

New York State Department of Environmental Conservation
 Division of Materials Management
 Inactive Landfill Initiative
 Field Activities Summary

Landfill Name: Denton Avenue Landfill

Region: 1

SWID: 30S24

Date of Field Activities: 5/30/18 – 6/5/18; 6/7/18 and 6/13/18

Summary of Field Activities

Three monitoring wells were installed and sampled. The field activities were conducted according to the Hydrogeologic Investigation at the Denton Avenue Landfill Site NYSDEC Region 1 – Suffolk County Manhasset, New York Work Plan with the following deviations: The monitoring wells proposed locations were relocated to the southern portion of the Site and south of the existing pond. Due to this new well relocation, one monitoring well was not installed. As shown on Figure 1, a total of three monitoring wells (out of four wells proposed) were installed and sampled.

Of note is that monitoring wells MW-2, MW-3 and associated Field QC sample were re-sampled on June 13, 2018. This is shown in Attachment 4 – Analytical Laboratory.

Monitoring Wells Installed

Monitoring Well ID	Northing	Easting	Elevation	Well Development Date	Comments
MW-1	211338.06497	1074592.53452	N/A	6/5/18	
MW-2	210600.66384	1074618.15680	N/A	6/5/18	
MW-3	210673.67938	1073547.32181	N/A	6/5/18	

Monitoring Wells Sampled

Monitoring Well ID	Date	Sample Collected (yes/no)	Comments
MW-1	6/4/18	Yes	1-NAS-002-001-02
MW-2	6/13/18	Yes	1-NAS-002-003-01
MW-3	6/13/18	Yes	1-NAS-002-003-02

Other Samples

Sample Location	Sample Type	Date	Comments
N/A	N/A	N/A	

Figures






Figure 1	Sample Locations
Figure 2	Groundwater Contours and Flow

Attachments

Attachment 1	Well Installation Work Plan
Attachment 2	Boring and Well Construction Logs
Attachment 3	Groundwater Sample Logs/Well Development Logs
Attachment 4	Analytical Laboratory Level II Data Deliverable



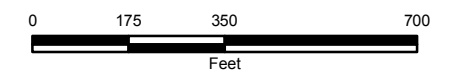
LEGEND

-  MONITORING WELLS
-  WATER FEATURE AND FLOW
-  WATER FEATURE
-  PARCEL BOUNDARY
-  ESTIMATED LANDFILL EXTENT

NOTE:
-PARCEL GEOREFERENCED FROM NASSAU COUNTY GIS

NEW YORK STATE
DEPARTMENT OF CONSERVATION
DENTON AVE LANDFILL
NEW HYDE PARK, NEW YORK

SAMPLE LOCATIONS










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JULY 2018



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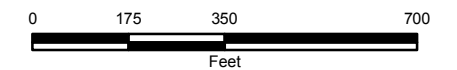
LEGEND

-  MONITORING WELLS
-  TOPOGRAPHIC CONTOURS
-  WATER FEATURE AND FLOW
-  WATER FEATURE
-  LANDFILL PARCEL BOUNDARY
-  ESTIMATED LANDFILL EXTENT
-  PRESUMED GROUNDWATER FLOW

NOTE:
 -PARCEL GEOREFERENCED FROM NASSAU COUNTY GIS
 -4 FT NASSAU COUNTY CONTOURS WERE CREATED USING THE USGS LONG ISLAND 2014 LIDAR COLLECTION

NEW YORK STATE
 DEPARTMENT OF CONSERVATION
 DENTON AVE LANDFILL
 NEW HYDE PARK, NEW YORK

GROUNDWATER CONTOURS AND FLOW



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Attachment 1

**Well Installation Work
Plan**

Site-Specific Work Plan for:

**HYDROGEOLOGIC INVESTIGATION
AT THE
DENTON AVENUE LANDFILL SITE
NYSDEC REGION 1 - NASSAU COUNTY
NEW HYDE PARK, NEW YORK**

Prepared For:



**Department of
Environmental
Conservation**

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7012

Prepared By:

PARSONS

301 Plainfield Rd, Suite 350
Syracuse, New York 13212
Phone: (315) 451-9560
Fax: (315) 451-9570

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Site Specific Work Plan For Hydrogeologic Investigation At The Denton Avenue Landfill Site

1.0 PROJECT BACKGROUND

This hydrogeologic investigation is part of the New York State Department of Environmental Conservation's (NYSDEC's) Inactive Landfills Initiative. The objective of the Initiative is to assess inactive landfills in New York State for potential impacts to drinking water sources and other potential receptors.

2.0 PROJECT OBJECTIVES

The objective of this hydrogeological investigation is to provide an initial assessment of the potential for impacts to groundwater in the immediate vicinity of the Denton Avenue Landfill site. This objective will be accomplished by installing four groundwater monitoring wells, sampling groundwater and analyzing the samples for a suite of potential organic and inorganic contaminants. The sample data will be evaluated to assess whether groundwater quality has been impacted by the landfill.

3.0 SITE SETTING

As shown of Figure 1, The landfill is located near the intersection of Denton Avenue and Evergreen Avenue, in New Hyde Park, New York. It is bound by residential properties to the west and to the north, commercial property and Denton Avenue to the east, and Evergreen Avenue to the south. The site covers approximately 96 acres. Based on review of historical documentation, the site is comprised of the Northern Denton Avenue Landfill, the Southern Denton Avenue Landfill, and a recharge basin located between the two. The majority of the Northern Denton Avenue Landfill has been redeveloped as a golf driving range, however the area west of the driving range is undeveloped. The Southern Denton Avenue Landfill has been redeveloped as a public park with baseball fields, a running track, a parking lot, and an indoor swimming pool. Uneven settlement was observed across most of the southern landfill area, especially across the parking lot during the site visit.

3.1 GROUNDWATER AND SURFACE WATER OCCURRENCE AND FLOW

The closest body of water is Manhasset Bay; north of the site. Based on a review of USGS Groundwater Conditions Maps for Long Island, groundwater flow direction in the site area is likely toward the west.

Historical documents indicated five monitoring wells (DA-1 through DA-5) were located on the NUS Corporation figure (See Figure 2 below) which is just west of the former landfill. These monitoring wells could not be located during the initial site visit on October 13, 2017.

The following four proposed locations were identified for the installation of new monitoring wells:

- MW-1; An upgradient location along Denton Ave.
- MW-2: A downgradient location south of the recharge basin;
- MW-4: A downgradient location near the edge of the park along Pinewood Lane,;
- MW-3: A downgradient location just off a parking lot for the park along Evergreen Avenue.

4.0 HYDROGEOLOGICAL INVESTIGATION SCOPE OF WORK

Field activities will be conducted in accordance with the Quality Assurance Project Plan (QAPP), Field Activities Plan (FAP), and Health and Safety Plan (HASP), which have been prepared and approved specifically for the NYSDEC Inactive Landfill Initiative program. Site-specific elements and specific job safety analyses for soil borings, and monitoring well installations will be added to the Health and Safety Plan specifically for the Denton Avenue Landfill.

A Community Air Monitoring Plan will be implemented for real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area during invasive activities on-site.

The specific field procedures to be used during this investigation are described in the FAP. That document describes the drilling methods, well installation and sampling methods, and handling of investigation-derived waste. The QAPP describes the analytical procedures to be used by the laboratory in analyzing the groundwater samples.

4.1 SUBSURFACE UTILITY CLEARING

The local DIG SAFE service will be used to mark out subsurface utility lines near the proposed monitoring well locations. Monitoring well boring locations will be adjusted in the field as necessary to avoid subsurface obstructions and utilities. Each well boring location will also be hand-dug to 5-feet to ensure the location is clear of subsurface utilities. The proposed well locations are shown on Figure 1.

4.2 MONITORING WELL INSTALLATIONS

Following hand-clearing, the borings will be installed into the overburden using hollow-stem augers or another acceptable technique based on the conditions present. Alternate drilling techniques are described in the FAP. Soil samples will be collected continuously at each boring location. Samples will be physically described in the field using both the Burmeister and USCS soil classification systems. A photoionization detector will be used to record the The headspace readings of each soil sample.

The borings will be advanced to the first water-bearing zone that is considered acceptable for placing a monitoring well that will yield a volume of representative groundwater sufficient for sampling. Based on review of the USGS Long Island Depth to Water Viewer, depth to water is estimated to be between 55 and 65-feet. Monitoring wells will be constructed of 2-inch inside-diameter polyvinyl chloride (PVC) casing with a 5 or 10-foot long, #10-slot screen with the screen extending above the water table interface to allow for seasonal fluctuation of the water table. Each well will be completed with a locking protective casing with at least 3-feet of stick-up or a flush-mount, whichever is more conducive for current site activities. Should shallow groundwater or other site conditions dictate, modifications to the well design will be made in the field by the supervising geologist.

Following installation, the new monitoring wells will be developed to remove material which may have settled in and around the well screen. Development will use methods described in the FAP. Following well development, the locations and elevations of the monitoring well PVC casings will be established relative to an arbitrary onsite datum using a Total Station surveying instrument.

Drilling equipment will be decontaminated by pressure washing between borings and before entering or leaving the site. Drill cuttings from borings will be spread along the ground adjacent to the borehole. However, soils that contain visible wastes, free product, NAPL, or are otherwise grossly contaminated will be containerized for subsequent characterization and disposal. Water generated during the investigation will be discharged to an unpaved area of the site.

4.3 GROUNDWATER AND SURFACE WATER SAMPLING

Once well installation and development are complete, a groundwater sample will be collected and analyzed as described in the FAP and QAPP. The wells will be purged prior to sampling, and all sampling equipment will be dedicated to that sampling location, or will be decontaminated between sampling locations using the methods provided in the FAP.

The groundwater samples will be analyzed for modified baseline VOCs, polycyclic aromatic hydrocarbons, 1,4-dioxane, perfluorinated compounds, baseline leachate indicators, and modified baseline metals. A complete list of analytical parameters is provided in Table 1.

5.0 INVESTIGATION REPORTING

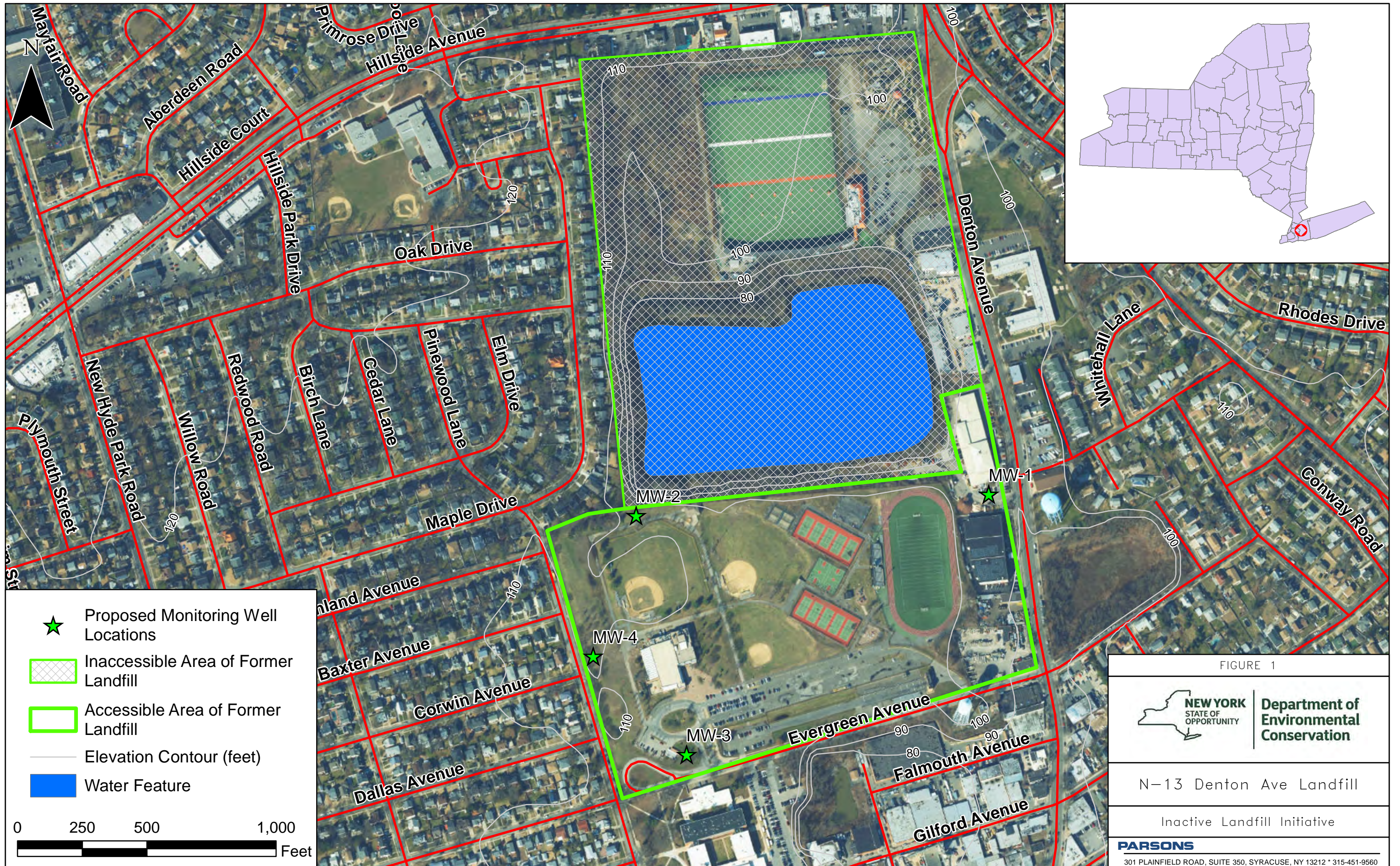
Boring logs, groundwater sampling logs, analytical data, and a site work summary will be provided at the completion of field activities for the site.

TABLE 1 – ANALYTICAL PARAMETERS

Parameter	Method	Parameter	Method
Leachate Indicators (water samples only)		PAHs + 1,4-Dioxane	
Ammonia	350.1 / SM20 4500NH3 B/D	Acenaphthene	8270D SIM
Chemical Oxygen Demand	410.4	Acenaphthylene	8270D SIM
Total Organic Carbon	EPA 9060 / SM20 5310B/C	Anthracene	8270D SIM
Total Dissolved Solids	SM20 2540C	Benzo(a)anthracene	8270D SIM
Sulfate	300	Benzo(a)pyrene	8270D SIM
Alkalinity	SM20 2320B	Benzo(b)fluoranthene	8270D SIM
Chloride	300	Benzo(g,h,i)perylene	8270D SIM
Bromide	300	Benzo(k)fluoranthene	8270D SIM
Total hardness as CaCO3	SM20 2340C	Chrysene	8270D SIM
		Dibenzo(a,h)anthracene	8270D SIM
Inorganics		Fluoranthene	8270D SIM
Arsenic	SW6010C	Fluorene	8270D SIM
Barium	SW6010C	Indeno(1,2,3-cd)pyrene	8270D SIM
Beryllium	SW6010C	Naphthalene	8270D SIM
Boron	SW6010C	Phenanthrene	8270D SIM
Chromium	SW6010C	Pyrene	8270D SIM
Copper	SW6010C	1-4-Dioxane	8270D SIM
Iron	SW6010C		
Lead	SW6010C	Perfluorinated Compounds	
Manganese	SW6010C	N-ethyl perfluorooctanesulfonamidoacetic acid	Modified 537
Nickel	SW6010C	N-methyl perfluorooctanesulfonamidoacetic acid	Modified 537
Selenium	SW6010C	Perfluorobutanesulfonic acid (PFBS)	Modified 537
Thallium	SW6010C	Perfluorodecanoic acid (PFDA)	Modified 537
Zinc	SW6010C	Perfluorododecanoic acid (PFDoA)	Modified 537
Mercury	SW7470A (water) SW7471B (soil)	Perfluoroheptanoic acid (PFHpA)	Modified 537
		Perfluorohexanesulfonic acid (PFHxS)	Modified 537
		Perfluorohexanoic acid (PFHxA)	Modified 537
		Perfluorononanoic acid (PFNA)	Modified 537
		Perfluorooctanesulfonic acid (PFOS)	Modified 537
		Perfluorooctanoic acid (PFOA)	Modified 537
		Perfluorotetradecanoic acid (PFTA)	Modified 537
		Perfluorotridecanoic acid (PFTriA)	Modified 537
		Perfluoroundecanoic acid (PFUA)	Modified 537
		Perfluoroheptanesulfonic acid (PFHpS)	Modified 537
		Perfluorodecanesulfonic acid (PFDS)	Modified 537

**TABLE 1 – ANALYTICAL PARAMETERS
(Continued)**

Parameter	Method	Parameter	Method
Perfluorinated Compounds (cont'd)			
Perfluorobutanoic acid (PFBA)	Modified 537	Perfluorooctanesulfonamide (PFOSA)	Modified 537
Perfluoropentanoic acid (PFPeA)	Modified 537	6:2 Fluorotelomer sulfonate (6:2 FTS)	Modified 537
		8:2 Fluorotelomer sulfonate (8:2 FTS)	Modified 537
Volatile Organic Compounds			
Acetone	SW8260C	Ethylbenzene	SW8260C
Acrylonitrile	SW8260C	2-Hexanone	SW8260C
Benzene	SW8260C	Bromomethane	SW8260C
Bromochloromethane	SW8260C	Chloromethane (Methyl chloride)	SW8260C
Bromodichloromethane	SW8260C	Dibromomethane	SW8260C
Bromoform	SW8260C	Methylene chloride	SW8260C
Carbon disulfide	SW8260C	2-Butanone (Methyl ethyl ketone)	SW8260C
Carbon tetrachloride	SW8260C	Idomethane (Methyl iodide)	SW8260C
Chlorobenzene	SW8260C	4-Methyl-2-pentanone (Methyl isobutyl ketone)	SW8260C
Chloroethane	SW8260C	Styrene	SW8260C
Chloroform	SW8260C	1,1,1,2-Tetrachloroethane	SW8260C
Dibromochloromethane	SW8260C	1,1,2,2-Tetrachloroethane	SW8260C
1,2-Dibromo-3-chloropropane	SW8260C	Tetrachloroethene	SW8260C
1,2-Dibromoethane (Ethylene dibromide)	SW8260C	Toluene	SW8260C
1,2-Dichlorobenzene	SW8260C	1,1,1-Trichloroethane	SW8260C
1,4-Dichlorobenzene	SW8260C	1,1,2-Trichloroethane	SW8260C
trans-1,4-Dichloro-2-butene	SW8260C	Trichloroethene	SW8260C
1,1-Dichloroethane	SW8260C	Trichlorofluoromethane	SW8260C
1,2-Dichloroethane	SW8260C	1,2,3-Trichloropropane	SW8260C
1,1-Dichloroethene	SW8260C	Vinyl acetate	SW8260C
cis-1,2-Dichloroethene	SW8260C	Vinyl chloride	SW8260C
trans-1,2-Dichloroethene	SW8260C	o-Xylene	SW8260C
1,2-Dichloropropane	SW8260C	m,p-Xylene	SW8260C
cis-1,3-Dichlororpropene	SW8260C	Xylenes, Total	SW8260C
trans-1,3-Dichlororpropene	SW8260C		





Attachment 2

**Boring and Well
Construction Logs**

Contractor: Parratt Wolff						PARSONS DRILLING RECORD		BORING/ WELL NO. MW-1	
Driller: Joe Percy/Jared Eaves						PROJECT NAME: NYSDEC Inactive Landfill Initiative		Page 1 of 2	
Oversight: Alayna Fuess						PROJECT Location: North New Hyde Park, New York		Location Description: South of pond, western border of DPW property.	
Rlg Type: A300 Ingersoll-Rand (CME)									
GROUNDWATER OBSERVATIONS								Location	
Apparent Borehole DTW: 35 ft bls						Date/Time Start: 6/1/2018 0930: (Hand Clear)		Plan	
Measured Water Level: 35.28 ft bls						Date/Time Finish: 6/4/2018 1630: (Well Installation)			
Total Depth of Well: 42 ft bls									
Additional Comments:									
Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL		SCHEMATIC	COMMENTS
					1			<p>Drawing Not to Scale</p>	
					2				Concrete Pad with flush mount casing
					3	Hand clear to 5' bgs: Dark Brown SILT and F-M SAND mixed with asphalt, traces of brick pieces: Dry.			
					4				2" Diameter PVC Riser (0' - 32' bgs)
HC	-	-	1.8	SM	5				
SS	5-8-10-8	1.4/2	3.8	SM	6	Dark Brown SILT, F-M SAND, some gravel, trace organics, trace brick/asphalt pieces: Damp: Medium Dense.			
					7				
SS	8-5-5-8	1.3/2	1.5	SM	8	Dark Brown SILT, F-M SAND, some gravel, trace organics, trace brick/asphalt pieces: Damp: Medium Dense.			
					9				
SS	9-6-7-4	0.2/2	0.6	SM	10	Poor recovery, Dark Brown SILT, F-M SAND, some gravel, trace organics, trace brick/asphalt pieces; Moist: Medium Dense.			
					11				
SS	6-4-4-4	0.2/2	0.5	SM	12	Poor recovery, Dark Brown SILT, F-M SAND, some gravel, trace organics, trace brick/asphalt pieces: Moist: Medium Dense.			
					13				Grout (0' - 25' bgs)
SS	3-4-2-2	1.1/2	0.4	SM	14	Light Brown to Dusky Yellowish Brown SILT, F-M-C SAND, trace gravel, trace pieces of glass: Moist: Loose.			
					15				
SS	3-3-3-3	1.5/2	1.3	SM/SP	16	(0-1') Light Brown to Dusky Yellowish Brown SILT, F-M-C SAND, trace gravel, trace pieces of glass: Moist: Loose.; (1-1.5') Dark yellowish orange F-M-C SAND, trace gravel: Moist: Loose.			
					17				
SS	3-3-3-3	0.6/2	0.7	SP	18	Dark yellowish orange F-M-C SAND, trace gravel: Moist: Loose.			
					19				
SS	2-5-3-3	1.0/2	3.4	SM	20	(0-0.4') Dark Yellowish Brown SILT, F-M SAND, trace gravel: Moist-Wet: Soft; (0.4-1') Dark Yellowish Brown Paper waste, some metallic pieces: Moist.			
					21				
SS	3-9-10-16	0.9/2	2.3	SP	22	Dark Yellowish Orange F-M SAND, some gravel, trace coarse sand: Damp-Moist: Medium Dense.			
					23				
HC	15-15-15-15	1.2/2	1.7	SP	24	Dark Yellowish Orange F-M SAND, some gravel, trace coarse sand: Damp-Moist: Medium Dense.			
					25				25' bgs
SAMPLING METHOD						COMMENTS:			
HC = Hand Cleared (post hole)						Well Completion Details: 2" Diameter, 0.010' Slot PVC Screen (32-42' bgs); 2" Diameter PVC Riser (0.2-32' bgs); Type #0 Sand (30'-42.2' bgs)			
SS= Split Spoon						Type #00 Sand (25-26' bgs) and (29-30' bgs); Bentonite Chips (26'-29' bgs); Grout (0.5'-25' bgs). Road box/flush mount steel protective casing.			

Contractor: <u>Parratt Wolff</u> Driller: <u>Joe Percy/Jared Eaves</u> Oversight: <u>Alayna Fuess</u> Rig Type: <u>A300 Ingersoll-Rand (CME)</u>						PARSONS DRILLING RECORD		BORING/ Page <u>2</u> of <u>2</u> WELL NO. MW-1		
PROJECT NAME: <u>NYSDEC Inactive Landfill Initiative</u> PROJECT Location: <u>North New Hyde Park, New York</u>						Location Description: <u>South of pond, western border of DPW property.</u>				
GROUNDWATER OBSERVATIONS						Location				
Apparent Borehole DTW: <u>35</u> ft bls Measured Water Level: <u>35.28</u> ft bls Total Depth of Well: <u>42</u> ft bls Additional Comments:						Plan				
						Date/Time Start: <u>6/1/2018 0930: (Hand Clear)</u> Date/Time Finish: <u>6/4/2018 1630: (Well Installation)</u>				
Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL		Schematic	Comments	
								Drawing Not to Scale		
SS	14-14-14-14	1.5/2	0.8	SP	26	Dark Yellowish Orange F-M SAND, some gravel, trace coarse sand; Damp-Moist; Medium Dense.				
					27					
SS	15-15-17-18	1.2/2	1.3	SP	28	Dark Yellowish Orange F-M SAND, some gravel, trace coarse sand; Damp-Moist; Medium Dense.				
					29					
SS	10-11-16-18	1.4/2	1.7	SP	30	(6/4/2018 1354 Resume Boring) Dark Yellowish Orange F-M SAND, trace gravel; Damp; Medium Dense.				
					31					
SS	17-14-16-15	1.4/2	0.8	SP	32	Dark Yellowish Orange F-M SAND, trace gravel; Damp-Moist; Medium Dense.				
					33					
SS	8-13-13-12	1.5/2	0.3	SP	34	Dark Yellowish Orange F-M SAND, trace gravel, small silty layer at the bottom of core; Moist; Medium Dense.				
					35					
SS	5-7-8-8	1.7/2	0.5	SP	36	Dark Yellowish Orange F-M SAND, trace gravel; Wet; Medium Dense.				
					37					
SS	8-8-11-13	1.9/2	0.6	SP	38	Dark Yellowish Orange F-M SAND, trace gravel; Wet; Medium Dense.				
					39					
SS	5-7-6-9	1.0/2	0.5	SP	40	Dark Yellowish Orange F-M SAND, trace gravel; Wet; Medium Dense.				
					41					
SS	10-10-10-10	1.4/2	0.4	SP	42	Dark Yellowish Orange F-M SAND, trace gravel; Wet; Medium Dense.				
					43					
						End boring at 43' bgs				

SAMPLING METHOD

HC = Hand Cleared (post hole)
 SS= Split Spoon

COMMENTS:

Well Completion Details: 2" Diameter, 0.010" Slot PVC Screen (32'-42' bgs); 2" Diameter PVC Riser (0.2'-32' bgs); Type #0 Sand (30'-42.2' bgs)
 Type #00 Sand (25-26' bgs) and (29-30' bgs); Bentonite Chips (26'-29' bgs); Grout (0.5'-25' bgs). Road box/flush mount steel protective casing.

Contractor: Parratt Wolff						PARSONS DRILLING RECORD		BORING/ WELL NO. MW-2	
Driller: Joe Percy/Jared Eaves						PROJECT NAME: NY SDEC Inactive Landfill Initiative		Page: 1 of 3	
Oversight: Alayna Fuess						PROJECT Location: North New Hyde Park, New York		Location Description:	
Rlg Type: A300 Ingersoll-Rand (CME)								Southeast corner of site, sits on grassy island in a parking lot.	
GROUNDWATER OBSERVATIONS								Location	
Apparent Borehole DTW:				53	ft bls	Date/Time Start: 5/29/2018: 1430 (Hand Clear)		Plan	
Measured Water Level:				52.6	ft bls	Date/Time Finish: 5/30/2018: 1725 (Well Construction)			
Total Depth of Well:				60	ft bls				
Additional Comments:									
Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL		SCHEMATIC	COMMENTS
					1				
					2				
					3				
					4				
HS	-	-	1.1	SP/SM	5	Hand clear to 5' bgs; Tan to Dusky Brown F-M SAND, some silt; Damp.			
SS	2-3-2-2	0.5/2	2.2	SM	6	Tan to Dusky Brown ORGANICS, some F-M sand, silt; Damp; Loose; Fill material including pieces of glass.			
					7				
SS	2-2-1-1	0.4/2	1.0	SM	8	Greenish Grey to Gravel Grey SILT, with orange-yellow compressed paper pieces; Wet: Loose.			
					9				
SS	3-3-50	0.9/2	0.9*	SM	10	Tan to Dusky Brown ORGANICS, some F-M sand, silt; Damp; Loose; Fill material including pieces of glass.			
					11				
SS	4-6-11-13	1.3/2	34.8	SP/SM	12	Greenish Grey-Dark Greyish Brown SILT, F-M Sand, some glass and plastic pieces; Moist-Damp			
					13				
SS	8-5-6-6	1.4/2	13.4	SM	14	Yellowish compressed paper and ORGANICS with Dark Grey SILT, ORGANICS, F-M SAND; Moist-Damp; Medium Dense.			
					15				
SS	7-3-4-4	0.9/2	27.2	SM	16	Dark Grey ORGANICS with some silt (pieces of what appears to be old rope) with Greenish Grey F-M SAND; Dry-Moist-Damp; Medium Dense.			
					17				
SS	6-5-3-6	0.5/2	2.1	SM	18	Dark Grey ORGANICS, SILT, some glass and paper waste; Damp-Moist; Loose.			
					19				
SS	5-10-6-4	0.9/2	8.7	SM	20	Dusky Yellowish Brown ORGANICS, man-made cloth fabric, F-M SAND; Damp; Medium Dense.			
					21				
SS	7-7-10-19	1.2/2	15.1	SM	22	Moderate Yellowish Brown - Dark Reddish Brown SILT, some F-M SAND interspersed with Greenish-Blue Gray GRAVEL; Damp-Moist; Medium Dense.			
					23				
SS	7-6-5-3	1.1/2	6.3	SM	24	Dark Grey-Brown SILT, ORGANICS, some F-M SAND, gravel; Damp-Moist; Medium Dense; Trace glass pieces.			
					25				
SAMPLING METHOD						COMMENTS:			
HC = Hand Cleared (post hole)						* Shows a CO reading of 2ppm in bag, no hits in work zone air monitoring			
SS= Split Spoon						Well Completion Details: 2" Diameter 0.010' Slot PVC Screen (50'-60' bgs); 2" Diameter PVC Riser (+3 AG - 50' bgs); Type #0 Sand (48'-60' bgs) and (60'-60.2' bgs); Type #00 Sand (43'-44' bgs) and (47'-48' bgs); Bentonite Chips (44'-47' bgs); Grout (0-43' bgs); 3" AG Steel protective casing with locking cap.			

Contractor: Parratt Wolff						PARSONS DRILLING RECORD		BORING/ WELL NO. MW-2	
Driller: Joe Percy/Jared Eaves						PROJECT NAME: NYSDEC Inactive Landfill Initiative		Page 2 of 3	
Oversight: Alayna Fuess						PROJECT Location: North New Hyde Park, New York		Location Description:	
Rig Type: A300 Ingersoll-Rand (CME)								Southeast corner of site, sits on grassy island in a parking lot.	
GROUNDWATER OBSERVATIONS						Date/Time Start: 5/29/2018: 1430 (Hand Clear)		Location	
Apparent Borehole DTW:						Date/Time Finish: 5/30/2018: 1725 (Well Construction) <td colspan="2">Plan</td>		Plan	
Measured Water Level:									
Total Depth of Well:									
Additional Comments:									
Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL		SCHMATIC	COMMENTS
								Drawing Not to Scale	
SS	4-4-4-4	0.3/2	4.9	SM	26	Dark Grey-Brown SILT, ORGANICS, some F-M SAND, gravel: Damp-Moist: Medium Dense: Trace glaze pieces.			
					27				
SS	4-4-3-2	1.2/2	7.3	SM	28	Dark Grey-Brown SILT, ORGANICS, some F-M SAND, gravel: Moist: Medium Dense.			
					29				
SS	11-22-8-6	0.9/2	3.3	SM	30	Dark Grey-Brown SILT, ORGANICS, some F-M SAND, gravel: Moist-wet: Medium dense: No glass.			
					31				
SS	7-4-7-4	0.3/2	0.4	SM	32	Dark Grey-Brown SILT, ORGANICS, some F-M SAND, gravel: Moist-wet: Medium dense.			
					33				
SS	5-4-15-14	0.9/2	7.5	SM/SP	34	Dark Brown-Dark Greyish Brown SILT, F-M SAND, some gravel, some amber glass pieces, traces of paper/cloth waste: Moist: Medium Dense.			
					35				
SS	10-11-5-3	0.5/2	3.5	SM/SP	36	Dark Brown-Dark Greyish Brown SILT, F-M SAND, some gravel, some amber glass pieces, traces of paper/cloth waste/Metal Scrap: Wet: Medium Dense.			
					37				
SS	50/0.2	1.5/2	-	SM/SP	38	Dark Brown-Dark Greyish Brown SILT, F-M SAND, some gravel, some amber glass pieces: Wet: Medium Dense.			
					39				
SS	18-22-37-70	1.5/2	1.3	SM	40	0-0.7' SAA: 0.7-1.5' Tan to Grey with occasional dark grey F-M SAND, trace-some silt, gravel: Damp-Moist (wet material in photo is fall-in material): Dense.			
					41				
SS	40-(50/0.4)	1.8/2	0.6	SM/SP	42	(0-1.1') Dark grey F-M SAND, some silt/gravel: wet. (1.1-1.8') Tan F-M SAND, trace gravel: Damp-moist: Dense.			
					43			43' bgs	
SS	25-15-10-10	-	-	-	44	Wet spoon, very poor recovery.		44' bgs	
					45			Type #00 Sand (43'-44' bgs)	
SS		1.0/2	0.5	SP/SM	46	Moderate Yellowish Brown - Greyish Brown F-M SAND, some silt, trace gravel: Wet-Damp towards bottom of core (~0.9' of soil in photo is fall-in material)		Bentonite Chips (44'-47' bgs)	
					47			47' bgs	
SAMPLING METHOD						COMMENTS:			
HC = Hand Cleared (post hole)						Well Completion Details: 2" Diameter 0.010' Slot PVC Screen (50'-60' bgs); 2" Diameter PVC Riser (+3 AG - 50' bgs); Type #0 Sand (48'-60.2' bgs); Type #00 Sand (43'-44' bgs) and (47'-48' bgs); Bentonite Chips (44'-47' bgs); Grout (0-43' bgs); 3' AG Steel protective casing with locking cap.			
SS= Split Spoon									

GROUNDWATER OBSERVATIONS						PARSONS DRILLING RECORD	BORING/ WELL NO. MW-2 Page 3 of 3		
Contractor: Parratt Wolff Driller: Joe Percy/Jared Eaves Oversight: Alayna Fuess Rig Type: A300 Ingersoll-Rand (CME)							PROJECT NAME: NYSDEC Inactive Landfill Initiative PROJECT Location: North New Hyde Park, New York		
Apparent Borehole DTW: 53 ft bls Measured Water Level: 52.6 ft bls Total Depth of Well: 60 ft bls Additional Comments:							Location Description: Southeast corner of site, sits on grassy island in a parking lot.		
Date/Time Start: 5/29/2018: 1430 (Hand Clear) Date/Time Finish: 5/30/2018: 1725 (Well Construction)							Location: Plan:		
Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	SCHMATIC	COMMENTS	
SS	5-9-9-10	1.4/2	0.4	SP/SM	48	Dark Greyish Brown F-M SAND and GRAVEL; wet sections interspersed with damp-dry ones. Dense.		Type #0 Sand (47'-48' bgs) 48' bgs	
					49				
SS	15-21-37-39	2.0/2	0.2	GM	50	Grey to Greyish Brown F-M SAND, some gravel; Damp; Medium Dense.			50' bgs
					51				
SS	12-15-15-17	1.1/2	0.2	GM/SP	52	Grey to Greyish Brown F-M SAND, trace gravel; Damp; Medium Dense, moist - wet at bottom.			
					53				▽ -53' bgs
SS	11-11-11-11	1.1/2	0.1	SP	54	Greyish-Brown F-M SAND, trace gravel; Wet; Medium Dense.			
					55				
SS	5-6-6-6	1.3/2	0.1	SP	56	Greyish-Brown F-M SAND, trace gravel; Wet; Medium Dense.			2" Diameter, 0.010" slot PVC Screen (50'-60' bgs)
					57				
SS	4-3-4-9	1.7/2	0.3	SP	58	Greyish-Brown F-M SAND, trace gravel; Wet; Medium Dense.			Type #0 Sand (48'-60.2' bgs)
					59				
SS	7-10-10-10	2.0/2	0.1	SP	60	Greyish-Brown F-M SAND, trace gravel; Wet; Medium Dense.			60' bgs
					61				60.2' bgs
						End boring at 61' bgs.			
SAMPLING METHOD HC = Hand Cleared (post hole) SS= Split Spoon						COMMENTS: Well Completion Details: 2" Diameter 0.010" Slot PVC Screen (50'-60' bgs); 2" Diameter PVC Riser (+3 AG - 50' bgs); Type #0 Sand (48'-60' bgs) and (60'-60.2' bgs); Type #0 Sand (43'-44' bgs) and (47'-48' bgs); Bentonite Chips (44'-47' bgs); Grout (0-43' bgs); 3' AG Steel protective casing with locking cap.			

Contractor: Parratt Wolff						PARSONS DRILLING RECORD		BORING/ WELL NO. Page 1 of 3 MW-3	
Driller: Joe Percy/Jared Eaves						PROJECT NAME: NYSDEC Inactive Landfill Initiative		Location Description: Western side of site, near baseball field to the east.	
Oversight: Alayna Fuess						PROJECT Location: North New Hyde Park, New York			
Rig Type: A300 Ingersoll-Rand (CME)									
GROUNDWATER OBSERVATIONS								Location	
Apparent Borehole DTW:					ft bls	Date/Time Start: 5/29/2018: 15:45 (Hand Clear) Date/Time Finish: 5/31/2018: 17:15 (Well Construction)		Plan	
Measured Water Level:					ft bls				
Total Depth of Well:				54	ft bls				
Additional Comments:									
Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL		Schematic	COMMENTS
					1				
					2				
					3	Hand Clear to 5' bgs, Moderate Yellowish Brown F-M SAND, SILT, some gravel, some wood and plastic, trace organics, trace glass pieces (FILL); Dry.			
					4				
HC	-	-	0.4	SP	5				2" Diameter PVC Riser (0' - 54' bgs)
SS	17-6-7-5	1.3/2	1.7	SM	6	Dark Brown interspersed with tan and light grey F-M SAND, SILT, GRAVEL, some pieces of plastic/glass (FILL); Dry-Damp; Medium Dense.			Grout (0'-47' bgs)
					7				
SS	1-2-1-2	0.9/2	2.8	SM	8	Dark Brown interspersed with tan and light grey F-M SAND, SILT, GRAVEL, some pieces of plastic/glass (FILL); Dry-Damp; Medium Dense.			
					9				
SS	3-3-4-4	0.8/2	2.9	SM	10	Dark Brown interspersed with tan and light grey F-M SAND, SILT, GRAVEL, some pieces of plastic/glass (FILL); Dry-Damp; Medium Dense.			
					11				
SS	5-5-5-5	1.7/2	2.1	SM	12	Dusky Brown F-M SAND, SILT, ORGANICS, some gravel, some glass pieces (FILL); Damp; Medium Dense.			
					13				
SS	2-10-10-8	0.6/2	1.8	SM	14	Dusky Brown F-M SAND, SILT, ORGANICS, some gravel, some glass pieces (FILL); Damp; Medium Dense.			
					15				
SS	4-5-5-2	0.9/2	2.7	SM	16	Dusky Brown F-M SAND, SILT, ORGANICS, some gravel, some glass pieces (FILL); Damp; Medium Dense.			
					17				
SS	8-3-6-6	0.7/2	4.1	SM	18	Dusky Brown F-M SAND, SILT, ORGANICS, some gravel, some glass pieces (FILL); Damp; Medium Dense.			
					19				
SS	5-5-6-8	0.8/2	4.7	SM	20	Blackish Brown to Dark Brown SILT, F-M SAND, some gravel, some organics (wood pieces), some glass pieces and paper waste; Damp; Medium Dense; Slight oily odor.			
					21				
SS	7-14-19-12	1.1/2	6.4	SM	22	(0-0.3') SAA: (0.3'-1.1') Moderate Yellowish Brown SILT, F-M SAND, ORGANICS (wood chunks), some-trace gravel; Damp; Dense.			
					23				
SS	12-10-11-10	1.1/2	5.9	SP	24	Dark Brown-Dusky Brownish Gray SILT, F-M SAND, ORGANICS (wood chunks), some gravel, traces of plastic and glass (FILL); Damp; Medium Dense.			
					25				
SAMPLING METHOD						COMMENTS:			
HC = Hand Cleared (post hole)						Well Construction Details: 2" Diameter PVC Well Screen (54'-64' bgs); 2" Diameter PVC Riser (0'-54' bgs); Type #0 Sand (52' - 64.2' bgs);			
SS= Split Spoon						Type #00 Sand (47'-48' bgs and 51'-52' bgs); Bentonite Chips (48'-51' bgs); Grout (0'-47' bgs); Road box/flush mount steel protective casing.			

PARSONS DRILLING RECORD						BORING/ WELL NO. Page <u>2</u> of <u>3</u> MW-3		
Contractor: Parratt Wolff Driller: Joe Percy/Jared Eaves Oversight: Alayna Fuess Rig Type: A300 Ingersoll-Rand (CME)						PROJECT NAME: NYSDEC Inactive Landfill Initiative PROJECT Location: North New Hyde Park, New York		
GROUNDWATER OBSERVATIONS						Location Description: Western side of site, near baseball field to the east.		
Apparent Borehole DTW: _____ ft bls Measured Water Level: _____ ft bls Total Depth of Well: _____ 54 ft bls Additional Comments: _____						Date/Time Start: 5/29/2018: 15:45 (Hand Clear) Date/Time Finish: 5/31/2018: 17:15 (Well Construction)		
						Location _____ Plan		
Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL	SCHMATIC Drawing Not to Scale	COMMENTS
SS	40-7-7-20	0.5/2	4.9	SM	26	Dark Brown-Dusky Brownish Gray SILT, F-M SAND, ORGANICS (wood chunks), some gravel, traces of plastic and glass (FILL); Damp; Medium Dense.		
					27			
SS	50/0.4	0.6/2	10.5	SM	28	Dark Brown-Dusky Brownish Gray SILT, F-M SAND, ORGANICS (wood chunks), some gravel, traces of plastic and glass (FILL); Damp; Dense; Slight sweet-oily odor.		
					29			
SS	12-50/0.1	0.9/2	24.4	SM	30	Dusky Yellowish Brown ORGANICS (wood chunks), SILT, some f-m sand, some paper waste, traces of broken glass; Dry; Very Dense; Slight sweet-oily odor.		
					31			
SS	10-4-10-35	1.1/2	7.7	SM	32	Dusky Yellowish Brown ORGANICS (wood chunks), SILT, some f-m sand, some paper waste, traces of broken glass; Dry; Very Dense; Slight sweet-oily odor.		
					33			
SS	10-7-7-6	0.8/2	11.5	SM	34	(0-0.4') Dusky Yellowish Brown ORGANICS (wood chunks), SILT, some f-m sand, some paper waste, traces of broken glass; Dry; Very Dense; Slight sweet-oily odor; (0.4-0.8') Light Yellowish Brown F-M SAND, some gravel; Damp; Medium Dense.		
					35			
SS	8-3-3-3	0.9/2	11.6	SM/SP	36	Light Yellowish Brown F-M SAND, some gravel; Damp; Medium Dense.		
					37			
SS	7-10-7-17	1.1/2	9.9	SM/SP	38	(0-0.3') Light Yellowish Brown F-M SAND, some gravel, trace silt; Damp; Medium Dense; (0.3-1.1') Dark Brown SILT, F-M SAND, trace gravel/brick pieces; Damp; Medium Dense.		
					39			
SS	10-7-3-10	1.0/2	4.6	SM	40	Dark Brown SILT, F-M SAND, trace gravel/brick pieces; Damp; Medium Dense.		
					41			
SS	16-13-23-23	1.5/2	2.9	SM/SP	42	(0-0.5') Dark Brown SILT, F-M SAND, trace gravel/brick pieces; Damp; Medium Dense; (0.5'-1.4') Dark Grey-Moderate Brown F-M SAND and SILT, trace gravel; Moist; Dense; (1.4'-1.5') Light yellowish brown F-M SAND, some gravel sized quartz pieces; Dry.		
					43			
SS	12-13-13-15	0.7/2	1.4	SM	44	Dark Grey-Brown SILT, F-M SAND, some gravel/possible concrete chunks; Moist; Medium Dense.		
					45			
SAMPLING METHOD HC = Hand Cleared (post hole) SS= Split Spoon						COMMENTS: Well Construction Details: 2" Diameter PVC Well Screen (54'-64' bgs); 2" Diameter PVC Riser (0'-54' bgs); Type #0 Sand (52' - 64.2' bgs); Type #00 Sand (47'-48' bgs and 51'-52' bgs); Bentonite Chips (48'-51' bgs); Grout (0'-47' bgs); Road box/flush mount steel protective casing.		

Contractor: Parratt Wolff						PARSONS DRILLING RECORD		BORING/ WELL NO. Page 3 of 3 MW-3	
Driller: Joe Percy/Jared Eaves						PROJECT NAME: NYSDEC Inactive Landfill Initiative		Location Description: Western side of site, near baseball field to the east.	
Oversight: Alayna Fuess						PROJECT Location: North New Hyde Park, New York			
Rig Type: A300 Ingersoll-Rand (CME)									
GROUNDWATER OBSERVATIONS								Location	
Apparent Borehole DTW:						Date/Time Start: 5/29/2018; 15:45 (Hand Clear)		Plan	
Measured Water Level:						Date/Time Finish: 5/31/2018; 17:15 (Well Construction)			
Total Depth of Well:									
Additional Comments:									
Sample Type	SPT	Recovery	PID	USCS Symbol	Depth (ft bls)	FIELD IDENTIFICATION OF MATERIAL		SCHEMATIC Drawing Not to Scale	
SS	13-13-13-15	1.2/2	3.1	SP	46	Grey-Light Grey F-M SAND, trace coarse sand, trace gravel; Damp; Medium Dense.			
					47				
SS	7-11-17-18	1.0/2	3.6	SP	48	Grey-Light Grey F-M SAND, trace coarse sand, trace gravel; Damp; Medium Dense.			
					49				
SS	15-17-19-27	1.7/2	0.0	SP	50	Light Grey-Tan F-M SAND, trace gravel/silt; Damp; Dense; Some darker lamellations.			
					51				
SS	28-26-28-24	1.1/2	0.0	SP	52	Light Grey-Tan F-M SAND, trace gravel/silt; Damp; Dense; Some darker lamellations, core photo missing.			
					53				
SS	12-20-27-22	1.5/2	0.5	SP	54	Light Grey-Tan F-M SAND, trace gravel/silt; Damp; Dense; Some darker lamellations, core photo missing.			
					55				
SS	5-15-20-22	1.0/2	0.0	SP	56	Light Grey-Tan F-M SAND, trace gravel/silt; Damp-Wet at bottom of core; Dense; Some darker lamellations, core photo missing.			
					57				
SS	15-22-22-15	1.8/2	0.2	SP	58	Light Yellowish Brown F-M SAND, trace coarse sand, trace gravel; Wet; Dense; Poorly graded.			
					59				
SS	7-11-11-10	1.1/2	0.4	SP	60	Light Yellowish Brown F-M SAND, trace coarse sand, trace gravel; Wet; Dense; Poorly graded.			
					61				
SS	12-11-10-9	1.5/2	0.0	SP	62	Light Yellowish Brown F-M SAND, trace coarse sand, trace gravel; Wet; Dense; Poorly graded.			
					63				
SS	12-13-14-8	1.3/2	1.6	SP	64	Tan F-M-C SAND, trace gravel; Wet; M. Dense.			
					65				
						End boring at 65' bgs, auger to 64.2' bgs.			
SAMPLING METHOD						COMMENTS:			
HC = Hand Cleared (post hole)						Well Construction Details: 2" Diameter PVC Well Screen (54'-64' bgs); 2" Diameter PVC Riser (0'-54' bgs); Type #0 Sand (52' - 64.2' bgs);			
SS= Split Spoon						Type #00 Sand (47'-48' bgs and 51'-52' bgs); Bentonite Chips (48'-51' bgs); Grout (0'-47' bgs); Road box/flush mount steel protective casing.			



Attachment 3

Sampling Logs

Low Flow Ground Water Sampling Log

Date: 6/7/2018 Personnel: AJF Weather: Overcast
 Site Name: Denton Ave LF Evacuation Method: Low-Flow Well #: MW-1
 Site Location: New Hyde Park, NY Sampling Method: Bladder Pump Project #: 65982

Well information:

Depth of Well * 41.85 ft. * Measurements taken from
 Depth to Water * 34.41 ft. Top of Well Casing
 Length of Water Column 7.44 ft. Top of Protective Casing
 Depth to Intake * 37.35 ft. (Other, Specify)

Start Purge Time: 10:50

Elapsed Time (min)	Depth To Water (ft)	10.0% Temperature (celsius)	0.1 pH	3% Specific Conductivity (ms/cm)	10 mV Oxidation Reduction Potential	10% Dissolved Oxygen (mg/l)	10% Turbidity (NTU)	100-500 ml/min Flow Rate (ml/min)
5	34.43	14.4	6.21	0.58	91.4	2.04	209	500
10	34.43	14.3	6.19	0.57	61.5	1.6	14.3	500
15	34.43	14.3	6.33	0.57	42.3	1.21	95.2	500
20	34.43	14.3	6.34	0.57	31.8	1.03	61.2	500
25	34.43	14.3	6.44	0.56	25.2	0.83	40.3	500
30	34.43	14.4	6.45	0.56	20.7	0.63	23.4	500
35	34.43	14.4	6.48	0.56	17.4	0.51	17.8	500
40	34.43	14.4	6.49	0.56	14.7	0.41	13.4	500
45	34.43	14.4	6.49	0.56	12.3	0.33	8.54	500
50	34.43	14.4	6.51	0.55	10.5	0.24	7.56	500
55	34.43	14.4	6.5	0.55	8.5	0.18	5.13	500
60	34.43	14.4	6.51	0.55	6.7	0.13	4.47	500
65	34.43	14.4	6.53	0.56	3.9	0.1	4.24	500
70	34.43	14.4	6.54	0.55	2.9	0.1	1.53	500
75	34.43	14.5	6.54	0.55	1	0.09	2.34	500

End Purge Time: 12:05

Water sample:

Time collected: 12:15 Total volume of purged water removed: 12 gal
 Physical appearance at start
 Color: Trans brown
 Odor: None
 Sheen/Free Product: None
 Physical appearance at sampling
 Color: Clear
 Odor: None
 Sheen/Free Product: None

Field Test Results:
 Dissolved ferrous iron: -
 Dissolved total iron: -
 Dissolved total manganese: -

Analytical Parameters:

Sample	Container Type	# Collected	Field Filtered	Preservative	Container pH
PFAS	250 mL HDPE	2	No	None	N/A
1, 4 Dioxane	1 L Amber Glass	2	No	None	N/A
Ammonia	60 mL Glass	1	No	None	N/A
Alkalinity	250 mL HDPE	1	No	None	N/A
Metals	500 mL HDPE	1	No	HNO3	N/A
COD	500 mL HDPE	1	No	H2SO4	N/A
SO4, CHL, BRO, TDS	250 mL HDPE	1	No	None	N/A
TOC	60 mL Glass	1	No	None	N/A
VOA	40 mL Vial	3	No	HCl	N/A



Attachment 4

**Analytical Laboratory
Level II Data Deliverable**

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Parsons Engineering Science for ILI

OBGNYA: ILI - Region 1, Denton Avenue Landfill

450619

SGS Job Number: JC67675

Sampling Date: 06/07/18

Report to:

O'Brien & Gere Engineers, Inc

scott.tucker@obg.com

ATTN: Scott Tucker

Total number of pages in report: 253



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.

A handwritten signature in black ink, appearing to read "Brian McGuire".

Brian McGuire
General Manager

Client Service contact: Kristin Degraw 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.



August 7, 2018

Ms. Sara Weishaupt
Parsons
301 Plainfield Road, Suite 350
Syracuse, NY 13212

**Re: SGS North America – Dayton, NJ Job # JC67672, JC67675, JC67951, and JC68071 -
Reissues**

Dear Ms. Weishaupt,

The final reports for SGS job numbers JC67672, JC67675, JC67951, and JC68071 have been edited to reflect corrections to the final results. These edits have been incorporated into the attached revised reports.

Specifically, MDL reporting has been added for inorganic portions to meet client requirements.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me if I can be of further assistance in this matter.

Sincerely,

Kristin Beebe DeGraw

Project Manager



CONTINUOUS SERVICE IMPROVEMENT!

Our goal is to continuously improve our service to you. Please share your ideas about how we can serve you better at EHS.US.CustomerCare@sgs.com. Your feedback is appreciated!



SGS North America Inc. Mid-Atlantic 2235 US Highway 130 Dayton, NJ 08810, USA t+1 (0)732 329 0200

Member of the SGS Group (SGS SA)



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Sample Summary

Parsons Engineering Science for ILI

Job No: JC67675

OBGNYA: ILI - Region 1, Denton Avenue Landfill

Project No: 450619

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JC67675-1	06/07/18	12:25 SH	06/08/18	AQ	Ground Water	1-NAS-002-001-01
JC67675-2	06/07/18	12:15 SH	06/08/18	AQ	Ground Water	1-NAS-002-001-02
JC67675-3	06/07/18	16:20 SH	06/08/18	AQ	Ground Water	1-NAS-002-001-03
JC67675-4	06/07/18	12:20 SH	06/08/18	AQ	Field Blank Water	1-NAS-002-001-04
JC67675-5	06/07/18	12:30 SH	06/08/18	AQ	Equipment Blank	1-NAS-002-001-05
JC67675-6	06/07/18	13:35 SH	06/08/18	AQ	Equipment Blank	1-NAS-002-001-06
JC67675-7	06/07/18	16:20 SH	06/08/18	AQ	Trip Blank Water	1-NAS-002-001-07

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Parsons Engineering Science for ILI

Job No JC67675

Site: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Report Date 7/2/2018 3:44:51 PM

On 06/08/2018, 1 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) and 1 Equipment Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC67675 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.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** V2C7092

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC67672-1QMS, JC67672-2DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

MS Semi-volatiles By Method EPA 537M BY ID

Matrix: AQ **Batch ID:** F:OP70507

- The data for EPA 537M BY ID meets quality control requirements.
- JC67675-6: Analysis performed at SGS Orlando, FL.
- JC67675-2: Analysis performed at SGS Orlando, FL.
- JC67675-4: Analysis performed at SGS Orlando, FL.
- JC67675-2 for PFOSA: Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

Matrix: AQ **Batch ID:** F:OP70681

- The data for EPA 537M BY ID meets quality control requirements.

MS Semi-volatiles By Method SW846 8270D BY SIM

Matrix: AQ **Batch ID:** OP12694A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Metals Analysis By Method SW846 6010C

Matrix: AQ **Batch ID:** MP7603

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67360-2MS, JC67360-2MSD, JC67360-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Boron, Chromium, Copper, Zinc are outside control limits for sample MP7603-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 6020A

Matrix: AQ **Batch ID:** MP7603A

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67360-2MS, JC67360-2MSD, JC67360-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Thallium are outside control limits for sample MP7603A-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP7603A-SD1 for Arsenic: Serial dilution indicates possible matrix interference.

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP7610

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67428-1DUP, JC67428-1MS, JC67428-1MSD were used as the QC samples for metals.

General Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP14027

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67675-2DUP, JC67675-2MS, JC67675-2DUP were used as the QC samples for Chloride, Bromide, Sulfate.
- JC67675-2 for Bromide: Peak shape indicates matrix interference and possible positive bias.

General Chemistry By Method SM2320 B-11

Matrix: AQ **Batch ID:** GN81422

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67506-2DUP were used as the QC samples for Alkalinity, Total as CaCO₃.
- JC67675-2 for Alkalinity, Total as CaCO₃: Sample was titrated to a final pH of 4.5.

General Chemistry By Method SM2340 C-11

Matrix: AQ **Batch ID:** GN81231

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67672-2DUP, JC67672-2MS were used as the QC samples for Hardness, Total as CaCO₃.

General Chemistry By Method SM2540 C-11

Matrix: AQ **Batch ID:** GN81240

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67673-3DUP were used as the QC samples for Solids, Total Dissolved.

General Chemistry By Method SM4500NH3 H-11LACHAT

Matrix: AQ

Batch ID: GP13706

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67644-1DUP, JC67644-1MS, JC67644-1MSD were used as the QC samples for Nitrogen, Ammonia.

General Chemistry By Method SM5220 C-11,HACH8000

Matrix: AQ

Batch ID: GP13708

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67577-1DUP, JC67577-1MS were used as the QC samples for Chemical Oxygen Demand.

General Chemistry By Method SW846 9060A

Matrix: AQ

Batch ID: GP13784

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67675-2MS, JC67675-2MSD were used as the QC samples for Total Organic Carbon.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the 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.

SGS North America Inc. 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 SGS North America Inc indicated via signature on the report cover

Monday, July 02, 2018

Page 3 of 3

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS Dayton, NJ

Job No: JC67675

Site: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Report Date 7/2/2018 12:01:20 AM

2 Sample(s) and 1 Field Blank(s) were collected on 06/07/2018 and were received at SGS North America Inc - Orlando on 06/13/2018 properly preserved, at 3 Deg. C and intact. These Samples received an SGS Orlando job number of JC67675. 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.

MS Semi-volatiles By Method EPA 537M BY ID

Matrix: AQ

Batch ID: OP70507

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) JC67530-2MS, JC67530-2MSD were used as the QC samples indicated.

Sample(s) JC67675-2, OP70507-MS, OP70507-MSD have surrogates outside control limits.

JC67675-2 for PFOSA: Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

JC67675-2 for 13C8-FOSA: Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

Matrix: AQ

Batch ID: OP70681

JC67675-2: Confirmation run for surrogate recoveries.

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

Narrative prepared by:

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: JC67675
Account: Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Collected: 06/07/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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JC67675-2 1-NAS-002-001-02

Chloroform	0.57 J	1.0	0.29	ug/l	SW846 8260C
Perfluorobutanoic acid ^a	12.0	8.0	2.0	ng/l	EPA 537M BY ID
Perfluoropentanoic acid ^a	20.2	4.0	1.5	ng/l	EPA 537M BY ID
Perfluorohexanoic acid ^a	18.4	4.0	1.0	ng/l	EPA 537M BY ID
Perfluoroheptanoic acid ^a	9.46	2.0	1.0	ng/l	EPA 537M BY ID
Perfluorooctanoic acid ^a	20.9	2.0	1.0	ng/l	EPA 537M BY ID
Perfluorononanoic acid ^a	1.99 J	2.0	1.0	ng/l	EPA 537M BY ID
Perfluoroundecanoic acid ^a	2.03 J	4.0	1.0	ng/l	EPA 537M BY ID
Perfluorobutanesulfonic acid ^a	3.23	2.0	1.0	ng/l	EPA 537M BY ID
Perfluorohexanesulfonic acid ^a	3.00	2.0	1.0	ng/l	EPA 537M BY ID
Perfluorooctanesulfonic acid ^a	8.78	2.0	1.5	ng/l	EPA 537M BY ID
Naphthalene	0.0494 J	0.095	0.028	ug/l	SW846 8270D BY SIM
1,4-Dioxane	0.181	0.095	0.046	ug/l	SW846 8270D BY SIM
Arsenic	0.45 J	1.0	0.33	ug/l	SW846 6020A
Barium	61.9 J	200	1.3	ug/l	SW846 6010C
Boron	20.7 J	100	13	ug/l	SW846 6010C
Iron	252	100	32	ug/l	SW846 6010C
Manganese	39.4	15	0.42	ug/l	SW846 6010C
Nickel	1.3 J	10	1.3	ug/l	SW846 6010C
Zinc	4.9 J	20	4.0	ug/l	SW846 6010C
Alkalinity, Total as CaCO ₃ ^b	203	5.0	1.1	mg/l	SM2320 B-11
Bromide ^c	0.52	0.50	0.060	mg/l	EPA 300/SW846 9056A
Chloride	151	2.0	0.070	mg/l	EPA 300/SW846 9056A
Hardness, Total as CaCO ₃	60.8	4.0	2.5	mg/l	SM2340 C-11
Solids, Total Dissolved	317	10	1.8	mg/l	SM2540 C-11
Sulfate	5.5	2.0	0.53	mg/l	EPA 300/SW846 9056A
Total Organic Carbon	2.5	1.0	0.60	mg/l	SW846 9060A

JC67675-4 1-NAS-002-001-04

No hits reported in this sample.

JC67675-6 1-NAS-002-001-06

No hits reported in this sample.

JC67675-7 1-NAS-002-001-07

No hits reported in this sample.

- (a) Analysis performed at SGS Orlando, FL.
- (b) Sample was titrated to a final pH of 4.5.
- (c) Peak shape indicates matrix interference and possible positive bias.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	1-NAS-002-001-02	Date Sampled:	06/07/18
Lab Sample ID:	JC67675-2	Date Received:	06/08/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C159751.D	1	06/12/18 20:19	HT	n/a	n/a	V2C7092
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	1.9	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	0.57	1.0	0.29	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	1.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
74-88-4	Iodomethane	ND	2.0	0.27	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/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:	1-NAS-002-001-02	Date Sampled:	06/07/18
Lab Sample ID:	JC67675-2	Date Received:	06/08/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-95-3	Methylene bromide	ND	1.0	0.45	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.47	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		80-120%
17060-07-0	1,2-Dichloroethane-D4	113%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/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:	1-NAS-002-001-02	Date Sampled:	06/07/18
Lab Sample ID:	JC67675-2	Date Received:	06/08/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P68759.D	1	06/13/18 16:12	JB	06/12/18 10:10	OP12694A	E3P3263
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.095	0.023	ug/l	
208-96-8	Acenaphthylene	ND	0.095	0.020	ug/l	
120-12-7	Anthracene	ND	0.095	0.019	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.048	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.048	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.095	0.041	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.095	0.034	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.095	0.032	ug/l	
218-01-9	Chrysene	ND	0.095	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.095	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.095	0.021	ug/l	
86-73-7	Fluorene	ND	0.095	0.023	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.095	0.036	ug/l	
91-20-3	Naphthalene	0.0494	0.095	0.028	ug/l	J
85-01-8	Phenanthrene	ND	0.095	0.022	ug/l	
129-00-0	Pyrene	ND	0.095	0.018	ug/l	
123-91-1	1,4-Dioxane	0.181	0.095	0.046	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		29-124%
321-60-8	2-Fluorobiphenyl	66%		23-122%
1718-51-0	Terphenyl-d14	88%		22-130%

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:	1-NAS-002-001-02	Date Sampled:	06/07/18
Lab Sample ID:	JC67675-2	Date Received:	06/08/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 537M BY ID EPA 537 MOD		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2Q15729.D	1	06/20/18 18:59	AFL	06/15/18 16:00	F:OP70507	F:S2Q278
Run #2 ^b	2Q16221.D	1	06/29/18 18:01	AFL	06/27/18 16:00	F:OP70681	F:S2Q288

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	12.0	8.0	2.0	ng/l	
2706-90-3	Perfluoropentanoic acid	20.2	4.0	1.5	ng/l	
307-24-4	Perfluorohexanoic acid	18.4	4.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	9.46	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	20.9	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	1.99	2.0	1.0	ng/l	J
335-76-2	Perfluorodecanoic acid	ND	4.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	2.03	4.0	1.0	ng/l	J
307-55-1	Perfluorododecanoic acid	ND	4.0	1.5	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	4.0	1.0	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	4.0	1.0	ng/l	
375-73-5	Perfluorobutanesulfonic acid	3.23	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	3.00	2.0	1.0	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	4.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	8.78	2.0	1.5	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	4.0	1.0	ng/l	
754-91-6	PFOSA ^c	ND	4.0	1.0	ng/l	
2355-31-9	MeFOSAA	ND	20	4.0	ng/l	
2991-50-6	EtFOSAA	ND	20	4.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	78%	84%	30-140%
	13C5-PFPeA	80%	78%	40-140%
	13C5-PFHxA	85%	82%	50-150%
	13C4-PFHpA	91%	82%	50-150%
	13C8-PFOA	95%	89%	50-150%
	13C9-PFNA	90%	93%	50-150%
	13C6-PFDA	82%	82%	50-150%
	13C7-PFUnDA	78%	73%	50-150%

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: 1-NAS-002-001-02		Date Sampled: 06/07/18
Lab Sample ID: JC67675-2		Date Received: 06/08/18
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: EPA 537M BY ID EPA 537 MOD		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

PFAS List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFDoDA	73%	64%	50-150%
	13C2-PFTeDA	76%	65%	40-150%
	13C3-PFBS	84%	82%	50-150%
	13C3-PFHxS	85%	80%	50-150%
	13C8-PFOS	82%	82%	50-150%
	13C8-FOSA	24% ^d	17%	30-140%
	d3-MeFOSAA	79%	73%	50-150%
	13C2-6:2FTS	93%	87%	50-150%
	13C2-8:2FTS	79%	79%	50-150%

- (a) Analysis performed at SGS Orlando, FL.
- (b) Confirmation run for surrogate recoveries. Analysis performed at SGS Orlando, FL.
- (c) Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.
- (d) Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

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: 1-NAS-002-001-02		Date Sampled: 06/07/18
Lab Sample ID: JC67675-2		Date Received: 06/08/18
Matrix: AQ - Ground Water		Percent Solids: n/a
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	0.45 J	1.0	0.33	ug/l	2	06/11/18	06/12/18 ZC	SW846 6020A ²	SW846 3010A ⁵
Barium	61.9 J	200	1.3	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Beryllium	ND	1.0	0.40	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Boron	20.7 J	100	13	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Chromium	ND	10	0.85	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Copper	ND	10	3.2	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Iron	252	100	32	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Lead	ND	3.0	2.6	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Manganese	39.4	15	0.42	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Mercury	ND	0.20	0.13	ug/l	1	06/12/18	06/12/18 JA	SW846 7470A ¹	SW846 7470A ⁶
Nickel	1.3 J	10	1.3	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Selenium	ND	10	6.6	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴
Thallium	ND	1.0	0.047	ug/l	2	06/11/18	06/12/18 ZC	SW846 6020A ²	SW846 3010A ⁵
Zinc	4.9 J	20	4.0	ug/l	1	06/11/18	06/13/18 ND	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA44634
- (2) Instrument QC Batch: MA44637
- (3) Instrument QC Batch: MA44646
- (4) Prep QC Batch: MP7603
- (5) Prep QC Batch: MP7603A
- (6) Prep QC Batch: MP7610

RL = Reporting Limit
 MDL = Method Detection Limit

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

4.1
4

Report of Analysis

Client Sample ID: 1-NAS-002-001-02	Date Sampled: 06/07/18
Lab Sample ID: JC67675-2	Date Received: 06/08/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO ₃ ^a	203	5.0	1.1	mg/l	1	06/15/18	ST	SM2320 B-11
Bromide ^b	0.52	0.50	0.060	mg/l	1	06/25/18 04:59	KS	EPA 300/SW846 9056A
Chemical Oxygen Demand	ND	20	6.3	mg/l	1	06/13/18 13:19	RP	SM5220 C-11,HACH8000
Chloride	151	2.0	0.070	mg/l	1	06/27/18 16:36	NV	EPA 300/SW846 9056A
Hardness, Total as CaCO ₃	60.8	4.0	2.5	mg/l	1	06/12/18 13:25	ST	SM2340 C-11
Nitrogen, Ammonia	ND	0.20	0.14	mg/l	1	06/13/18 11:17	BM	SM4500NH3 H-11LACHAT
Solids, Total Dissolved	317	10	1.8	mg/l	1	06/12/18 15:30	RC	SM2540 C-11
Sulfate	5.5	2.0	0.53	mg/l	1	06/25/18 04:59	KS	EPA 300/SW846 9056A
Total Organic Carbon	2.5	1.0	0.60	mg/l	1	06/15/18 17:26	CD	SW846 9060A

(a) Sample was titrated to a final pH of 4.5.

(b) Peak shape indicates matrix interference and possible positive bias.

RL = Reporting Limit
MDL = Method Detection Limit

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

Report of Analysis

Client Sample ID:	1-NAS-002-001-04	Date Sampled:	06/07/18
Lab Sample ID:	JC67675-4	Date Received:	06/08/18
Matrix:	AQ - Field Blank Water	Percent Solids:	n/a
Method:	EPA 537M BY ID EPA 537 MOD		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2Q15730.D	1	06/20/18 19:20	AFL	06/15/18 16:00	F:OP70507	F:S2Q278
Run #2							

Run #	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	8.0	2.0	ng/l	
2706-90-3	Perfluoropentanoic acid	ND	4.0	1.5	ng/l	
307-24-4	Perfluorohexanoic acid	ND	4.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	ND	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	ND	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	ND	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	ND	4.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	ND	4.0	1.0	ng/l	
307-55-1	Perfluorododecanoic acid	ND	4.0	1.5	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	4.0	1.0	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	4.0	1.0	ng/l	
375-73-5	Perfluorobutanesulfonic acid	ND	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	ND	2.0	1.0	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	4.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	2.0	1.5	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	4.0	1.0	ng/l	
754-91-6	PFOSA	ND	4.0	1.0	ng/l	
2355-31-9	MeFOSAA	ND	20	4.0	ng/l	
2991-50-6	EtFOSAA	ND	20	4.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	92%		30-140%
	13C5-PFPeA	94%		40-140%
	13C5-PFHxA	95%		50-150%
	13C4-PFHpA	101%		50-150%
	13C8-PFOA	107%		50-150%
	13C9-PFNA	93%		50-150%
	13C6-PFDA	79%		50-150%
	13C7-PFUnDA	76%		50-150%

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: 1-NAS-002-001-04		Date Sampled: 06/07/18
Lab Sample ID: JC67675-4		Date Received: 06/08/18
Matrix: AQ - Field Blank Water		Percent Solids: n/a
Method: EPA 537M BY ID EPA 537 MOD		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

PFAS List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFDoDA	77%		50-150%
	13C2-PFTeDA	81%		40-150%
	13C3-PFBS	95%		50-150%
	13C3-PFHxS	95%		50-150%
	13C8-PFOS	72%		50-150%
	13C8-FOSA	74%		30-140%
	d3-MeFOSAA	80%		50-150%
	13C2-6:2FTS	99%		50-150%
	13C2-8:2FTS	72%		50-150%

(a) Analysis performed at SGS Orlando, FL.

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

4.2
4

Report of Analysis

Client Sample ID: 1-NAS-002-001-06		Date Sampled: 06/07/18
Lab Sample ID: JC67675-6		Date Received: 06/08/18
Matrix: AQ - Equipment Blank		Percent Solids: n/a
Method: EPA 537M BY ID EPA 537 MOD		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2Q15731.D	1	06/20/18 19:40	AFL	06/15/18 16:00	F:OP70507	F:S2Q278
Run #2							

Run #	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	8.0	2.0	ng/l	
2706-90-3	Perfluoropentanoic acid	ND	4.0	1.5	ng/l	
307-24-4	Perfluorohexanoic acid	ND	4.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	ND	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	ND	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	ND	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	ND	4.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	ND	4.0	1.0	ng/l	
307-55-1	Perfluorododecanoic acid	ND	4.0	1.5	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	4.0	1.0	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	4.0	1.0	ng/l	
375-73-5	Perfluorobutanesulfonic acid	ND	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	ND	2.0	1.0	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	4.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	2.0	1.5	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	4.0	1.0	ng/l	
754-91-6	PFOSA	ND	4.0	1.0	ng/l	
2355-31-9	MeFOSAA	ND	20	4.0	ng/l	
2991-50-6	EtFOSAA	ND	20	4.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	95%		30-140%
	13C5-PFPeA	93%		40-140%
	13C5-PFHxA	98%		50-150%
	13C4-PFHpA	104%		50-150%
	13C8-PFOA	110%		50-150%
	13C9-PFNA	101%		50-150%
	13C6-PFDA	95%		50-150%
	13C7-PFUnDA	92%		50-150%

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

4.3
4

Report of Analysis

Client Sample ID: 1-NAS-002-001-06		Date Sampled: 06/07/18
Lab Sample ID: JC67675-6		Date Received: 06/08/18
Matrix: AQ - Equipment Blank		Percent Solids: n/a
Method: EPA 537M BY ID EPA 537 MOD		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

PFAS List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFDoDA	85%		50-150%
	13C2-PFTeDA	87%		40-150%
	13C3-PFBS	100%		50-150%
	13C3-PFHxS	103%		50-150%
	13C8-PFOS	100%		50-150%
	13C8-FOSA	72%		30-140%
	d3-MeFOSAA	99%		50-150%
	13C2-6:2FTS	105%		50-150%
	13C2-8:2FTS	94%		50-150%

(a) Analysis performed at SGS Orlando, FL.

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

4.3
4

Report of Analysis

Client Sample ID:	1-NAS-002-001-07	Date Sampled:	06/07/18
Lab Sample ID:	JC67675-7	Date Received:	06/08/18
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C159745.D	1	06/12/18 17:27	HT	n/a	n/a	V2C7092
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	1.9	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	1.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
74-88-4	Iodomethane	ND	2.0	0.27	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/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:	1-NAS-002-001-07	Date Sampled:	06/07/18
Lab Sample ID:	JC67675-7	Date Received:	06/08/18
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-95-3	Methylene bromide	ND	1.0	0.45	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.47	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-120%
17060-07-0	1,2-Dichloroethane-D4	112%		81-124%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

CHAIN-OF-CUSTODY / Analytical Request Document

Section A Laboratory Information				Section B Client Information					COC #:									
Lab Name: SGS - Accutest				Company: Parsons/OBG					Project Name:									
Attention: Tammy Esposito McCloskey				Attention: Scott Tucker					ILI - Region 1									
Address: Route 2235 Route 130; Dayton, NJ 08810				Address: 333 West Washington Street, PO Box 4873 Syracuse, NY 13221					Project Site: Denton Ave LF									
Phone: 732-329-0200				Phone: 315-956-6345					Project Number: 450619									
Email:				Email: Scott.Tucker@obg.com					Preservative codes (for water only):									
Section C Deliverable Requirements				Purchase Order No:					0 1 0 2 3 1 0 0 3									
Report To: Scott.Tucker@obg.com				TAT - 10 Day					Composites (Y/N)									
Copy To: Lorraine.Weber@parsons.com; Laura.Drachenberg@parsons.com				Section D Additional Information					#Bottles									
Marianne.Kosciewicz@parsons.com; Heather.Fettig@parsons.com									NS/MSD									
Deliverables: Level 2, CAT B Report, NYSDEC EQUIS EDD									0 1 0 2 3 1 0 0 3									
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID MUST BE UNIQUE	Sample Date	Sample Time	Sample Purpose	Sample Matrix	Sample Type	# of Cont.	0	1	2	3	1	0	0	3	
1 1-NAS-002-MW-2	57.46	57.46	1-NAS-002-001-01	6/7/18	1225	-	WG	N	13	X	X	X	X	X	X	X	X	X
2 1-NAS-002-MW-1	37.35	37.35	1-NAS-002-001-02		1215	-	WG	N	13	X	X	X	X	X	X	X	X	X
3 1-NAS-002-MW-3			1-NAS-002-001-03		1620	-	WG	N	13	X	X	X	X	X	X	X	X	X
4 1-NAS-002-FIELD RC	-	-	1-NAS-002-001-04		1220	-	WQ	FB	2	X	X	X	X	X	X	X	X	X
5 1-NAS-002-FIELD RC	-	-	1-NAS-002-001-05		1230	-	WQ	FB	2	X	X	X	X	X	X	X	X	X
6 1-NAS-002-FIELD RC	-	-	1-NAS-002-001-06		1235	-	WQ	EB	2	X	X	X	X	X	X	X	X	X
7 1-NAS-002-FIELD RC	-	-	1-NAS-002-001-07	↓	-	-	WQ	TB	2			X						
8																		
9																		
10																		
Special Instructions:										INITIAL ASSESSMENT <i>3P Done</i>								
Samplers Name: <i>Sara Hahn</i>				Company: <i>OBG</i>		Relinquished By: <i>[Signature]</i>		Company: <i>OBG</i>		Label Verification:				Custody Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>				
Shipment Method: <i>Rel Ex</i>				Date/Time: <i>6/7/18</i>		Accepted By: <i>[Signature]</i>		Date/Time: <i>6/7/18</i>		Rec'd on Ice: Yes <input type="checkbox"/> No <input type="checkbox"/>				Samples Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>				
Date/Time:				Shipment Tracking No:		Company:		Date/Time:		Cooler Temp.:				Custody Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>				
Date/Time:				Date/Time:		Date/Time:		Date/Time:		Rec'd on Ice: Yes <input type="checkbox"/> No <input type="checkbox"/>				Samples Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>				
Preservatives: 0 = None; [1 = HCL]; [2 = HNO3]; [3 = H2SO4]; [4 = NaOH]; [5 = Zn Acetate]; [6 = MeOH]; [7 = NaHSO4]; 8 = Other (H3PO4);																		

1	1-NAS-002-MW-2	57.46	57.46	1-NAS-002-001-01	6/7/18	1225	-	WG	N	13	X	X	X	X	X	X	X	X
2	1-NAS-002-MW-1	37.35	37.35	1-NAS-002-001-02		1215	-	WG	N	13	X	X	X	X	X	X	X	X
3	1-NAS-002-MW-3			1-NAS-002-001-03		1620	-	WG	N	13	X	X	X	X	X	X	X	X
4	1-NAS-002-FIELD RC	-	-	1-NAS-002-001-04		1220	-	WQ	FB	2	X	X	X	X	X	X	X	X
5	1-NAS-002-FIELD RC	-	-	1-NAS-002-001-05		1230	-	WQ	FB	2	X	X	X	X	X	X	X	X
6	1-NAS-002-FIELD RC	-	-	1-NAS-002-001-06		1235	-	WQ	EB	2	X	X	X	X	X	X	X	X
7	1-NAS-002-FIELD RC	-	-	1-NAS-002-001-07	↓	-	-	WQ	TB	2			X					

E79
A35
C19
ASOT4
1931
U687

Rel: *EX* *2/8/18 9:20* *Red* *[Signature]* *6/8/18 9:20* *3.1, 4.0 c-tp*

I:\Parsons-Eng 8653\65982.Inactive-Landfill\N-D\COC Blank\COC for ILI_Region 4_6.xlsx

SGS Sample Receipt Summary

Job Number: JC67675

Client: PARSONS

Project: OBGNYA: ILI - REGION 1, DENTON AVENUE L

Date / Time Received: 6/8/2018 9:20:00 AM

Delivery Method:

Airbill #'s:

Cooler Temps (Raw Measured) °C: Cooler 1: (4.0); Cooler 2: (3.1);

Cooler Temps (Corrected) °C: Cooler 1: (4.0); Cooler 2: (3.1);

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Test Strip Lot #s:	pH 1-12: 216017	pH 12+: 208717	Other: (Specify)
--------------------	-----------------	----------------	------------------

Comments

SM089-03
Rev. Date 12/7/17

JC67675: Chain of Custody

Page 2 of 4

5.1
5

GW, FB, EB, WTB

KDI-06418-55

CHAIN-OF-CUSTODY / Analytical Request Document

JC67675

Section A Laboratory Information			Section B Client Information				COC #: 1-NAS-002-001																		
Lab Name: SGS - Accutest			Company: Parsons/OBG				Project Name: ILI - Region 1																		
Attention: Tammy Esposito McCloskey			Attention: Scott Tucker				Project Site: Denton Ave LF																		
Address: Route 2235 Route 130; Dayton, NJ 08810			Address: 333 West Washington Street, PO Box 4873 Syracuse, NY 13221				Project Number: 450619																		
Phone: 732-329-0200			Phone: 315-956-6345																						
Email:			Email: Scott.Tucker@obg.com																						
Section C Deliverable Requirements			Section D Additional Information																						
Report To: Scott.Tucker@obg.com			Purchase Order No:																						
Copy To: Lorraine.Weber@parsons.com; Laura.Drachenberg@parsons.com Maryanne.Kosciewicz@parsons.com; Heather.Fettig@parsons.com			TAT - 10 Day																						
Deliverables: Level 2, CAT B Report, NYSDEC EQUIS EDD																									
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID MUST BE UNIQUE	Sample Date	Sample Time	Sample Purpose	Sample Matrix	Sample Type	# of Cont.	Preservative codes (for water only):														
											0	1	0	2	3	1	0	0	3						
											Ammonia 350.15(NH3) 0.00 Arsenic - SM20 22.08 500/CM/HRD/TTS - 300/5W/25/00 Modified Baseline VOCs - 8160 TOC - 9060A CO2 - 410-4 Mod Soil MetWater 6010/70/50/30 2140 Para + 1, 4 - Ozone/82/05/04 PHS Modified 527 Composite (V/N) #Bottles														
1	1-1-NAS-002-MW-2	57.46	57.46	1-NAS-002-001-01	6/7/18	1225	---	WG	N	13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Discard
2	1-NAS-002-MW-1	37.35	37.35	1-NAS-002-001-02		1215	---	WG	N	13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	1-NAS-002-MW-3			1-NAS-002-001-03		1620	---	WG	N	13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Discard
4	1-NAS-002-FIELD QC	-	-	1-NAS-002-001-04		1220	---	WQ	FB	2	X														
5	1-NAS-002-FIELD QC			1-NAS-002-001-05		1230	---	WQ	FB	2	X														Discard
6	1-NAS-002-FIELD QC	-	-	1-NAS-002-001-06		1235	---	WQ	EB	2	X														
7	1-NAS-002-FIELD QC	-	-	1-NAS-002-001-07			---	WQ	TB	2	X														
8																									
9																									
10																									
Special Instructions:																									
Discard samples -1, -3, -5																									
												INITIAL ASSESSMENT <i>3P Don</i>													
Samplers Name: <i>Sara Haber</i>			Company: <i>OBG</i>			Relinquished By: <i>[Signature]</i>			Company: <i>OBG</i>			LAB VERIFICATION: <i>[Signature]</i>			Custody Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>										
Date/Time: <i>6/7/18</i>			Date/Time: <i>6/7/18</i>			Accepted By: <i>[Signature]</i>			Company: <i>OBG</i>			Cooler Temp.: <i>[Blank]</i>			Samples Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>										
Shipment Method: <i>Rel Ex</i>			Shipment Tracking No: <i>[Blank]</i>			Date/Time: <i>[Blank]</i>			Date/Time: <i>[Blank]</i>			Rec'd on Ice: Yes <input type="checkbox"/> No <input type="checkbox"/>			Custody Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>										
Preservatives: 0 = None; [1 = HCL]; [2 = HNO3]; [3 = H2SO4]; [4 = NaOH]; [5 = Zn Acetate]; [6 = MeOH]; [7 = NaHSO4]; 8 = Other (H3PO4):																									

5.1
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E79
A35
G9
G5074
1931
U687

Rel: EX 2/2/18 9:20 Rec'd *[Signature]* 6/8/18 9:20 3.1, 4.0 c-ip

I:\Parsons-Eng.8653\65982.Inactive-Landf\N\D\COC Blank\COC for ILI_Region 4_6.xlsx

Job Change Order: JC67675

Requested Date: 6/11/2018 **Received Date:** 6/8/2018
Account Name: Parsons Engineering Science for **Due Date:** 6/22/2018
Project Description: OBGNYA: ILI - Region 1, Denton Avenue Landfill **Deliverable:** NYASPB
C/O Initiated By: KD **PM:** KD **TAT (Days):** 14

=====
Sample #: JC67675-1, -3, -5 **Change:**
Please cancel all tests and add HOLDCREDIT.
Dept:

TAT: 14
=====

JC67675: Chain of Custody
Page 4 of 4

Above Changes Per: Client / Scott Tucker **Date/Time:** 6/11/2018 2:52:09 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Internal Sample Tracking Chronicle

Parsons Engineering Science for ILI

Job No: JC67675

OBGNYA: ILI - Region 1, Denton Avenue Landfill
 Project No: 450619

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5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC67675-2 Collected: 07-JUN-18 12:15 By: SH Received: 08-JUN-18 By: AS 1-NAS-002-001-02						
JC67675-2	SW846 7470A	12-JUN-18 11:28	JA	12-JUN-18	JA	HG
JC67675-2	SM2340 C-11	12-JUN-18 13:25	ST			HRD
JC67675-2	SW846 6020A	12-JUN-18 15:10	ZC	11-JUN-18	CH	ASMS, TLMS
JC67675-2	SM2540 C-11	12-JUN-18 15:30	RC			TDS
JC67675-2	SW846 8260C	12-JUN-18 20:19	HT			V8260SL+
JC67675-2	SM4500NH3 H-11LACHA	13-JUN-18 11:17	BM	13-JUN-18	BM	AMN
JC67675-2	SM5220 C-11, HACH8000	13-JUN-18 13:19	RP	13-JUN-18	RP	COD
JC67675-2	SW846 6010C	13-JUN-18 15:44	ND	11-JUN-18	CH	B, BA, BE, CR, CU, FE, MN, NI, PB, SE, ZN
JC67675-2	SW846 8270D BY SIM	13-JUN-18 16:12	JB	12-JUN-18	YB	B8270SIMP AH
JC67675-2	SM2320 B-11	15-JUN-18	ST			ALK
JC67675-2	SW846 9060A	15-JUN-18 17:26	CD	15-JUN-18	CD	TOCSW846
JC67675-2	EPA 537M BY ID	20-JUN-18 18:59	AFL	15-JUN-18		LCID537NY21
JC67675-2	EPA 300/SW846 9056A25	25-JUN-18 04:59	KS	24-JUN-18	KS	BRO, SO4
JC67675-2	EPA 300/SW846 9056A27	27-JUN-18 16:36	NV	26-JUN-18	NV	CHL
JC67675-2	EPA 537M BY ID	29-JUN-18 18:01	AFL	27-JUN-18		LCID537NY21
JC67675-4 Collected: 07-JUN-18 12:20 By: SH Received: 08-JUN-18 By: AS 1-NAS-002-001-04						
JC67675-4	EPA 537M BY ID	20-JUN-18 19:20	AFL	15-JUN-18		LCID537NY21
JC67675-6 Collected: 07-JUN-18 13:35 By: SH Received: 08-JUN-18 By: AS 1-NAS-002-001-06						
JC67675-6	EPA 537M BY ID	20-JUN-18 19:40	AFL	15-JUN-18		LCID537NY21
JC67675-7 Collected: 07-JUN-18 16:20 By: SH Received: 08-JUN-18 By: AS 1-NAS-002-001-07						
JC67675-7	SW846 8260C	12-JUN-18 17:27	HT			V8260SL+

SGS Internal Chain of Custody

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/08/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67675-1.1	Secured Storage	Jennifer Voitovitch	06/11/18 22:04	Retrieve from Storage
JC67675-1.1	Jennifer Voitovitch	Secured Staging Area	06/11/18 22:04	Return to Storage
JC67675-1.1	Secured Staging Area	Vikas Parikh	06/12/18 08:29	Retrieve from Storage
JC67675-1.1	Vikas Parikh		06/12/18 10:33	Depleted
JC67675-1.1.1	Vikas Parikh	Organics Prep	06/12/18 08:29	Extract from JC67675-1.1
JC67675-1.1.1	Organics Prep	Yaw Britwum	06/12/18 14:33	Extract from JC67675-1.1
JC67675-1.1.1	Yaw Britwum	Extract Storage	06/12/18 14:33	Return to Storage
JC67675-1.1.1	Extract Storage	John Boudreau	06/13/18 10:39	Retrieve from Storage
JC67675-1.1.1	John Boudreau	GCMS3P	06/13/18 10:39	Load on Instrument
JC67675-1.1.1	GCMS3P	John Boudreau	06/14/18 11:32	Unload from Instrument
JC67675-1.1.1	John Boudreau	Extract Freezer	06/14/18 11:32	Return to Storage
JC67675-1.1.1	Extract Freezer		07/23/18 09:00	Disposed
JC67675-1.3	Secured Storage	Todd Shoemaker	06/11/18 14:06	Retrieve from Storage
JC67675-1.3	Todd Shoemaker	Secured Staging Area	06/11/18 14:07	Return to Storage
JC67675-1.3	Secured Staging Area	Colleen Hill	06/11/18 15:45	Retrieve from Storage
JC67675-1.3	Colleen Hill	Secured Storage	06/11/18 16:53	Return to Storage
JC67675-1.3	Secured Storage	Jennifer Voitovitch	06/11/18 19:10	Retrieve from Storage
JC67675-1.3	Jennifer Voitovitch	Secured Staging Area	06/11/18 19:10	Return to Storage
JC67675-1.3	Secured Staging Area	Jessica Adametz	06/12/18 07:26	Retrieve from Storage
JC67675-1.3	Jessica Adametz	Secured Storage	06/12/18 14:47	Return to Storage
JC67675-1.3	Tim Hudson		08/03/18 14:57	Disposed
JC67675-1.9	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-1.9	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-1.10	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-1.10	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-2.2	Secured Storage	Jennifer Voitovitch	06/11/18 22:04	Retrieve from Storage
JC67675-2.2	Jennifer Voitovitch	Secured Staging Area	06/11/18 22:04	Return to Storage
JC67675-2.2	Secured Staging Area	Vikas Parikh	06/12/18 08:29	Retrieve from Storage
JC67675-2.2	Vikas Parikh		06/12/18 10:33	Depleted
JC67675-2.2.1	Vikas Parikh	Organics Prep	06/12/18 08:29	Extract from JC67675-2.2
JC67675-2.2.1	Organics Prep	Yaw Britwum	06/12/18 14:33	Extract from JC67675-2.2
JC67675-2.2.1	Yaw Britwum	Extract Storage	06/12/18 14:33	Return to Storage
JC67675-2.2.1	Extract Storage	John Boudreau	06/13/18 10:39	Retrieve from Storage
JC67675-2.2.1	John Boudreau	GCMS3P	06/13/18 10:39	Load on Instrument
JC67675-2.2.1	GCMS3P	John Boudreau	06/14/18 11:32	Unload from Instrument
JC67675-2.2.1	John Boudreau	Extract Freezer	06/14/18 11:32	Return to Storage
JC67675-2.2.1	Extract Freezer		07/23/18 09:00	Disposed

5.3
5

SGS Internal Chain of Custody

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/08/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67675-2.3	Secured Storage	Todd Shoemaker	06/11/18 14:06	Retrieve from Storage
JC67675-2.3	Todd Shoemaker	Secured Staging Area	06/11/18 14:07	Return to Storage
JC67675-2.3	Secured Staging Area	Colleen Hill	06/11/18 15:45	Retrieve from Storage
JC67675-2.3	Colleen Hill	Secured Storage	06/11/18 16:53	Return to Storage
JC67675-2.3	Secured Storage	Jennifer Voitovitch	06/11/18 19:10	Retrieve from Storage
JC67675-2.3	Jennifer Voitovitch	Secured Staging Area	06/11/18 19:10	Return to Storage
JC67675-2.3	Secured Staging Area	Jessica Adametz	06/12/18 07:26	Retrieve from Storage
JC67675-2.3	Jessica Adametz	Sarvadaman Tripathi	06/12/18 08:26	Custody Transfer
JC67675-2.3	Sarvadaman Tripathi	Secured Storage	06/12/18 18:17	Return to Storage
JC67675-2.3	Tim Hudson		08/03/18 14:57	Disposed
JC67675-2.3.1	Colleen Hill	Metals Digestion	06/11/18 16:47	Digestate from JC67675-2.3
JC67675-2.3.1	Metals Digestion	Colleen Hill	06/11/18 16:47	Digestate from JC67675-2.3
JC67675-2.3.1	Colleen Hill	Metals Digestate Storage	06/11/18 16:47	Return to Storage
JC67675-2.3.1	Metals Digestate Storage		08/20/18 09:00	Disposed
JC67675-2.4	Secured Storage	Matthew Robbins	06/12/18 18:24	Retrieve from Storage
JC67675-2.4	Matthew Robbins	Secured Staging Area	06/12/18 18:24	Return to Storage
JC67675-2.4	Secured Staging Area	Beatrice Marcelino	06/13/18 07:57	Retrieve from Storage
JC67675-2.4	Beatrice Marcelino	Secured Storage	06/14/18 07:29	Return to Storage
JC67675-2.4	Tim Hudson		08/03/18 14:57	Disposed
JC67675-2.5	Secured Storage	Benjamin Gaines	06/12/18 09:29	Retrieve from Storage
JC67675-2.5	Benjamin Gaines	Secured Staging Area	06/12/18 09:29	Return to Storage
JC67675-2.5	Secured Staging Area	Ruchitaben Chauhan	06/12/18 10:27	Retrieve from Storage
JC67675-2.5	Ruchitaben Chauhan	Secured Storage	06/12/18 16:49	Return to Storage
JC67675-2.5	Secured Storage	Luis Villanueva	06/13/18 19:57	Retrieve from Storage
JC67675-2.5	Luis Villanueva	Secured Staging Area	06/13/18 19:57	Return to Storage
JC67675-2.5	Secured Staging Area	Mahendra Patel	06/14/18 08:16	Retrieve from Storage
JC67675-2.5	Mahendra Patel	Secured Storage	06/14/18 17:09	Return to Storage
JC67675-2.5	Secured Storage	Todd Shoemaker	06/15/18 10:10	Retrieve from Storage
JC67675-2.5	Todd Shoemaker	Secured Staging Area	06/15/18 10:10	Return to Storage
JC67675-2.5	Secured Staging Area	Dave Hunkele	06/19/18 06:07	Retrieve from Storage
JC67675-2.5	Dave Hunkele	Secured Storage	06/19/18 06:10	Return to Storage
JC67675-2.5	Secured Storage	Todd Shoemaker	06/21/18 11:13	Retrieve from Storage
JC67675-2.5	Todd Shoemaker	Secured Staging Area	06/21/18 11:13	Return to Storage
JC67675-2.5	Secured Staging Area	Karthika Sathayamoorthy	06/21/18 11:17	Retrieve from Storage
JC67675-2.5	Karthika Sathayamoorthy	Secured Storage	06/21/18 17:00	Return to Storage
JC67675-2.5	Secured Storage	Dave Hunkele	06/23/18 09:27	Retrieve from Storage
JC67675-2.5	Dave Hunkele	Secured Staging Area	06/23/18 09:27	Return to Storage
JC67675-2.5	Secured Staging Area	Natasha Verma	06/23/18 09:29	Retrieve from Storage
JC67675-2.5	Natasha Verma	Secured Staging Area	06/23/18 18:42	Return to Storage
JC67675-2.5	Secured Staging Area	Todd Shoemaker	06/25/18 13:13	Retrieve from Storage
JC67675-2.5	Todd Shoemaker	Secured Storage	06/25/18 13:13	Return to Storage

5.3
5

SGS Internal Chain of Custody

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/08/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67675-2.5	Secured Storage	Todd Shoemaker	06/25/18 14:36	Retrieve from Storage
JC67675-2.5	Todd Shoemaker	Secured Staging Area	06/25/18 14:36	Return to Storage
JC67675-2.5	Secured Staging Area	Karthika Sathayamoorthy	06/25/18 14:44	Retrieve from Storage
JC67675-2.5	Karthika Sathayamoorthy	Secured Storage	06/25/18 17:11	Return to Storage
JC67675-2.5	Secured Storage	Todd Shoemaker	06/27/18 09:14	Retrieve from Storage
JC67675-2.5	Todd Shoemaker	Secured Staging Area	06/27/18 09:14	Return to Storage
JC67675-2.5	Secured Staging Area	Natasha Verma	06/27/18 09:46	Retrieve from Storage
JC67675-2.5	Natasha Verma	Secured Staging Area	06/27/18 18:16	Return to Storage
JC67675-2.5	Secured Staging Area	Dave Hunkele	06/29/18 06:08	Retrieve from Storage
JC67675-2.5	Dave Hunkele	Secured Storage	06/29/18 06:10	Return to Storage
JC67675-2.5	Tim Hudson		08/03/18 14:57	Disposed
JC67675-2.6	Secured Storage	Dave Hunkele	06/15/18 11:00	Retrieve from Storage
JC67675-2.6	Dave Hunkele	Secured Staging Area	06/15/18 11:00	Return to Storage
JC67675-2.6	Secured Staging Area	Sarvadaman Tripathi	06/15/18 12:47	Retrieve from Storage
JC67675-2.6	Sarvadaman Tripathi	Secured Storage	06/15/18 17:54	Return to Storage
JC67675-2.6	Secured Storage	Sahara Feliciano	06/24/18 08:53	Retrieve from Storage
JC67675-2.6	Sahara Feliciano	Secured Staging Area	06/24/18 08:53	Return to Storage
JC67675-2.6	Secured Staging Area	Karthika Sathayamoorthy	06/24/18 10:29	Retrieve from Storage
JC67675-2.6	Karthika Sathayamoorthy	Secured Storage	06/24/18 18:26	Return to Storage
JC67675-2.6	Secured Storage	Dwayne Johnson	06/26/18 11:21	Retrieve from Storage
JC67675-2.6	Dwayne Johnson	Secured Staging Area	06/26/18 11:22	Return to Storage
JC67675-2.6	Secured Staging Area	Karthika Sathayamoorthy	06/26/18 11:31	Retrieve from Storage
JC67675-2.6	Karthika Sathayamoorthy	Secured Storage	06/26/18 17:03	Return to Storage
JC67675-2.6	Tim Hudson		08/03/18 14:57	Disposed
JC67675-2.8	Secured Storage	Sahara Feliciano	06/14/18 14:19	Retrieve from Storage
JC67675-2.8	Sahara Feliciano	Secured Staging Area	06/14/18 14:19	Return to Storage
JC67675-2.8	Secured Staging Area	Courtney Dringus	06/15/18 08:01	Retrieve from Storage
JC67675-2.8	Courtney Dringus	Secured Storage	06/15/18 13:50	Return to Storage
JC67675-2.8	Tim Hudson		08/03/18 14:57	Disposed
JC67675-2.9	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-2.9	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-2.10	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-2.10	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-2.11	Secured Storage	Hueanh Tran	06/12/18 10:55	Retrieve from Storage
JC67675-2.11	Hueanh Tran	GCMS2C	06/12/18 10:55	Load on Instrument
JC67675-2.11	GCMS2C	Hueanh Tran	06/13/18 10:16	Unload from Instrument
JC67675-2.11	Hueanh Tran	Secured Storage	06/13/18 10:16	Return to Storage
JC67675-2.11	Tim Hudson		08/03/18 14:57	Disposed

5.3
5

SGS Internal Chain of Custody

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/08/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67675-3.2	Secured Storage	Jennifer Voitovitch	06/11/18 22:04	Retrieve from Storage
JC67675-3.2	Jennifer Voitovitch	Secured Staging Area	06/11/18 22:04	Return to Storage
JC67675-3.2	Secured Staging Area	Vikas Parikh	06/12/18 08:29	Retrieve from Storage
JC67675-3.2	Vikas Parikh		06/12/18 10:33	Depleted
JC67675-3.2.1	Vikas Parikh	Organics Prep	06/12/18 08:29	Extract from JC67675-3.2
JC67675-3.2.1	Organics Prep	Yaw Britwum	06/12/18 14:33	Extract from JC67675-3.2
JC67675-3.2.1	Yaw Britwum	Extract Storage	06/12/18 14:33	Return to Storage
JC67675-3.2.1	Extract Storage	John Boudreau	06/13/18 10:39	Retrieve from Storage
JC67675-3.2.1	John Boudreau	GCMS3P	06/13/18 10:39	Load on Instrument
JC67675-3.2.1	GCMS3P	John Boudreau	06/14/18 11:32	Unload from Instrument
JC67675-3.2.1	John Boudreau	Extract Freezer	06/14/18 11:32	Return to Storage
JC67675-3.2.1	Extract Freezer		07/23/18 09:00	Disposed
JC67675-3.3	Secured Storage	Todd Shoemaker	06/11/18 14:06	Retrieve from Storage
JC67675-3.3	Todd Shoemaker	Secured Staging Area	06/11/18 14:07	Return to Storage
JC67675-3.3	Secured Staging Area	Colleen Hill	06/11/18 15:45	Retrieve from Storage
JC67675-3.3	Colleen Hill	Secured Storage	06/11/18 16:53	Return to Storage
JC67675-3.3	Secured Storage	Jennifer Voitovitch	06/11/18 19:10	Retrieve from Storage
JC67675-3.3	Jennifer Voitovitch	Secured Staging Area	06/11/18 19:10	Return to Storage
JC67675-3.3	Secured Staging Area	Jessica Adametz	06/12/18 07:26	Retrieve from Storage
JC67675-3.3	Jessica Adametz	Secured Storage	06/12/18 14:47	Return to Storage
JC67675-3.3	Tim Hudson		08/03/18 14:57	Disposed
JC67675-3.6	Secured Storage	Matthew Robbins	06/26/18 14:55	Retrieve from Storage
JC67675-3.6	Matthew Robbins	Secured Staging Area	06/26/18 14:55	Return to Storage
JC67675-3.6	Secured Staging Area	Karthika Sathayamoorthy	06/26/18 14:57	Retrieve from Storage
JC67675-3.6	Karthika Sathayamoorthy	Secured Storage	06/26/18 17:03	Return to Storage
JC67675-3.6	Tim Hudson		08/03/18 14:57	Disposed
JC67675-3.9	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-3.9	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-3.10	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-3.10	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-4.1	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-4.1	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-4.2	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-4.2	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-5.1	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-5.1	Robert Lofrano		06/12/18 14:48	Subcontract

5.3
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SGS Internal Chain of Custody

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/08/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC67675-5.2	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-5.2	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-6.1	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-6.1	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-6.2	Secured Storage	Robert Lofrano	06/12/18 08:17	Retrieve from Storage
JC67675-6.2	Robert Lofrano		06/12/18 14:48	Subcontract
JC67675-7.2	Secured Storage	Hueanh Tran	06/12/18 10:55	Retrieve from Storage
JC67675-7.2	Hueanh Tran	GCMS2C	06/12/18 10:55	Load on Instrument
JC67675-7.2	GCMS2C	Hueanh Tran	06/13/18 10:16	Unload from Instrument
JC67675-7.2	Hueanh Tran	Secured Storage	06/13/18 10:16	Return to Storage
JC67675-7.2	Tim Hudson		08/03/18 14:57	Disposed

5.3
5

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: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2C7092-MB	2C159732.D	1	06/12/18	HT	n/a	n/a	V2C7092

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67675-2, JC67675-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	1.9	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	1.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
74-88-4	Iodomethane	ND	2.0	0.27	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.45	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.19	ug/l	

Method Blank Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2C7092-MB	2C159732.D	1	06/12/18	HT	n/a	n/a	V2C7092

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67675-2, JC67675-7

CAS No.	Compound	Result	RL	MDL	Units	Q
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.47	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	108% 80-120%
17060-07-0	1,2-Dichloroethane-D4	108% 81-124%
2037-26-5	Toluene-D8	97% 80-120%
460-00-4	4-Bromofluorobenzene	100% 80-120%

CAS No.	Tentatively Identified Compounds	R. T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2C7092-BS	2C159730.D	1	06/12/18	HT	n/a	n/a	V2C7092

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67675-2, JC67675-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	192	96	42-150
107-13-1	Acrylonitrile	50	47.8	96	70-135
71-43-2	Benzene	50	47.8	96	80-120
74-97-5	Bromochloromethane	50	52.8	106	84-121
75-27-4	Bromodichloromethane	50	49.4	99	83-120
75-25-2	Bromoform	50	56.3	113	76-129
74-83-9	Bromomethane	50	46.4	93	57-138
78-93-3	2-Butanone (MEK)	200	194	97	64-137
75-15-0	Carbon disulfide	50	51.0	102	64-137
56-23-5	Carbon tetrachloride	50	55.8	112	75-135
108-90-7	Chlorobenzene	50	47.7	95	84-117
75-00-3	Chloroethane	50	41.4	83	63-132
67-66-3	Chloroform	50	46.9	94	80-119
74-87-3	Chloromethane	50	52.4	105	46-136
96-12-8	1,2-Dibromo-3-chloropropane	50	50.7	101	72-127
124-48-1	Dibromochloromethane	50	54.3	109	80-123
106-93-4	1,2-Dibromoethane	50	50.2	100	84-117
95-50-1	1,2-Dichlorobenzene	50	49.2	98	84-119
106-46-7	1,4-Dichlorobenzene	50	48.4	97	82-117
110-57-6	trans-1,4-Dichloro-2-Butene	50	39.9	80	32-148
75-34-3	1,1-Dichloroethane	50	48.0	96	79-120
107-06-2	1,2-Dichloroethane	50	47.2	94	78-126
75-35-4	1,1-Dichloroethene	50	48.6	97	69-126
156-59-2	cis-1,2-Dichloroethene	50	46.8	94	80-120
156-60-5	trans-1,2-Dichloroethene	50	46.7	93	76-120
78-87-5	1,2-Dichloropropane	50	48.5	97	82-121
10061-01-5	cis-1,3-Dichloropropene	50	47.4	95	83-120
10061-02-6	trans-1,3-Dichloropropene	50	46.4	93	82-121
100-41-4	Ethylbenzene	50	46.4	93	80-120
591-78-6	2-Hexanone	200	178	89	65-132
74-88-4	Iodomethane	50	49.0	98	72-128
108-10-1	4-Methyl-2-pentanone(MIBK)	200	195	98	71-131
74-95-3	Methylene bromide	50	48.8	98	85-120
75-09-2	Methylene chloride	50	45.3	91	77-120
100-42-5	Styrene	50	45.5	91	82-122
630-20-6	1,1,1,2-Tetrachloroethane	50	51.3	103	82-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2C7092-BS	2C159730.D	1	06/12/18	HT	n/a	n/a	V2C7092

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67675-2, JC67675-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-34-5	1,1,2,2-Tetrachloroethane	50	48.8	98	76-119
127-18-4	Tetrachloroethene	50	51.3	103	70-131
108-88-3	Toluene	50	47.1	94	80-120
71-55-6	1,1,1-Trichloroethane	50	46.5	93	81-128
79-00-5	1,1,2-Trichloroethane	50	45.6	91	83-118
79-01-6	Trichloroethene	50	47.8	96	80-120
75-69-4	Trichlorofluoromethane	50	49.4	99	64-136
96-18-4	1,2,3-Trichloropropane	50	51.4	103	79-120
108-05-4	Vinyl Acetate	50	51.9	104	76-132
75-01-4	Vinyl chloride	50	51.8	104	51-135
	m,p-Xylene	100	95.1	95	80-120
95-47-6	o-Xylene	50	49.8	100	80-120
1330-20-7	Xylene (total)	150	145	97	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	98%	80-120%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67672-1QMS	2C159741.D	1	06/12/18	HT	n/a	n/a	V2C7092
JC67672-1Q	2C159735.D	1	06/12/18	HT	n/a	n/a	V2C7092

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67675-2, JC67675-7

CAS No.	Compound	JC67672-1Q Spike		MS	MS	Limits
		ug/l	Q ug/l	ug/l	%	
67-64-1	Acetone	ND	200	168	84	34-149
107-13-1	Acrylonitrile	ND	50	40.9	82	62-138
71-43-2	Benzene	ND	50	45.2	90	54-136
74-97-5	Bromochloromethane	ND	50	47.8	96	79-124
75-27-4	Bromodichloromethane	ND	50	45.8	92	79-124
75-25-2	Bromoform	ND	50	49.7	99	71-130
74-83-9	Bromomethane	ND	50	44.2	88	53-142
78-93-3	2-Butanone (MEK)	ND	200	166	83	54-142
75-15-0	Carbon disulfide	ND	50	48.5	97	59-145
56-23-5	Carbon tetrachloride	ND	50	55.2	110	70-143
108-90-7	Chlorobenzene	ND	50	44.8	90	78-123
75-00-3	Chloroethane	ND	50	41.3	83	57-141
67-66-3	Chloroform	ND	50	44.3	89	76-123
74-87-3	Chloromethane	ND	50	49.7	99	43-141
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	43.7	87	66-130
124-48-1	Dibromochloromethane	ND	50	48.4	97	76-125
106-93-4	1,2-Dibromoethane	ND	50	46.0	92	78-119
95-50-1	1,2-Dichlorobenzene	ND	50	44.3	89	77-123
106-46-7	1,4-Dichlorobenzene	ND	50	44.6	89	76-122
110-57-6	trans-1,4-Dichloro-2-Butene	ND	50	26.2	52	17-148
75-34-3	1,1-Dichloroethane	ND	50	45.2	90	73-126
107-06-2	1,2-Dichloroethane	ND	50	44.1	88	72-131
75-35-4	1,1-Dichloroethene	ND	50	47.7	95	63-136
156-59-2	cis-1,2-Dichloroethene	ND	50	43.8	88	60-136
156-60-5	trans-1,2-Dichloroethene	ND	50	45.2	90	70-126
78-87-5	1,2-Dichloropropane	ND	50	45.1	90	78-124
10061-01-5	cis-1,3-Dichloropropene	ND	50	43.9	88	79-123
10061-02-6	trans-1,3-Dichloropropene	ND	50	41.9	84	77-123
100-41-4	Ethylbenzene	ND	50	43.4	87	51-140
591-78-6	2-Hexanone	ND	200	158	79	56-139
74-88-4	Iodomethane	ND	50	46.2	92	67-132
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	200	175	88	66-136
74-95-3	Methylene bromide	ND	50	45.3	91	81-121
75-09-2	Methylene chloride	ND	50	42.5	85	73-125
100-42-5	Styrene	ND	50	43.1	86	75-129
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	46.9	94	77-124

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67672-1QMS	2C159741.D	1	06/12/18	HT	n/a	n/a	V2C7092
JC67672-1Q	2C159735.D	1	06/12/18	HT	n/a	n/a	V2C7092

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67675-2, JC67675-7

CAS No.	Compound	JC67672-1Q Spike		MS	MS	Limits
		ug/l	Q ug/l	ug/l	%	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	43.0	86	71-122
127-18-4	Tetrachloroethene	ND	50	49.5	99	61-139
108-88-3	Toluene	ND	50	42.8	86	60-135
71-55-6	1,1,1-Trichloroethane	ND	50	45.2	90	74-138
79-00-5	1,1,2-Trichloroethane	ND	50	41.7	83	78-121
79-01-6	Trichloroethene	ND	50	46.3	93	62-141
75-69-4	Trichlorofluoromethane	ND	50	51.6	103	57-149
96-18-4	1,2,3-Trichloropropane	ND	50	45.5	91	74-122
108-05-4	Vinyl Acetate	ND	50	42.9	86	63-135
75-01-4	Vinyl chloride	ND	50	50.4	101	43-146
	m,p-Xylene	ND	100	88.5	89	50-144
95-47-6	o-Xylene	ND	50	44.9	90	63-134
1330-20-7	Xylene (total)	ND	150	133	89	56-139

CAS No.	Surrogate Recoveries	MS	JC67672-1Q Limits	
1868-53-7	Dibromofluoromethane	106%	108%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	109%	81-124%
2037-26-5	Toluene-D8	95%	95%	80-120%
460-00-4	4-Bromofluorobenzene	97%	100%	80-120%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67672-2DUP	2C159743.D	1	06/12/18	HT	n/a	n/a	V2C7092
JC67672-2	2C159736.D	1	06/12/18	HT	n/a	n/a	V2C7092

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67675-2, JC67675-7

CAS No.	Compound	JC67672-2 ug/l	DUP Q	ug/l	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	20
107-13-1	Acrylonitrile	ND		ND		nc	20
71-43-2	Benzene	ND		ND		nc	20
74-97-5	Bromochloromethane	ND		ND		nc	20
75-27-4	Bromodichloromethane	ND		ND		nc	20
75-25-2	Bromoform	ND		ND		nc	20
74-83-9	Bromomethane	ND		ND		nc	20
78-93-3	2-Butanone (MEK)	ND		ND		nc	20
75-15-0	Carbon disulfide	ND		ND		nc	20
56-23-5	Carbon tetrachloride	ND		ND		nc	20
108-90-7	Chlorobenzene	ND		ND		nc	20
75-00-3	Chloroethane	ND		ND		nc	20
67-66-3	Chloroform	ND		ND		nc	20
74-87-3	Chloromethane	ND		ND		nc	20
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	20
124-48-1	Dibromochloromethane	ND		ND		nc	20
106-93-4	1,2-Dibromoethane	ND		ND		nc	20
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	20
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	20
110-57-6	trans-1,4-Dichloro-2-Butene	ND		ND		nc	20
75-34-3	1,1-Dichloroethane	ND		ND		nc	20
107-06-2	1,2-Dichloroethane	ND		ND		nc	20
75-35-4	1,1-Dichloroethene	ND		ND		nc	20
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	20
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	20
78-87-5	1,2-Dichloropropane	ND		ND		nc	20
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	20
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	20
100-41-4	Ethylbenzene	ND		ND		nc	20
591-78-6	2-Hexanone	ND		ND		nc	20
74-88-4	Iodomethane	ND		ND		nc	20
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	20
74-95-3	Methylene bromide	ND		ND		nc	20
75-09-2	Methylene chloride	ND		ND		nc	20
100-42-5	Styrene	ND		ND		nc	20
630-20-6	1,1,1,2-Tetrachloroethane	ND		ND		nc	20

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC67672-2DUP	2C159743.D	1	06/12/18	HT	n/a	n/a	V2C7092
JC67672-2	2C159736.D	1	06/12/18	HT	n/a	n/a	V2C7092

The QC reported here applies to the following samples:

Method: SW846 8260C

JC67675-2, JC67675-7

CAS No.	Compound	JC67672-2		Q	RPD	Limits
		ug/l	DUP ug/l			
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND		nc	20
127-18-4	Tetrachloroethene	ND	ND		nc	20
108-88-3	Toluene	ND	ND		nc	20
71-55-6	1,1,1-Trichloroethane	ND	ND		nc	20
79-00-5	1,1,2-Trichloroethane	ND	ND		nc	20
79-01-6	Trichloroethene	ND	ND		nc	20
75-69-4	Trichlorofluoromethane	ND	ND		nc	20
96-18-4	1,2,3-Trichloropropane	ND	ND		nc	20
108-05-4	Vinyl Acetate	ND	ND		nc	20
75-01-4	Vinyl chloride	ND	ND		nc	20
	m,p-Xylene	ND	ND		nc	20
95-47-6	o-Xylene	ND	ND		nc	20
1330-20-7	Xylene (total)	ND	ND		nc	20

CAS No.	Surrogate Recoveries	DUP	JC67672-2	Limits
1868-53-7	Dibromofluoromethane	110%	109%	80-120%
17060-07-0	1,2-Dichloroethane-D4	109%	107%	81-124%
2037-26-5	Toluene-D8	96%	95%	80-120%
460-00-4	4-Bromofluorobenzene	101%	101%	80-120%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-BFB	Injection Date: 04/16/18
Lab File ID: 2C158318.D	Injection Time: 16:16
Instrument ID: GCMS2C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	14691	17.8	Pass
75	30.0 - 60.0% of mass 95	37965	46.0	Pass
95	Base peak, 100% relative abundance	82565	100.0	Pass
96	5.0 - 9.0% of mass 95	5414	6.56	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	85733	103.8	Pass
175	5.0 - 9.0% of mass 174	6848	8.29 (7.99) ^a	Pass
176	95.0 - 101.0% of mass 174	83202	100.8 (97.0) ^a	Pass
177	5.0 - 9.0% of mass 176	5410	6.55 (6.50) ^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
V2C7025-IC7025	2C158319.D	04/16/18	16:59	00:43	Initial cal 0.5
V2C7025-IC7025	2C158320.D	04/16/18	17:28	01:12	Initial cal 1
V2C7025-IC7025	2C158321.D	04/16/18	17:57	01:41	Initial cal 2
V2C7025-IC7025	2C158322.D	04/16/18	18:26	02:10	Initial cal 5
V2C7025-IC7025	2C158323.D	04/16/18	18:55	02:39	Initial cal 10
V2C7025-IC7025	2C158324.D	04/16/18	19:24	03:08	Initial cal 20
V2C7025-ICC7025	2C158325.D	04/16/18	19:52	03:36	Initial cal 50
V2C7025-IC7025	2C158326.D	04/16/18	20:21	04:05	Initial cal 100
V2C7025-IC7025	2C158327.D	04/16/18	20:50	04:34	Initial cal 200
V2C7025-ICV7025	2C158330.D	04/16/18	22:16	06:00	Initial cal verification 50
V2C7025-ICV7025	2C158331.D	04/16/18	22:45	06:29	Initial cal verification 50

6.5.1
6

Instrument Performance Check (BFB)

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-BFB2	Injection Date: 04/17/18
Lab File ID: 2C158334.D	Injection Time: 15:57
Instrument ID: GCMS2C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16413	17.8	Pass
75	30.0 - 60.0% of mass 95	41570	45.1	Pass
95	Base peak, 100% relative abundance	92157	100.0	Pass
96	5.0 - 9.0% of mass 95	6076	6.59	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	95880	104.0	Pass
175	5.0 - 9.0% of mass 174	7709	8.37 (8.04) ^a	Pass
176	95.0 - 101.0% of mass 174	93357	101.3 (97.4) ^a	Pass
177	5.0 - 9.0% of mass 176	6373	6.92 (6.83) ^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
V2C7025-ICV7025	2C158335.D	04/17/18	16:26	00:29	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7092-BFB	Injection Date: 06/12/18
Lab File ID: 2C159729.D	Injection Time: 09:19
Instrument ID: GCMS2C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	12841	17.3	Pass
75	30.0 - 60.0% of mass 95	34781	47.0	Pass
95	Base peak, 100% relative abundance	74045	100.0	Pass
96	5.0 - 9.0% of mass 95	4737	6.40	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	78272	105.7	Pass
175	5.0 - 9.0% of mass 174	6130	8.28 (7.83) ^a	Pass
176	95.0 - 101.0% of mass 174	75256	101.6 (96.1) ^a	Pass
177	5.0 - 9.0% of mass 176	5209	7.03 (6.92) ^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
V2C7092-CC7025	2C159729.D	06/12/18	09:19	00:00	Continuing cal 20
V2C7092-BS	2C159730.D	06/12/18	10:04	00:45	Blank Spike
V2C7092-MB	2C159732.D	06/12/18	11:01	01:42	Method Blank
ZZZZZZ	2C159733.D	06/12/18	11:36	02:17	(unrelated sample)
ZZZZZZ	2C159734.D	06/12/18	12:05	02:46	(unrelated sample)
JC67672-1Q	2C159735.D	06/12/18	12:33	03:14	(used for QC only; not part of job JC67675)
JC67672-2	2C159736.D	06/12/18	13:02	03:43	(used for QC only; not part of job JC67675)
ZZZZZZ	2C159737.D	06/12/18	13:30	04:11	(unrelated sample)
ZZZZZZ	2C159740.D	06/12/18	15:04	05:45	(unrelated sample)
JC67672-1QMS	2C159741.D	06/12/18	15:33	06:14	Matrix Spike
JC67672-2DUP	2C159743.D	06/12/18	16:30	07:11	Duplicate
ZZZZZZ	2C159744.D	06/12/18	16:59	07:40	(unrelated sample)
JC67675-7	2C159745.D	06/12/18	17:27	08:08	1-NAS-002-001-07
ZZZZZZ	2C159746.D	06/12/18	17:56	08:37	(unrelated sample)
ZZZZZZ	2C159747.D	06/12/18	18:24	09:05	(unrelated sample)
ZZZZZZ	2C159748.D	06/12/18	18:53	09:34	(unrelated sample)
ZZZZZZ	2C159749.D	06/12/18	19:22	10:03	(unrelated sample)
ZZZZZZ	2C159750.D	06/12/18	19:50	10:31	(unrelated sample)
JC67675-2	2C159751.D	06/12/18	20:19	11:00	1-NAS-002-001-02

Internal Standard Area Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Check Std: V2C7092-CC7025	Injection Date: 06/12/18
Lab File ID: 2C159729.D	Injection Time: 09:19
Instrument ID: GCMS2C	Method: SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	222787	8.31	226932	10.77	286913	11.71	254996	14.69	168298	16.86
Upper Limit ^a	445574	8.81	453864	11.27	573826	12.21	509992	15.19	336596	17.36
Lower Limit ^b	111394	7.81	113466	10.27	143457	11.21	127498	14.19	84149	16.36

Lab Sample ID	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
V2C7092-BS	291413	8.32	242683	10.77	312405	11.71	273724	14.69	174463	16.86
V2C7092-MB	280801	8.30	232898	10.77	297511	11.71	267876	14.69	167206	16.86
ZZZZZZ	258775	8.31	227466	10.77	289199	11.71	254040	14.69	167405	16.86
ZZZZZZ	280548	8.29	234815	10.77	298640	11.71	273291	14.69	165227	16.86
JC67672-1Q	232943	8.30	231799	10.77	297781	11.71	272367	14.69	167820	16.86
JC67672-2	224319	8.30	226922	10.77	289928	11.71	262809	14.69	159280	16.86
ZZZZZZ	228134	8.30	232492	10.77	299013	11.71	267704	14.69	157892	16.86
ZZZZZZ	226970	8.32	215649	10.78	276334	11.71	237115	14.69	145893	16.86
JC67672-1QMS	230357	8.31	236300	10.77	299636	11.71	273848	14.69	178789	16.86
JC67672-2DUP	251227	8.31	226475	10.77	289647	11.71	261782	14.69	157627	16.86
ZZZZZZ	231592	8.31	225661	10.77	287673	11.71	259075	14.69	157020	16.86
JC67675-7	226649	8.31	230324	10.77	293298	11.71	261166	14.69	153012	16.86
ZZZZZZ	253859	8.31	223493	10.77	284549	11.71	258144	14.69	153393	16.86
ZZZZZZ	214572	8.31	220638	10.77	282020	11.71	253031	14.69	155660	16.86
ZZZZZZ	224444	8.31	226549	10.77	290049	11.71	261035	14.69	155089	16.86
ZZZZZZ	231522	8.31	219160	10.77	279255	11.71	252148	14.69	151831	16.86
ZZZZZZ	238603	8.32	222954	10.77	286320	11.71	257502	14.69	161946	16.86
JC67675-2	219789	8.31	213200	10.77	273208	11.71	243946	14.69	151808	16.86

- IS 1** = Tert Butyl Alcohol-D9
- IS 2** = Pentafluorobenzene
- IS 3** = 1,4-Difluorobenzene
- IS 4** = Chlorobenzene-D5
- IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC67675-2	2C159751.D	112	113	96	98
JC67675-7	2C159745.D	111	112	96	103
JC67672-1QMS	2C159741.D	106	100	95	97
JC67672-2DUP	2C159743.D	110	109	96	101
V2C7092-BS	2C159730.D	106	99	98	98
V2C7092-MB	2C159732.D	108	108	97	100

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

Initial Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

Response Factor Report Instrument #1

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
 Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
 Last Update : Mon Apr 23 10:59:15 2018
 Response via : Initial Calibration

Calibration Files

1 =2C158320.D 2 =2C158321.D 100 =2C158326.D 50 =2C158325.D
 20 =2C158324.D 200 =2C158327.D 5 =2C158322.D 10 =2C158323.D
 0.5 =2C158319.D =

Compound	1	2	100	50	20	200	5	10	0.5	Avg	%RSD
1) I Tert Butyl Alcohol-d9 -----ISTD-----											
2) ethanol										0.000#	-1.00
3) tertiary butyl alcohol											
	1.235	1.255	1.291	1.227	1.227	1.261	1.183	1.205		1.235	2.72
4) 1,4-dioxane											
	0.079	0.095	0.090	0.088	0.092	0.090	0.088	0.092		0.089	5.18
5) I pentafluorobenzene -----ISTD-----											
6) chlorodifluoromethane											
		0.776	0.841	0.919	0.811	0.983	0.969			0.883	9.78
7) dichlorodifluoromethane											
		0.865	0.655	0.724	0.763	0.753	0.885	0.808		0.779	10.33
8) chloromethane											
	1.460	1.283	1.043	1.059	1.123	1.149	1.273	1.241		1.204	11.52
9) vinyl chloride											
	0.978	0.993	0.959	0.983	1.040	1.062	1.049	1.098	1.143	1.034	5.93
10) 1,3-butadiene											
										0.000#	-1.00
11) bromomethane											
	0.816	0.721	0.569	0.609	0.656	0.604	0.689	0.702		0.671	11.80
12) chloroethane											
	0.662	0.577	0.472	0.503	0.527	0.508	0.547	0.553		0.544	10.70
13) trichlorofluoromethane											
	0.931	0.921	0.930	0.969	1.011	1.035	1.002	1.037	1.038	0.986	4.97
14) vinyl bromide											
	0.664	0.613	0.588	0.608	0.635	0.648	0.637	0.650	0.787	0.648	8.86
15) ethyl ether											
	0.281	0.271	0.292	0.295	0.289	0.295	0.288	0.292	0.299	0.289	2.95
16) 2-chloropropane											
	1.080	1.068	0.962	1.021	1.057	1.034	1.099	1.084	1.445	1.095	12.59
17) acrolein											
		0.174	0.187	0.194	0.184	0.188	0.194			0.187	3.95
18) freon 113											
	0.408	0.414	0.424	0.456	0.486	0.473	0.459	0.480	0.381	0.442	8.35
19) 1,1-dichloroethene											
	0.693	0.610	0.525	0.560	0.604	0.569	0.619	0.620		0.600	8.38
20) acetone											
	0.082	0.078	0.074	0.075	0.081	0.077	0.076	0.081		0.078	3.75
21) iodomethane											
	0.950	0.931	0.936	0.971	1.003	1.024	0.989	1.019	1.188	1.001	7.79
22) acetonitrile											
		0.127	0.126	0.139	0.136	0.123	0.151			0.134	7.75
23) carbon disulfide											

Initial Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

24)	methylen chloride	1.774	1.707	1.647	1.743	1.840	1.822	1.806	1.854	1.774	4.02
25)	methyl acetate	0.739	0.668	0.629	0.637	0.676	0.683	0.652	0.680	0.938	13.53
26)	methyl tert butyl ether	0.649	0.695	0.633	0.636	0.631	0.629	0.618	0.641	0.821	9.66
27)	trans-1,2-dichloroethene	1.820	1.759	1.748	1.697	1.789	1.693	1.778	1.799	2.253	9.35
28)	hexane	0.601	0.585	0.502	0.518	0.535	0.527	0.558	0.549	0.697	10.48
29)	di-isopropyl ether	0.420	0.366	0.312	0.325	0.334	0.325	0.369	0.339	0.349	10.06
30)	1,1-dichloroethane	2.197	2.018	1.835	1.891	2.008	1.905	2.018	2.048	2.713	12.71
31)	chloroprene	1.012	0.949	0.906	0.920	0.944	0.923	0.938	0.960	1.120	6.86
32)	acrylonitrile	0.826	0.807	0.741	0.758	0.748	0.747	0.780	0.793	1.049	11.89
33)	vinyl acetate	0.328	0.312	0.322	0.318	0.328	0.336	0.316	0.335	0.393	7.25
34)	ethyl tert-butyl ether	0.070	0.081	0.099	0.095	0.095	0.097	0.094	0.099	0.091	11.35
35)	2-butanone	1.878	1.785	1.820	1.808	1.868	1.940	1.843	1.864	2.197	6.57
36)	ethyl acetate	0.089	0.091	0.093	0.093	0.090	0.091	0.090	0.087	0.089	2.09
37)	2,2-dichloropropane	0.116	0.116	0.120	0.107	0.139	0.133			0.122	9.78
38)	cis-1,2-dichloroethene	0.801	0.745	0.630	0.662	0.733	0.684	0.771	0.768	0.724	8.24
39)	propionitrile	0.657	0.613	0.539	0.553	0.558	0.546	0.570	0.591	0.774	12.51
40)	bromochloromethane	0.159	0.153	0.138	0.143	0.147	0.137	0.147	0.149	0.164	6.09
41)	tetrahydrofuran	0.317	0.270	0.293	0.292	0.290	0.299	0.279	0.303	0.329	6.04
42)	chloroform	0.386	0.286	0.295	0.306	0.287	0.317	0.331		0.315	11.09
43)	t-butyl formate	1.054	0.915	0.857	0.865	0.871	0.869	0.910	0.892	1.289	14.97
44)	dibromofluoromethane (s)	0.585	0.565	0.548	0.545	0.582	0.559	0.580	0.604	0.571	3.51
45)	methacrylonitrile	0.431	0.428	0.427	0.427	0.424	0.441	0.420	0.435	0.461	2.86
46)	1,1,1-trichloroethane	0.297	0.289	0.281	0.277	0.274	0.279	0.263	0.279	0.230	6.97
47)	Cyclohexane	0.918	0.851	0.820	0.835	0.860	0.913	0.866	0.896	1.171	11.71
48)	1,1-dichloropropene	0.795	0.726	0.675	0.736	0.805	0.771	0.782	0.772	0.810	5.72
49)	carbon tetrachloride	0.703	0.676	0.597	0.618	0.620	0.589	0.665	0.648	0.773	8.90
50)	isobutyl alcohol	0.685	0.686	0.648	0.666	0.686	0.718	0.707	0.707	0.688	3.37
		0.034	0.034	0.037	0.035	0.034	0.043			0.036	10.37
51)	I 1,4-difluorobenzene	-----ISTD-----									
52)	1,2-dichloroethane-d4 (s)	0.376	0.374	0.336	0.352	0.361	0.333	0.368	0.361	0.401	5.78
53)	n-butyl alcohol										

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Initial Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

	0.031	0.029	0.025	0.026	0.029	0.026	0.027	0.028		0.028	7.68
54)	tert-amyl alcohol										
	0.051	0.035	0.036	0.044	0.036	0.041	0.042			0.041	13.59
55)	iso-octane										
	1.721	1.622	1.415	1.542	1.677	1.628	1.669	1.666		1.618	6.00
56)	benzene										
	1.544	1.513	1.370	1.406	1.435	1.363	1.455	1.464	1.785	1.482	8.68
57)	tert-amyl methyl ether										
	0.308	0.282	0.276	0.285	0.299	0.294	0.297	0.297		0.292	3.57
58)	heptane										
	0.335	0.287	0.295	0.307	0.302	0.332	0.300			0.308	5.97
59)	isopropyl acetate										
	0.071	0.091	0.093	0.094	0.095	0.093	0.092	0.096		0.091	8.77
60)	1,2-dichloroethane										
	0.606	0.553	0.469	0.477	0.504	0.453	0.515	0.503		0.510	9.71
61)	ethyl acrylate										
	0.590	0.557	0.563	0.557	0.552	0.553	0.556			0.561	2.36
62)	trichloroethene										
	0.396	0.376	0.338	0.348	0.354	0.335	0.366	0.365	0.453	0.370	9.84
63)	2-nitropropane										
	0.191	0.168	0.165	0.163	0.173	0.205	0.158			0.175	9.82
64)	2-chloroethyl vinyl ether										
	0.251	0.238	0.239	0.247	0.248	0.236	0.240	0.244	0.247	0.243	2.16
65)	methyl methacrylate										
	0.108	0.102	0.116	0.113	0.112	0.118	0.108	0.113		0.111	4.41
66)	1,2-dichloropropane										
	0.399	0.387	0.351	0.364	0.376	0.346	0.378	0.377	0.376	0.373	4.44
67)	dibromomethane										
	0.273	0.241	0.243	0.241	0.251	0.245	0.252	0.254	0.288	0.254	6.27
68)	methylcyclohexane										
	0.765	0.727	0.640	0.689	0.748	0.730	0.735	0.737		0.721	5.44
69)	bromodichloromethane										
	0.512	0.501	0.491	0.491	0.484	0.501	0.473	0.477	0.626	0.506	9.18
70)	epichlorohydrin										
	0.073	0.067	0.062	0.063	0.064	0.065	0.061	0.064		0.065	5.68
71)	cis-1,3-dichloropropene										
	0.602	0.557	0.584	0.583	0.570	0.592	0.575	0.567	0.597	0.581	2.56
72)	4-methyl-2-pentanone										
	0.231	0.215	0.201	0.212	0.222	0.206	0.219	0.222		0.216	4.45
73)	3-methyl-1-butanol										
	0.049	0.036	0.040	0.045	0.037	0.046	0.046			0.043	11.37
74)	I chlorobenzene-d5										
75)	toluene-d8 (s)										
	1.267	1.259	1.296	1.244	1.254	1.267	1.247	1.261	1.250	1.261	1.25
76)	toluene										
	0.991	0.969	0.955	0.927	0.923	0.913	0.939	0.943	1.039	0.955	4.14
77)	ethyl methacrylate										
	0.666	0.600	0.573	0.551	0.559	0.547	0.568	0.573	0.728	0.596	10.28
78)	trans-1,3-dichloropropene										
	0.619	0.615	0.608	0.589	0.582	0.565	0.594	0.593	0.606	0.597	2.89
79)	1,1,2-trichloroethane										
	0.342	0.332	0.333	0.317	0.319	0.318	0.336	0.435		0.339	11.02
80)	2-hexanone										
	0.259	0.254	0.220	0.219	0.236	0.210	0.242	0.242	0.266	0.238	8.11
81)	tetrachloroethene										
	0.378	0.380	0.378	0.373	0.368	0.362	0.379	0.386	0.400	0.378	2.89
82)	1,3-dichloropropane										
	0.615	0.598	0.566	0.556	0.575	0.539	0.573	0.581	0.601	0.578	4.08
83)	butyl acetate										

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Initial Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

	0.415	0.350	0.322	0.318	0.343	0.319	0.359	0.361	0.404	0.355	9.99
84)	dibromochloromethane										
	0.416	0.402	0.482	0.446	0.433	0.482	0.407	0.417	0.456	0.438	6.96
85)	1,2-dibromoethane										
	0.440	0.441	0.459	0.439	0.440	0.460	0.431	0.434	0.421	0.440	2.82
86)	n-butyl ether										
	1.992	1.846	1.724	1.714	1.803	1.711	1.845	1.864	2.313	1.868	10.15
87)	chlorobenzene										
	1.097	0.999	1.045	1.026	1.022	1.051	1.047	1.029	1.103	1.047	3.27
88)	1,1,1,2-tetrachloroethane										
	0.438	0.427	0.437	0.426	0.445	0.435	0.449	0.455	0.507	0.446	5.52
89)	ethylbenzene										
	1.814	1.713	1.645	1.651	1.716	1.639	1.733	1.733	2.105	1.750	8.25
90)	m,p-xylene										
	0.676	0.674	0.659	0.650	0.663	0.676	0.683	0.676	0.791	0.683	6.14
91)	o-xylene										
	0.714	0.681	0.716	0.703	0.732	0.738	0.717	0.725	0.804	0.725	4.68
92)	styrene										
	1.221	1.178	1.117	1.118	1.150	1.159	1.195	1.180	1.301	1.180	4.80
93)	butyl acrylate										
	1.083	0.994	0.898	0.887	0.963	0.908	0.989	0.997		0.965	6.82
94)	bromoform										
	0.340	0.342	0.393	0.368	0.358	0.422	0.343	0.350	0.354	0.363	7.59
95)	isopropylbenzene										
	2.033	1.926	1.892	1.909	1.994	1.940	1.983	2.029	2.372	2.009	7.23
96)	cis-1,4-dichloro-2-butene										
	0.209	0.231	0.234	0.232	0.239	0.248	0.225	0.241	0.225	0.231	4.93
97)	I 1,4-dichlorobenzene-d -----ISTD-----										
98)	4-bromofluorobenzene (s)										
	0.719	0.728	0.756	0.749	0.717	0.761	0.725	0.719	0.689	0.729	3.12
99)	bromobenzene										
	0.883	0.863	0.822	0.832	0.811	0.791	0.855	0.830	0.857	0.838	3.44
100)	1,1,2,2-tetrachloroethane										
	1.098	1.101	1.080	1.078	1.069	1.010	1.068	1.058	1.251	1.090	6.05
101)	trans-1,4-dichloro-2-butene										
	0.123	0.131	0.126	0.123	0.125	0.126	0.120			0.125	2.82
102)	1,2,3-trichloropropane										
	0.269	0.267	0.263	0.261	0.261	0.247	0.273	0.269	0.278	0.265	3.37
103)	n-propylbenzene										
	3.535	3.348	3.090	3.178	3.188	2.955	3.311	3.307	3.830	3.305	7.78
104)	2-chlorotoluene										
	0.781	0.782	0.746	0.750	0.732	0.719	0.754	0.741	0.739	0.749	2.78
105)	4-chlorotoluene										
	2.131	2.065	1.955	1.959	1.940	1.904	1.976	1.958	2.309	2.022	6.34
106)	1,3,5-trimethylbenzene										
	2.730	2.684	2.465	2.543	2.562	2.354	2.597	2.614	2.878	2.603	5.84
107)	tert-butylbenzene										
	2.184	2.235	2.374	2.327	2.239	2.212	2.210	2.231	2.347	2.262	3.02
108)	1,2,4-trimethylbenzene										
	2.836	2.621	2.502	2.565	2.593	2.399	2.690	2.647	2.993	2.650	6.67
109)	sec-butylbenzene										
	3.431	3.423	3.428	3.499	3.472	3.296	3.502	3.484	3.791	3.481	3.80
110)	1,3-dichlorobenzene										
	1.644	1.674	1.582	1.611	1.640	1.529	1.674	1.694	1.814	1.651	4.83
111)	p-isopropyltoluene										
	2.957	2.994	2.970	3.028	3.027	2.868	3.020	3.095	3.303	3.029	3.97
112)	1,4-dichlorobenzene										
	1.702	1.644	1.613	1.625	1.613	1.560	1.613	1.604	1.783	1.639	3.99
113)	1,2-dichlorobenzene										

Initial Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

114)	n-butylbenzene	1.813	1.762	1.737	1.759	1.785	1.624	1.784	1.789	1.958	1.779	4.86
115)	1,2-dibromo-3-chloropropane	1.558	1.509	1.500	1.543	1.545	1.470	1.563	1.550	1.807	1.560	6.24
116)	1,3,5-trichlorobenzene	0.249	0.266	0.292	0.276	0.269	0.274	0.271	0.284	0.250	0.270	5.24
117)	Nitrobenzene	1.772	1.758	1.809	1.823	1.880	1.605	1.818	1.858	2.028	1.817	6.18
118)	1,2,4-trichlorobenzene	0.046	0.056	0.052	0.052	0.061	0.049	0.043			0.051	12.30
119)	2-ethylhexyl acrylate	1.409	1.450	1.606	1.578	1.615	1.390	1.503	1.549	1.786	1.543	7.96
120)	hexachlorobutadiene	1.211	1.337	1.175	1.145	1.255	1.128	1.073			1.189	7.37
121)	naphthalene	0.883	0.901	0.865	0.888	0.921	0.782	0.913	0.915		0.883	5.10
122)	1,2,3-trichlorobenzene	3.130	3.221	3.834	3.755	3.870	3.235	3.588	3.752	3.953	3.593	8.79
123)	hexachloroethane	1.279	1.384	1.495	1.448	1.488	1.318	1.396	1.459	1.522	1.421	5.83
124)	2-methylnaphthalene	0.524	0.521	0.657	0.629	0.569	0.632	0.549	0.558	0.573	0.579	8.49
125)	Ethylenimine	2.219	2.037	1.878	1.945			1.661			1.948	10.55
126)	Bis(chloromethyl)ether										0.000#	-1.00
											0.000#	-1.00

 (#) = Out of Range ### Number of calibration levels exceeded format ###

M2C7025.M

Mon Apr 23 11:00:19 2018

RPT1

Initial Calibration Verification

Job Number: JC67675
 Account: ILINY Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
 Lab FileID: 2C158330.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v2c7025\2C158330.D Vial: 19
 Acq On : 16 Apr 2018 10:16 pm Operator: HueanhT
 Sample : icv7025-50 Inst : Instrument #1
 Misc : MS25516,V2C7025,w,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
 Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
 Last Update : Mon Apr 23 10:59:15 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	0.00	8.33
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.235	1.282	-3.8	105	-0.02	8.45
4	1,4-dioxane	0.089	0.073	18.0	83	0.00	12.35
5 I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	10.78
6	chlorodifluoromethane	0.883	0.566	35.9#	70	0.01	4.45
7	dichlorodifluoromethane	0.779	0.693	11.0	99	0.00	4.42
8	chloromethane	1.204	1.119	7.1	109	0.01	4.87
9	vinyl chloride	1.034	0.978	5.4	103	0.00	5.14
10	1,3-butadiene			-----NA-----			
11	bromomethane	0.671	0.642	4.3	109	0.02	5.86
12	chloroethane	0.544	0.520	4.4	107	0.01	6.05
13	trichlorofluoromethane	0.986	0.942	4.5	100	0.01	6.60
14	vinyl bromide	0.648	0.713	-10.0	121	0.02	6.46
15	ethyl ether	0.289	0.286	1.0	100	0.00	7.04
16	2-chloropropane	1.095	1.034	5.6	105	0.00	7.30
17	acrolein	0.187	0.255	-36.4#	141	0.00	7.31
18	freon 113	0.442	0.507	-14.7	115	0.01	7.55
19	1,1-dichloroethene	0.600	0.500	16.7	92	0.00	7.54
20	acetone	0.078	0.075	3.8	103	0.00	7.53
21	iodomethane	1.001	1.074	-7.3	114	0.00	7.83
22	acetonitrile	0.134	0.079	41.0#	64	0.00	8.04
23	carbon disulfide	1.774	1.661	6.4	98	0.01	7.99
24	methylene chloride	0.700	0.639	8.7	104	0.01	8.36
25	methyl acetate	0.661	0.593	10.3	96	0.00	8.06
26	methyl tert butyl ether	1.815	3.655	-0.7	111	0.00	8.75
27	trans-1,2-dichloroethene	0.564	0.501	11.2	100	0.00	8.77
28	hexane	0.349	0.292	16.3	93	0.01	9.17
29	di-isopropyl ether	2.070	2.017	2.6	110	0.00	9.41
30	1,1-dichloroethane	0.964	0.933	3.2	105	0.00	9.41
31	chloroprene	0.806	0.788	2.2	107	0.00	9.52
32	acrylonitrile	0.332	0.356	-7.2	115	0.00	8.68
33	vinyl acetate	0.091	0.110	-20.9	120	0.00	9.36
34	ethyl tert-butyl ether	1.889	1.950	-3.2	111	0.00	9.92
35	2-butanone	0.090	0.093	-3.3	103	0.00	10.13
36	ethyl acetate	0.122	0.120	1.6	107	0.00	10.15
37	2,2-dichloropropane	0.724	0.677	6.5	106	0.00	10.23
38	cis-1,2-dichloroethene	0.600	0.582	3.0	109	0.00	10.19
39	propionitrile	0.149	0.140	6.0	101	0.00	10.22
40	bromochloromethane	0.297	0.310	-4.4	110	0.00	10.51
41	tetrahydrofuran	0.315	0.294	6.7	103	0.00	10.53

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158330.D

42		chloroform	0.947	0.919	3.0	110	0.00	10.60
43		t-butyl formate	0.571	0.400	29.9	76	0.00	10.65
44	S	dibromofluoromethane (s)	0.433	0.432	0.2	105	0.00	10.80
45		methacrylonitrile	0.274	0.291	-6.2	108	0.00	10.42
46		1,1,1-trichloroethane	0.903	0.842	6.8	104	0.00	10.88
47		Cyclohexane	0.764	1.076	-40.8#	151	0.00	10.99
48		1,1-dichloropropene	0.654	0.632	3.4	106	0.00	11.05
49		carbon tetrachloride	0.688	0.679	1.3	105	0.00	11.08
50		isobutyl alcohol	0.036	0.039	-8.3	121	0.00	11.03
51	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	11.72
52	S	1,2-dichloroethane-d4 (s)	0.362	0.345	4.7	102	0.00	11.24
53		n-butyl alcohol	0.028	0.024	14.3	94	0.00	11.77
54		tert-amyl alcohol	0.041	0.036	12.2	103	0.00	11.20
55		iso-octane	1.618	1.456	10.0	98	0.00	11.40
56		benzene	1.482	1.461	1.4	108	0.00	11.30
57		tert-amyl methyl ether	0.292	0.300	-2.7	109	0.00	11.39
58		heptane	0.308	0.307	0.3	108	0.00	11.55
59		isopropyl acetate	0.091	0.099	-8.8	110	0.00	11.22
60		1,2-dichloroethane	0.510	0.502	1.6	109	0.00	11.33
61		ethyl acrylate	0.561	0.604	-7.7	112	0.00	12.00
62		trichloroethene	0.370	0.373	-0.8	111	0.00	12.01
63		2-nitropropane	0.175	0.180	-2.9	113	0.00	12.74
64		2-chloroethyl vinyl ether	0.243	0.273	-12.3	115	0.00	12.78
65		methyl methacrylate	0.111	0.121	-9.0	111	0.00	12.26
66		1,2-dichloropropane	0.373	0.370	0.8	106	0.00	12.29
67		dibromomethane	0.254	0.263	-3.5	113	0.00	12.40
68		methylcyclohexane	0.721	0.633	12.2	95	0.00	12.30
69		bromodichloromethane	0.506	0.516	-2.0	109	0.00	12.55
70		epichlorohydrin	0.065	0.063	3.1	105	0.00	12.86
71		cis-1,3-dichloropropene	0.581	0.625	-7.6	111	0.00	12.98
72		4-methyl-2-pentanone	0.216	0.221	-2.3	108	0.00	13.08
73		3-methyl-1-butanol	0.043	0.039	9.3	101	0.00	13.08
74	I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	14.69
75	S	toluene-d8 (s)	1.261	1.232	2.3	101	0.00	13.27
76		toluene	0.955	0.993	-4.0	110	0.00	13.34
77		ethyl methacrylate	0.596	0.597	-0.2	111	0.00	13.50
78		trans-1,3-dichloropropene	0.597	0.610	-2.2	106	0.00	13.51
79		1,1,2-trichloroethane	0.339	0.349	-2.9	112	0.00	13.72
80		2-hexanone	0.238	0.236	0.8	110	0.00	13.88
81		tetrachloroethene	0.378	0.404	-6.9	111	0.00	13.86
82		1,3-dichloropropane	0.578	0.616	-6.6	113	0.00	13.90
83		butyl acetate	0.355	0.365	-2.8	117	0.00	13.95
84		dibromochloromethane	0.438	0.512	-16.9	117	0.00	14.13
85		1,2-dibromoethane	0.440	0.492	-11.8	114	0.00	14.27
86		n-butyl ether	1.868	1.846	1.2	110	0.00	14.67
87		chlorobenzene	1.047	1.126	-7.5	112	0.00	14.72
88		1,1,1,2-tetrachloroethane	0.446	0.471	-5.6	113	0.00	14.78
89		ethylbenzene	1.750	1.824	-4.2	113	0.00	14.77
90		m,p-xylene	0.683	0.719	-5.3	113	0.00	14.88
91		o-xylene	0.725	0.781	-7.7	114	0.00	15.26
92		styrene	1.180	1.246	-5.6	114	0.00	15.27
93		butyl acrylate	0.965	1.003	-3.9	116	0.00	15.09
94		bromoform	0.363	0.431	-18.7	120	0.00	15.49
95		isopropylbenzene	2.009	2.092	-4.1	112	0.00	15.59
96		cis-1,4-dichloro-2-butene	0.231	0.242	-4.8	107	0.00	15.62
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	16.86
98	S	4-bromofluorobenzene (s)	0.729	0.748	-2.6	102	0.00	15.77

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158330.D

99	bromobenzene	0.838	0.930	-11.0	115	0.00	15.95
100	1,1,2,2-tetrachloroethane	1.090	1.175	-7.8	112	0.00	15.84
101	trans-1,4-dichloro-2-bute	0.125	0.148	-18.4	121	0.00	15.87
102	1,2,3-trichloropropane	0.265	0.282	-6.4	111	0.00	15.93
103	n-propylbenzene	3.305	3.505	-6.1	113	0.00	15.97
104	2-chlorotoluene	0.749	0.812	-8.4	111	0.00	16.10
105	4-chlorotoluene	2.022	2.214	-9.5	116	0.00	16.20
106	1,3,5-trimethylbenzene	2.603	2.720	-4.5	110	0.00	16.12
107	tert-butylbenzene	2.262	2.550	-12.7	112	0.00	16.43
108	1,2,4-trimethylbenzene	2.650	2.854	-7.7	114	0.00	16.48
109	sec-butylbenzene	3.481	3.826	-9.9	112	0.00	16.64
110	1,3-dichlorobenzene	1.651	1.774	-7.5	113	0.00	16.80
111	p-isopropyltoluene	3.029	3.325	-9.8	113	0.00	16.76
112	1,4-dichlorobenzene	1.639	1.785	-8.9	113	0.00	16.89
113	1,2-dichlorobenzene	1.779	1.928	-8.4	112	0.00	17.25
114	n-butylbenzene	1.560	1.680	-7.7	112	0.00	17.15
115	1,2-dibromo-3-chloropropa	0.270	0.299	-10.7	111	0.00	18.01
116	1,3,5-trichlorobenzene	1.817	2.018	-11.1	113	0.00	18.20
117	Nitrobenzene	0.051	0.049	3.9	97	0.00	18.21
118	1,2,4-trichlorobenzene	1.543	1.798	-16.5	117	0.00	18.85
119	2-ethylhexyl acrylate	1.189	1.392	-17.1	121	0.00	18.86
120	hexachlorobutadiene	0.883	0.940	-6.5	109	0.00	18.97
121	naphthalene	3.593	4.283	-19.2	117	0.00	19.16
122	1,2,3-trichlorobenzene	1.421	1.639	-15.3	116	0.00	19.38
123	hexachloroethane	0.579	0.704	-21.6	115	0.00	17.54
124	2-methylnaphthalene	1.948	2.105	-8.1	106	0.00	20.31
125	Ethylenimine			-----NA-----			
126	Bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range
 2C158325.D M2C7025.M

SPCC's out = 0 CCC's out = 0
 Mon Apr 23 11:00:34 2018 RPT1

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158331.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v2c7025\2C158331.D Vial: 20
 Acq On : 16 Apr 2018 10:45 pm Operator: HueanhT
 Sample : icv7025-50 Inst : Instrument #1
 Misc : MS25516,V2C7025,w,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
 Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
 Last Update : Tue Apr 17 15:50:34 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	115	0.01	8.34
2	ethanol			-----NA-----			
3	tertiary butyl alcohol			-----NA-----			
4	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	10.77
6	chlorodifluoromethane			-----NA-----			
7	dichlorodifluoromethane			-----NA-----			
8	chloromethane			-----NA-----			
9	vinyl chloride			-----NA-----			
10	1,3-butadiene			-----NA-----			
11	bromomethane			-----NA-----			
12	chloroethane			-----NA-----			
13	trichlorofluoromethane			-----NA-----			
14	vinyl bromide			-----NA-----			
15	ethyl ether			-----NA-----			
16	2-chloropropane			-----NA-----			
17	acrolein			-----NA-----			
18	freon 113			-----NA-----			
19	1,1-dichloroethene			-----NA-----			
20	acetone			-----NA-----			
21	iodomethane			-----NA-----			
22	acetonitrile	0.134	0.154	-14.9	122	0.02	8.06
23	carbon disulfide			-----NA-----			
24	methylene chloride			-----NA-----			
25	methyl acetate			-----NA-----			
26	methyl tert butyl ether			-----NA-----			
27	trans-1,2-dichloroethene			-----NA-----			
28	hexane			-----NA-----			
29	di-isopropyl ether			-----NA-----			
30	1,1-dichloroethane			-----NA-----			
31	chloroprene			-----NA-----			
32	acrylonitrile			-----NA-----			
33	vinyl acetate			-----NA-----			
34	ethyl tert-butyl ether			-----NA-----			
35	2-butanone			-----NA-----			
36	ethyl acetate			-----NA-----			
37	2,2-dichloropropane			-----NA-----			
38	cis-1,2-dichloroethene			-----NA-----			
39	propionitrile			-----NA-----			
40	bromochloromethane			-----NA-----			
41	tetrahydrofuran			-----NA-----			

6.8.3
6

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158331.D

42	chloroform								-----NA-----
43	t-butyl formate								-----NA-----
44 S	dibromofluoromethane (s)	0.433	0.427	1.4	100	0.00	10.80		
45	methacrylonitrile								-----NA-----
46	1,1,1-trichloroethane								-----NA-----
47	Cyclohexane								-----NA-----
48	1,1-dichloropropene								-----NA-----
49	carbon tetrachloride								-----NA-----
		----- True	Calc.	% Drift					-----
50	isobutyl alcohol								-----NA-----
		----- AvgRF	CCRF	% Dev					-----
51 I	1,4-difluorobenzene	1.000	1.000	0.0	98	0.00	11.71		
52 S	1,2-dichloroethane-d4 (s)	0.362	0.373	-3.0	104	0.00	11.23		
53	n-butyl alcohol								-----NA-----
54	tert-amyl alcohol								-----NA-----
55	iso-octane								-----NA-----
56	benzene								-----NA-----
57	tert-amyl methyl ether								-----NA-----
58	heptane								-----NA-----
59	isopropyl acetate								-----NA-----
60	1,2-dichloroethane								-----NA-----
61	ethyl acrylate								-----NA-----
62	trichloroethene								-----NA-----
63	2-nitropropane								-----NA-----
64	2-chloroethyl vinyl ether								-----NA-----
65	methyl methacrylate								-----NA-----
66	1,2-dichloropropane								-----NA-----
67	dibromomethane								-----NA-----
68	methylcyclohexane								-----NA-----
69	bromodichloromethane								-----NA-----
70	epichlorohydrin								-----NA-----
71	cis-1,3-dichloropropene								-----NA-----
72	4-methyl-2-pentanone								-----NA-----
73	3-methyl-1-butanol								-----NA-----
74 I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	14.69		
75 S	toluene-d8 (s)	1.261	1.235	2.1	100	0.00	13.27		
76	toluene								-----NA-----
77	ethyl methacrylate								-----NA-----
78	trans-1,3-dichloropropene								-----NA-----
79	1,1,2-trichloroethane								-----NA-----
80	2-hexanone								-----NA-----
81	tetrachloroethene	0.378	0.364	3.7	98	0.00	13.86		
82	1,3-dichloropropane								-----NA-----
83	butyl acetate								-----NA-----
84	dibromochloromethane								-----NA-----
85	1,2-dibromoethane								-----NA-----
86	n-butyl ether								-----NA-----
87	chlorobenzene								-----NA-----
88	1,1,1,2-tetrachloroethane								-----NA-----
89	ethylbenzene								-----NA-----
90	m,p-xylene								-----NA-----
91	o-xylene								-----NA-----
92	styrene								-----NA-----
93	butyl acrylate								-----NA-----
94	bromoform								-----NA-----
95	isopropylbenzene								-----NA-----

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158331.D

96	cis-1,4-dichloro-2-butene								-----NA-----
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	108	0.00		16.86	
98 S	4-bromofluorobenzene (s)	0.729	0.708	2.9	102	0.00		15.77	
99	bromobenzene								-----NA-----
100	1,1,2,2-tetrachloroethane								-----NA-----
101	trans-1,4-dichloro-2-bute								-----NA-----
102	1,2,3-trichloropropane								-----NA-----
103	n-propylbenzene								-----NA-----
104	2-chlorotoluene								-----NA-----
105	4-chlorotoluene								-----NA-----
106	1,3,5-trimethylbenzene								-----NA-----
107	tert-butylbenzene								-----NA-----
108	1,2,4-trimethylbenzene								-----NA-----
109	sec-butylbenzene								-----NA-----
110	1,3-dichlorobenzene								-----NA-----
111	p-isopropyltoluene								-----NA-----
112	1,4-dichlorobenzene								-----NA-----
113	1,2-dichlorobenzene								-----NA-----
114	n-butylbenzene								-----NA-----
115	1,2-dibromo-3-chloropropa								-----NA-----
116	1,3,5-trichlorobenzene								-----NA-----
117	Nitrobenzene								-----NA-----
118	1,2,4-trichlorobenzene								-----NA-----
119	2-ethylhexyl acrylate								-----NA-----
120	hexachlorobutadiene								-----NA-----
121	naphthalene								-----NA-----
122	1,2,3-trichlorobenzene								-----NA-----
123	hexachloroethane								-----NA-----
124	2-methylnaphthalene								-----NA-----

(#) = Out of Range
 2C158325.D M2C7025.M

SPCC's out = 0 CCC's out = 0
 Tue Apr 17 16:02:35 2018 RPT1

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158335.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v2c7025\2C158335.D Vial: 24
Acq On : 17 Apr 2018 4:26 pm Operator: HueanhT
Sample : icv7025-50 Inst : Instrument #1
Misc : MS25516,V2C7025,w,,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
Last Update : Tue Apr 17 15:50:34 2018
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	122	0.00	8.34
2	ethanol			-----NA-----			
3	tertiary butyl alcohol			-----NA-----			
4	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	10.77
6	chlorodifluoromethane	0.883	0.926	-4.9	115	0.00	4.45
7	dichlorodifluoromethane			-----NA-----			
8	chloromethane			-----NA-----			
9	vinyl chloride			-----NA-----			
10	1,3-butadiene			-----NA-----			
11	bromomethane			-----NA-----			
12	chloroethane			-----NA-----			
13	trichlorofluoromethane			-----NA-----			
14	vinyl bromide			-----NA-----			
15	ethyl ether			-----NA-----			
16	2-chloropropane			-----NA-----			
17	acrolein	0.187	0.207	-10.7	116	0.02	7.32
18	freon 113			-----NA-----			
19	1,1-dichloroethene			-----NA-----			
20	acetone			-----NA-----			
21	iodomethane			-----NA-----			
22	acetonitrile			-----NA-----			
23	carbon disulfide			-----NA-----			
24	methylene chloride			-----NA-----			
25	methyl acetate			-----NA-----			
26	methyl tert butyl ether			-----NA-----			
27	trans-1,2-dichloroethene			-----NA-----			
28	hexane			-----NA-----			
29	di-isopropyl ether			-----NA-----			
30	1,1-dichloroethane			-----NA-----			
31	chloroprene			-----NA-----			
32	acrylonitrile			-----NA-----			
33	vinyl acetate			-----NA-----			
34	ethyl tert-butyl ether			-----NA-----			
35	2-butanone			-----NA-----			
36	ethyl acetate			-----NA-----			
37	2,2-dichloropropane			-----NA-----			
38	cis-1,2-dichloroethene			-----NA-----			
39	propionitrile			-----NA-----			
40	bromochloromethane			-----NA-----			
41	tetrahydrofuran			-----NA-----			

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158335.D

42	chloroform							-----NA-----
43	t-butyl formate							-----NA-----
44 S	dibromofluoromethane (s)	0.433	0.429	0.9	105	0.00	10.80	
45	methacrylonitrile							-----NA-----
46	1,1,1-trichloroethane							-----NA-----
47	Cyclohexane	0.764	0.877	-14.8	125	0.00	10.99	
48	1,1-dichloropropene							-----NA-----
49	carbon tetrachloride							-----NA-----
		----- True	Calc.	% Drift				-----
50	isobutyl alcohol							-----NA-----
		----- AvgRF	CCRF	% Dev				-----
51 I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	11.71	
52 S	1,2-dichloroethane-d4 (s)	0.362	0.377	-4.1	108	0.00	11.23	
53	n-butyl alcohol							-----NA-----
54	tert-amyl alcohol							-----NA-----
55	iso-octane							-----NA-----
56	benzene							-----NA-----
57	tert-amyl methyl ether							-----NA-----
58	heptane							-----NA-----
59	isopropyl acetate							-----NA-----
60	1,2-dichloroethane							-----NA-----
61	ethyl acrylate							-----NA-----
62	trichloroethene							-----NA-----
63	2-nitropropane							-----NA-----
64	2-chloroethyl vinyl ether							-----NA-----
65	methyl methacrylate							-----NA-----
66	1,2-dichloropropane							-----NA-----
67	dibromomethane							-----NA-----
68	methylcyclohexane							-----NA-----
69	bromodichloromethane							-----NA-----
70	epichlorohydrin							-----NA-----
71	cis-1,3-dichloropropene							-----NA-----
72	4-methyl-2-pentanone							-----NA-----
73	3-methyl-1-butanol							-----NA-----
74 I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	14.69	
75 S	toluene-d8 (s)	1.261	1.247	1.1	100	0.00	13.27	
76	toluene							-----NA-----
77	ethyl methacrylate							-----NA-----
78	trans-1,3-dichloropropene							-----NA-----
79	1,1,2-trichloroethane							-----NA-----
80	2-hexanone							-----NA-----
81	tetrachloroethene							-----NA-----
82	1,3-dichloropropane							-----NA-----
83	butyl acetate							-----NA-----
84	dibromochloromethane							-----NA-----
85	1,2-dibromoethane							-----NA-----
86	n-butyl ether							-----NA-----
87	chlorobenzene							-----NA-----
88	1,1,1,2-tetrachloroethane							-----NA-----
89	ethylbenzene							-----NA-----
90	m,p-xylene							-----NA-----
91	o-xylene							-----NA-----
92	styrene							-----NA-----
93	butyl acrylate							-----NA-----
94	bromoform							-----NA-----
95	isopropylbenzene							-----NA-----

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158335.D

96	cis-1,4-dichloro-2-butene								-----NA-----
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00		16.86	
98 S	4-bromofluorobenzene (s)	0.729	0.716	1.8	101	0.00		15.77	
99	bromobenzene								-----NA-----
100	1,1,2,2-tetrachloroethane								-----NA-----
101	trans-1,4-dichloro-2-bute								-----NA-----
102	1,2,3-trichloropropane								-----NA-----
103	n-propylbenzene								-----NA-----
104	2-chlorotoluene								-----NA-----
105	4-chlorotoluene								-----NA-----
106	1,3,5-trimethylbenzene								-----NA-----
107	tert-butylbenzene								-----NA-----
108	1,2,4-trimethylbenzene								-----NA-----
109	sec-butylbenzene								-----NA-----
110	1,3-dichlorobenzene								-----NA-----
111	p-isopropyltoluene								-----NA-----
112	1,4-dichlorobenzene								-----NA-----
113	1,2-dichlorobenzene								-----NA-----
114	n-butylbenzene								-----NA-----
115	1,2-dibromo-3-chloropropa								-----NA-----
116	1,3,5-trichlorobenzene								-----NA-----
117	Nitrobenzene								-----NA-----
118	1,2,4-trichlorobenzene								-----NA-----
119	2-ethylhexyl acrylate								-----NA-----
120	hexachlorobutadiene								-----NA-----
121	naphthalene								-----NA-----
122	1,2,3-trichlorobenzene								-----NA-----
123	hexachloroethane								-----NA-----
124	2-methylnaphthalene								-----NA-----

(#) = Out of Range
 2C158325.D M2C7025.M

SPCC's out = 0 CCC's out = 0
 Tue Apr 17 16:51:51 2018 RPT1

6.8.4
 6

Continuing Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7092-CC7025
Lab FileID: 2C159729.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V2C7092\2C159729.D Vial: 3
 Acq On : 12 Jun 2018 9:19 am Operator: HueanhT
 Sample : cc7025-20 Inst : Instrument #1
 Misc : MS26998,V2C7092,w,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
 Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
 Last Update : Fri May 18 09:36:02 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	79	-0.03	8.31
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.235	1.590	-28.7#	102	-0.03	8.44
4	1,4-dioxane	0.089	0.121	-36.0#	104	-0.02	12.33
5 I	pentafluorobenzene	1.000	1.000	0.0	98	0.00	10.77
6	chlorodifluoromethane	0.883	0.847	4.1	91	0.01	4.45
7	dichlorodifluoromethane	0.779	1.096	-40.7#	141	0.01	4.43
8	chloromethane	1.204	1.310	-8.8	115	-0.06	4.80
9	vinyl chloride	1.034	1.115	-7.8	105	-0.02	5.12
10	1,3-butadiene			-----NA-----			
11	bromomethane	0.671	0.646	3.7	97	-0.02	5.82
12	chloroethane	0.544	0.476	12.5	89	-0.03	6.02
13	trichlorofluoromethane	0.986	1.037	-5.2	101	0.01	6.60
14	vinyl bromide	0.648	0.670	-3.4	104	0.00	6.44
15	ethyl ether	0.289	0.311	-7.6	106	0.00	7.03
16	2-chloropropane	1.095	0.962	12.1	89	0.00	7.29
17	acrolein	0.187	0.172	8.0	87	0.00	7.30
18	freon 113	0.442	0.596	-34.8#	121	0.00	7.54
19	1,1-dichloroethene	0.600	0.621	-3.5	101	-0.02	7.52
20	acetone	0.078	0.090	-15.4	110	0.00	7.54
21	iodomethane	1.001	0.999	0.2	98	-0.01	7.81
22	acetonitrile	0.134	0.155	-15.7	110	-0.01	8.03
23	carbon disulfide	1.774	1.937	-9.2	103	0.00	7.97
24	methylene chloride	0.700	0.677	3.3	98	0.00	8.34
25	methyl acetate	0.661	0.620	6.2	97	0.00	8.06
26	methyl tert butyl ether	1.815	1.785	1.7	98	0.00	8.75
27	trans-1,2-dichloroethene	0.564	0.562	0.4	103	0.00	8.77
28	hexane	0.349	0.658	-88.5#	193	0.00	9.17
29	di-isopropyl ether	2.070	1.817	12.2	89	0.00	9.41
30	1,1-dichloroethane	0.964	0.979	-1.6	102	0.00	9.41
31	chloroprene	0.806	0.711	11.8	93	0.00	9.52
32	acrylonitrile	0.332	0.339	-2.1	101	0.00	8.66
33	vinyl acetate	0.091	0.096	-5.5	100	0.00	9.36
34	ethyl tert-butyl ether	1.889	1.714	9.3	90	0.00	9.91
35	2-butanone	0.090	0.091	-1.1	99	0.00	10.13
36	ethyl acetate	0.122	0.106	13.1	87	0.00	10.15
37	2,2-dichloropropane	0.724	0.857	-18.4	115	0.00	10.23
38	cis-1,2-dichloroethene	0.600	0.607	-1.2	107	0.00	10.19
39	propionitrile	0.149	0.150	-0.7	101	0.00	10.21
40	bromochloromethane	0.297	0.324	-9.1	110	0.00	10.51
41	tetrahydrofuran	0.315	0.289	8.3	93	0.00	10.52

Continuing Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7092-CC7025
Lab FileID: 2C159729.D

42		chloroform	0.947	0.928	2.0	105	0.00	10.60
43		t-butyl formate	0.571	0.458	19.8	77	0.00	10.64
44	S	dibromofluoromethane (s)	0.433	0.467	-7.9	108	0.00	10.80
45		methacrylonitrile	0.274	0.261	4.7	93	0.00	10.42
46		1,1,1-trichloroethane	0.903	0.861	4.7	98	0.00	10.87
47		Cyclohexane	0.764	0.831	-8.8	101	0.00	10.99
48		1,1-dichloropropene	0.654	0.620	5.2	98	0.00	11.04
49		carbon tetrachloride	0.688	0.815	-18.5	117	0.00	11.08
50		isobutyl alcohol	0.036	0.052	-44.4#	139	0.00	11.02
51	I	1,4-difluorobenzene	1.000	1.000	0.0	94	0.00	11.71
52	S	1,2-dichloroethane-d4 (s)	0.362	0.371	-2.5	97	0.00	11.23
53		n-butyl alcohol	0.028	0.028	0.0	93	0.00	11.77
54		tert-amyl alcohol	0.041	0.048	-17.1	103	0.00	11.19
55		iso-octane	1.618	1.735	-7.2	98	0.00	11.40
56		benzene	1.482	1.492	-0.7	98	0.00	11.30
57		tert-amyl methyl ether	0.292	0.298	-2.1	94	0.00	11.39
58		heptane	0.308	0.258	16.2	79	0.00	11.55
59		isopropyl acetate	0.091	0.095	-4.4	95	0.00	11.22
60		1,2-dichloroethane	0.510	0.522	-2.4	98	0.00	11.33
61		ethyl acrylate	0.561	0.505	10.0	85	0.00	12.00
62		trichloroethene	0.370	0.370	0.0	99	0.00	12.01
63		2-nitropropane	0.175	0.164	6.3	95	0.00	12.74
64		2-chloroethyl vinyl ether	0.243	0.186	23.5#	71	0.00	12.77
65		methyl methacrylate	0.111	0.106	4.5	89	0.00	12.26
66		1,2-dichloropropane	0.373	0.379	-1.6	95	0.00	12.29
67		dibromomethane	0.254	0.266	-4.7	100	0.00	12.40
68		methylcyclohexane	0.721	0.773	-7.2	98	0.00	12.30
69		bromodichloromethane	0.506	0.517	-2.2	101	0.00	12.54
70		epichlorohydrin	0.065	0.061	6.2	89	0.00	12.85
71		cis-1,3-dichloropropene	0.581	0.573	1.4	95	0.00	12.98
72		4-methyl-2-pentanone	0.216	0.219	-1.4	93	0.00	13.08
73		3-methyl-1-butanol	0.043	0.045	-4.7	94	0.00	13.08
74	I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	14.69
75	S	toluene-d8 (s)	1.261	1.220	3.3	95	0.00	13.27
76		toluene	0.955	0.886	7.2	94	0.00	13.34
77		ethyl methacrylate	0.596	0.488	18.1	85	0.00	13.50
78		trans-1,3-dichloropropene	0.597	0.569	4.7	95	0.00	13.51
79		1,1,2-trichloroethane	0.339	0.323	4.7	99	0.00	13.72
80		2-hexanone	0.238	0.221	7.1	91	0.00	13.88
81		tetrachloroethene	0.378	0.385	-1.9	102	0.00	13.86
82		1,3-dichloropropane	0.578	0.575	0.5	97	0.00	13.89
83		butyl acetate	0.355	0.305	14.1	87	0.00	13.94
84		dibromochloromethane	0.438	0.482	-10.0	108	0.00	14.12
85		1,2-dibromoethane	0.440	0.455	-3.4	101	0.00	14.27
86		n-butyl ether	1.868	1.414	24.3#	76	0.00	14.67
87		chlorobenzene	1.047	1.034	1.2	99	0.00	14.72
88		1,1,1,2-tetrachloroethane	0.446	0.471	-5.6	103	0.00	14.78
89		ethylbenzene	1.750	1.646	5.9	93	0.00	14.77
90		m,p-xylene	0.683	0.652	4.5	96	0.00	14.88
91		o-xylene	0.725	0.702	3.2	93	0.00	15.26
92		styrene	1.180	1.107	6.2	94	0.00	15.27
93		butyl acrylate	0.965	0.745	22.8#	75	0.00	15.09
94		bromoform	0.363	0.429	-18.2	117	0.00	15.49
95		isopropylbenzene	2.009	1.824	9.2	89	0.00	15.58
96		cis-1,4-dichloro-2-butene	0.231	0.224	3.0	92	0.00	15.62
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	96	0.00	16.86
98	S	4-bromofluorobenzene (s)	0.729	0.688	5.6	92	0.00	15.77

Continuing Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7092-CC7025
Lab FileID: 2C159729.D

99	bromobenzene	0.838	0.862	-2.9	102	0.00	15.94
100	1,1,2,2-tetrachloroethane	1.090	1.079	1.0	96	0.00	15.84
101	trans-1,4-dichloro-2-bute	0.125	0.127	-1.6	99	0.00	15.87
102	1,2,3-trichloropropane	0.265	0.282	-6.4	103	0.00	15.93
103	n-propylbenzene	3.305	3.168	4.1	95	0.00	15.97
104	2-chlorotoluene	0.749	0.757	-1.1	99	0.00	16.09
105	4-chlorotoluene	2.022	1.909	5.6	94	0.00	16.20
106	1,3,5-trimethylbenzene	2.603	2.449	5.9	91	0.00	16.11
107	tert-butylbenzene	2.262	2.050	9.4	88	0.00	16.43
108	1,2,4-trimethylbenzene	2.650	2.494	5.9	92	0.00	16.48
109	sec-butylbenzene	3.481	3.176	8.8	87	0.00	16.63
110	1,3-dichlorobenzene	1.651	1.736	-5.1	101	0.00	16.80
111	p-isopropyltoluene	3.029	2.778	8.3	88	0.00	16.75
112	1,4-dichlorobenzene	1.639	1.651	-0.7	98	0.00	16.89
113	1,2-dichlorobenzene	1.779	1.824	-2.5	98	0.00	17.25
114	n-butylbenzene	1.560	1.373	12.0	85	0.00	17.15
115	1,2-dibromo-3-chloropropa	0.270	0.269	0.4	96	0.00	18.00
116	1,3,5-trichlorobenzene	1.817	1.741	4.2	89	0.00	18.19
117	Nitrobenzene	0.051	0.060	-17.6	111	0.00	18.20
118	1,2,4-trichlorobenzene	1.543	1.370	11.2	81	0.00	18.85
119	2-ethylhexyl acrylate	1.189	0.422	64.5#	35#	0.00	18.85
120	hexachlorobutadiene	0.883	0.803	9.1	83	0.00	18.97
121	naphthalene	3.593	2.876	20.0	71	0.00	19.15
122	1,2,3-trichlorobenzene	1.421	1.295	8.9	83	0.00	19.38
123	hexachloroethane	0.579	0.596	-2.9	100	0.00	17.54
124	2-methylnaphthalene	1.948	0.757	61.1#	39#	0.00	20.31
125	Ethylenimine			-----NA-----			
126	Bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range
 2C158324.D M2C7025.M

SPCC's out = 0 CCC's out = 0
 Tue Jun 12 13:40:57 2018 RPT1

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: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12694A-MB1	3P68748.D	1	06/13/18	JB	06/12/18	OP12694A	E3P3263

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

JC67675-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.025	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.021	ug/l	
120-12-7	Anthracene	ND	0.10	0.020	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.043	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.036	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.033	ug/l	
218-01-9	Chrysene	ND	0.10	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.022	ug/l	
86-73-7	Fluorene	ND	0.10	0.025	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.038	ug/l	
91-20-3	Naphthalene	ND	0.10	0.029	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.023	ug/l	
129-00-0	Pyrene	ND	0.10	0.019	ug/l	
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	32%	15-110%
4165-62-2	Phenol-d5	23%	12-110%
118-79-6	2,4,6-Tribromophenol	60%	32-143%
4165-60-0	Nitrobenzene-d5	61%	29-124%
321-60-8	2-Fluorobiphenyl	50%	23-122%
1718-51-0	Terphenyl-d14	97%	22-130%

7.1.1
7

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12694A-BS12	3P68749.D	1	06/13/18	JB	06/12/18	OP12694A	E3P3263
OP12694A-BSD12	3P68750.D	1	06/13/18	JB	06/12/18	OP12694A	E3P3263

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

JC67675-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	1	0.639	64	0.664	66	4	31-135/38
208-96-8	Acenaphthylene	1	0.582	58	0.612	61	5	28-130/42
120-12-7	Anthracene	1	0.598	60	0.683	68	13	40-125/32
56-55-3	Benzo(a)anthracene	1	0.598	60	0.652	65	9	38-132/31
50-32-8	Benzo(a)pyrene	1	0.498	50	0.508	51	2	31-110/37
205-99-2	Benzo(b)fluoranthene	1	0.521	52	0.486	49	7	31-113/37
191-24-2	Benzo(g,h,i)perylene	1	0.483	48	0.424	42	13	18-110/54
207-08-9	Benzo(k)fluoranthene	1	0.473	47	0.524	52	10	31-119/43
218-01-9	Chrysene	1	0.552	55	0.633	63	14	43-119/33
53-70-3	Dibenzo(a,h)anthracene	1	0.545	55	0.484	48	12	20-112/50
206-44-0	Fluoranthene	1	0.612	61	0.681	68	11	48-118/27
86-73-7	Fluorene	1	0.642	64	0.676	68	5	42-123/34
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.498	50	0.437	44	13	18-113/49
91-20-3	Naphthalene	1	0.589	59	0.620	62	5	30-114/40
85-01-8	Phenanthrene	1	0.575	58	0.640	64	11	45-125/31
129-00-0	Pyrene	1	0.622	62	0.699	70	12	48-125/29
123-91-1	1,4-Dioxane	1	0.338	34	0.255	26	28	10-110/40

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	38%	39%	15-110%
4165-62-2	Phenol-d5	26%	27%	12-110%
118-79-6	2,4,6-Tribromophenol	73%	77%	32-143%
4165-60-0	Nitrobenzene-d5	73%	76%	29-124%
321-60-8	2-Fluorobiphenyl	62%	65%	23-122%
1718-51-0	Terphenyl-d14	88%	95%	22-130%

* = Outside of Control Limits.

7.2.1
7

Instrument Performance Check (DFTPP)

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3217-DFTPP	Injection Date: 05/11/18
Lab File ID: 3P67555.D	Injection Time: 22:23
Instrument ID: GCMS3P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	37652	34.3	Pass
68	Less than 2.0% of mass 69	82	0.07 (0.15) ^a	Pass
69	Mass 69 relative abundance	54674	49.8	Pass
70	Less than 2.0% of mass 69	329	0.30 (0.60) ^a	Pass
127	40.0 - 60.0% of mass 198	55794	50.8	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	109728	100.0	Pass
199	5.0 - 9.0% of mass 198	6943	6.33	Pass
275	10.0 - 30.0% of mass 198	27418	25.0	Pass
365	1.0 - 100.0% of mass 198	3582	3.26	Pass
441	Present, but less than mass 443	10371	9.45 (79.8) ^b	Pass
442	40.0 - 100.0% of mass 198	71293	65.0	Pass
443	17.0 - 23.0% of mass 442	12995	11.8 (18.2) ^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
E3P3217-ICC3217	3P67556.D	05/11/18	22:34	00:11	Initial cal 1.0
E3P3217-IC3217	3P67557.D	05/11/18	22:55	00:32	Initial cal 0.5
E3P3217-IC3217	3P67558.D	05/11/18	23:16	00:53	Initial cal 5.0
E3P3217-IC3217	3P67559.D	05/11/18	23:37	01:14	Initial cal 2.5
E3P3217-IC3217	3P67560.D	05/11/18	23:58	01:35	Initial cal 0.2
E3P3217-IC3217	3P67561.D	05/12/18	00:19	01:56	Initial cal 0.1
E3P3217-IC3217	3P67562A.D	05/12/18	00:47	02:24	Initial cal 0.05
E3P3217-IC3217	3P67563.D	05/12/18	01:08	02:45	Initial cal 0.02
E3P3217-IC3217	3P67564.D	05/12/18	01:29	03:06	Initial cal 0.01
E3P3217-ICV3217	3P67566.D	05/12/18	02:11	03:48	Initial cal verification 1

7.3.1
7

Instrument Performance Check (DFTPP)

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3218-DFTPP	Injection Date: 05/12/18
Lab File ID: 3P67567.D	Injection Time: 14:22
Instrument ID: GCMS3P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	83173	35.1	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	119490	50.4	Pass
70	Less than 2.0% of mass 69	32	0.01 (0.03) ^a	Pass
127	40.0 - 60.0% of mass 198	121631	51.3	Pass
197	Less than 1.0% of mass 198	1163	0.49	Pass
198	Base peak, 100% relative abundance	236891	100.0	Pass
199	5.0 - 9.0% of mass 198	16351	6.90	Pass
275	10.0 - 30.0% of mass 198	57645	24.3	Pass
365	1.0 - 100.0% of mass 198	7501	3.17	Pass
441	Present, but less than mass 443	21450	9.05 (83.4) ^b	Pass
442	40.0 - 100.0% of mass 198	137296	58.0	Pass
443	17.0 - 23.0% of mass 442	25730	10.9 (18.7) ^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
E3P3218-ICV3217	3P67568.D	05/12/18	14:40	00:18	Initial cal verification 5
E3P3218-CC3217	3P67569.D	05/12/18	15:10	00:48	Continuing cal 1.0
OP11873A-MB2	3P67570.D	05/12/18	15:34	01:12	Method Blank
OP11873A-LB9	3P67571.D	05/12/18	15:55	01:33	Leachate Blank
OP11873A-BS12	3P67572.D	05/12/18	16:16	01:54	Blank Spike
ZZZZZZ	3P67573.D	05/12/18	16:37	02:15	(unrelated sample)
ZZZZZZ	3P67574.D	05/12/18	16:58	02:36	(unrelated sample)
ZZZZZZ	3P67575.D	05/12/18	17:19	02:57	(unrelated sample)
ZZZZZZ	3P67576.D	05/12/18	17:40	03:18	(unrelated sample)
ZZZZZZ	3P67577.D	05/12/18	18:01	03:39	(unrelated sample)
ZZZZZZ	3P67578.D	05/12/18	18:22	04:00	(unrelated sample)
ZZZZZZ	3P67579.D	05/12/18	18:43	04:21	(unrelated sample)
ZZZZZZ	3P67580.D	05/12/18	19:04	04:42	(unrelated sample)
ZZZZZZ	3P67581.D	05/12/18	19:25	05:03	(unrelated sample)
ZZZZZZ	3P67583.D	05/12/18	20:07	05:45	(unrelated sample)
ZZZZZZ	3P67584.D	05/12/18	20:28	06:06	(unrelated sample)
ZZZZZZ	3P67585.D	05/12/18	20:49	06:27	(unrelated sample)
ZZZZZZ	3P67586.D	05/12/18	21:10	06:48	(unrelated sample)
JC65067-1	3P67587.D	05/12/18	21:31	07:09	(used for QC only; not part of job JC67675)

7.3.2
7

Instrument Performance Check (DFTPP)

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3218-DFTPP	Injection Date: 05/12/18
Lab File ID: 3P67567.D	Injection Time: 14:22
Instrument ID: GCMS3P	

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JC65067-1	3P67588.D	05/12/18	21:52	07:30	(used for QC only; not part of job JC67675)
ZZZZZZ	3P67589.D	05/12/18	22:13	07:51	(unrelated sample)
ZZZZZZ	3P67593.D	05/12/18	23:37	09:15	(unrelated sample)
ZZZZZZ	3P67595.D	05/13/18	00:19	09:57	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3263-DFTPP	Injection Date: 06/13/18
Lab File ID: 3P68739.D	Injection Time: 08:50
Instrument ID: GCMS3P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	148098	43.5	Pass
68	Less than 2.0% of mass 69	1422	0.42 (0.73) ^a	Pass
69	Mass 69 relative abundance	195041	57.2	Pass
70	Less than 2.0% of mass 69	269	0.08 (0.14) ^a	Pass
127	40.0 - 60.0% of mass 198	193825	56.9	Pass
197	Less than 1.0% of mass 198	1397	0.41	Pass
198	Base peak, 100% relative abundance	340821	100.0	Pass
199	5.0 - 9.0% of mass 198	23738	6.96	Pass
275	10.0 - 30.0% of mass 198	81208	23.8	Pass
365	1.0 - 100.0% of mass 198	12778	3.75	Pass
441	Present, but less than mass 443	27311	8.01 (82.6) ^b	Pass
442	40.0 - 100.0% of mass 198	175357	51.5	Pass
443	17.0 - 23.0% of mass 442	33068	9.70 (18.9) ^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
E3P3263-CC3217	3P68740.D	06/13/18	09:00	00:10	Continuing cal 0.5
OP12469A-MB2	3P68742.D	06/13/18	09:44	00:54	Method Blank
ZZZZZZ	3P68743.D	06/13/18	10:05	01:15	(unrelated sample)
ZZZZZZ	3P68744.D	06/13/18	10:26	01:36	(unrelated sample)
OP12462A-MB2	3P68745.D	06/13/18	10:50	02:00	Method Blank
ZZZZZZ	3P68746.D	06/13/18	11:11	02:21	(unrelated sample)
ZZZZZZ	3P68747.D	06/13/18	11:33	02:43	(unrelated sample)
OP12694A-MB1	3P68748.D	06/13/18	11:54	03:04	Method Blank
OP12694A-BS12	3P68749.D	06/13/18	12:16	03:26	Blank Spike
OP12694A-BSD12	3P68750.D	06/13/18	12:37	03:47	Blank Spike Duplicate
ZZZZZZ	3P68773.D	06/13/18	12:58	04:08	(unrelated sample)
ZZZZZZ	3P68751.D	06/13/18	13:20	04:30	(unrelated sample)
ZZZZZZ	3P68752.D	06/13/18	13:41	04:51	(unrelated sample)
ZZZZZZ	3P68753.D	06/13/18	14:03	05:13	(unrelated sample)
ZZZZZZ	3P68755.D	06/13/18	14:46	05:56	(unrelated sample)
ZZZZZZ	3P68756.D	06/13/18	15:07	06:17	(unrelated sample)
ZZZZZZ	3P68757.D	06/13/18	15:29	06:39	(unrelated sample)
ZZZZZZ	3P68758.D	06/13/18	15:50	07:00	(unrelated sample)
JC67675-2	3P68759.D	06/13/18	16:12	07:22	1-NAS-002-001-02

7.3.3
7

Instrument Performance Check (DFTPP)

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3263-DFTPP	Injection Date: 06/13/18
Lab File ID: 3P68739.D	Injection Time: 08:50
Instrument ID: GCMS3P	

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	3P68761A.D	06/13/18	17:27	08:37	(unrelated sample)
ZZZZZZ	3P68763.D	06/13/18	18:09	09:19	(unrelated sample)
ZZZZZZ	3P68764.D	06/13/18	18:30	09:40	(unrelated sample)
ZZZZZZ	3P68765.D	06/13/18	18:52	10:02	(unrelated sample)
ZZZZZZ	3P68766.D	06/13/18	19:13	10:23	(unrelated sample)
ZZZZZZ	3P68768.D	06/13/18	19:57	11:07	(unrelated sample)
ZZZZZZ	3P68769.D	06/13/18	20:19	11:29	(unrelated sample)
ZZZZZZ	3P68770.D	06/13/18	20:40	11:50	(unrelated sample)

7.3.3
7

Internal Standard Area Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Check Std: E3P3263-CC3217	Injection Date: 06/13/18
Lab File ID: 3P68740.D	Injection Time: 09:00
Instrument ID: GCMS3P	Method: SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	186996	7.09	236428	8.56	378043	10.68	293481	13.36
Upper Limit ^a	373992	7.59	472856	9.06	756086	11.18	586962	13.86
Lower Limit ^b	93498	6.59	118214	8.06	189022	10.18	146741	12.86

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP12469A-MB2	129477	7.09	170657	8.56	275274	10.68	201350	13.36
ZZZZZZ	139015	7.09	179055	8.56	284817	10.68	203375	13.36
ZZZZZZ	141874	7.09	181412	8.56	281928	10.68	201245	13.37
OP12462A-MB2	121483	7.09	156364	8.56	245023	10.68	186211	13.37
ZZZZZZ	130232	7.09	173365	8.56	275900	10.68	209229	13.36
ZZZZZZ	144802	7.09	190410	8.56	305919	10.68	232852	13.36
OP12694A-MB1	129010	7.09	167186	8.56	263300	10.68	199116	13.36
OP12694A-BS12	113186	7.09	147242	8.56	243415	10.68	184728	13.37
OP12694A-BSD12	118774	7.09	156222	8.56	250595	10.68	196853	13.36
ZZZZZZ	188182	7.09	264379	8.56	409414	10.68	341827	13.37
ZZZZZZ	151235	7.09	210461	8.56	325957	10.68	260912	13.37
ZZZZZZ	116951	7.09	152182	8.56	242920	10.68	197933	13.36
ZZZZZZ	142861	7.09	185559	8.56	296817	10.68	229659	13.36
ZZZZZZ	128434	7.09	169095	8.56	274067	10.68	222122	13.37
ZZZZZZ	135673	7.09	176371	8.56	282781	10.68	220933	13.36
ZZZZZZ	110979	7.09	146041	8.56	231792	10.68	179250	13.36
ZZZZZZ	129382	7.09	166930	8.56	270968	10.68	206267	13.36
JC67675-2	123904	7.09	156144	8.56	246780	10.68	192228	13.37
ZZZZZZ	145745	7.09	187519	8.56	289061	10.68	226243	13.37
ZZZZZZ	117413	7.09	155491	8.56	256160	10.68	207103	13.37
ZZZZZZ	151482	7.09	204273	8.56	339825	10.68	263322	13.36
ZZZZZZ	132233	7.09	217193	8.56	289991	10.68	226670	13.37
ZZZZZZ	199910	7.09	348287	8.56	357888	10.69	293250	13.37
ZZZZZZ	203702	7.09	204044	8.56	276058	10.68	217411	13.36
ZZZZZZ	134644	7.09	177524	8.56	278837	10.68	218406	13.36
ZZZZZZ	111339	7.09	149943	8.56	253224	10.68	201632	13.36

- IS 1 = 1-Methylnaphthalene-d10
- IS 2 = Fluorene-d10
- IS 3 = Fluoranthene-d10
- IS 4 = Benzo(a)pyrene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.1
7

Surrogate Recovery Summary

Job Number: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: SW846 8270D BY SIM	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JC67675-2	3P68759.D	76	66	88
OP12694A-BS12	3P68749.D	73	62	88
OP12694A-BSD123	P68750.D	76	65	95
OP12694A-MB1	3P68748.D	61	50	97

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	29-124%
S2 = 2-Fluorobiphenyl	23-122%
S3 = Terphenyl-d14	22-130%

7.5.1
7

Initial Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3217-ICC3217
Lab FileID: 3P67556.D

Response Factor Report MSGC3P

Method : C:\MSDCHEM\1\METHODS\M3P3217SIM.M (RTE Integrator)
 Title : Semi Volatile Extractables by GC/MS
 Last Update : Sat May 12 15:00:58 2018
 Response via : Initial Calibration

Calibration Files

2.5 =3p67559.D 1.0 =3p67556.D 0.5 =3p67557.D 0.2 =3p67560.D
 0.1 =3p67561.D 0.05=3p67562a.D 0.02=3p67563.D 0.01=3p67564.D
 5 =3p67558.D = = =

Compound

Compound	2.5	1.0	0.5	0.2	0.1	0.05	0.02	0.01	5	Avg	%RSD
1) I 1-Methylnaphthalene-d	-----ISTD-----										
2) 1,4-dioxane	0.318	0.316	0.364	0.327	0.364	0.275	0.294		0.304	0.320	9.84
3) 2-Fluorophenol	0.783	0.781	0.887	0.815	0.814	0.718	0.742	0.738	0.726	0.778	6.99
4) Phenol-d5	0.955	0.991	1.099	1.004	0.997	0.879	0.893	0.893	0.896	0.956	7.68
5) Phenol	1.023	1.038	1.148	1.066	1.056	0.941	0.964	0.993	0.994	1.025	6.05
6) bis(2-Chloroethyl)ether	0.692	0.712	0.784	0.722	0.720	0.670	0.706	0.697	0.671	0.708	4.80
7) Nitrobenzene-d5	0.909	0.925	1.034	0.948	0.926	0.821	0.839	0.830	0.821	0.895	8.14
8) Naphthalene	2.409	2.384	2.685	2.518	2.514	2.271	2.455	2.725	2.333	2.477	6.13
9) Hexachlorobutadiene	0.456	0.452	0.509	0.475	0.491	0.438	0.456	0.477	0.443	0.466	5.04
10) 2-Methylnaphthalene	1.334	1.370	1.516	1.397	1.408	1.292	1.552	1.885	1.289	1.449	12.89
11) 1-Methylnaphthalene	1.410	1.442	1.585	1.482	1.526	1.341	1.581	1.792	1.354	1.502	9.36
12) I Fluorene-d10	-----ISTD-----										
13) 2-Fluorobiphenyl	1.272	1.366	1.526	1.473	1.490	1.331	1.395	1.407	0.937	1.355	12.99
14) Acenaphthylene	1.730	1.785	1.956	1.784	1.838	1.584	1.809	1.975	1.776	1.804	6.46
15) Acenaphthene	1.139	1.192	1.323	1.222	1.268	1.082	1.202	1.355	1.164	1.216	7.16
16) 4,6-dinitro-2-methylphenol	0.176	0.160	0.128	0.086	0.066				0.220	0.139	41.51
	---- Quadratic regression ---- Coefficient = 0.9998										
	Response Ratio = -0.00977 + 0.14072 *A + 0.01293 *A^2										
17) Fluorene	1.246	1.284	1.421	1.328	1.360	1.166	1.327	1.485	1.238	1.317	7.42
18) 2,4,6-Tribromophenol	0.209	0.212	0.226	0.201	0.201	0.163	0.164	0.162	0.221	0.195	13.04
19) I Fluoranthene-d10	-----ISTD-----										
20) Hexachlorobenzene	0.269	0.276	0.306	0.288	0.298	0.263	0.275	0.287	0.262	0.280	5.47
21) Pentachlorophenol	0.177	0.179	0.182	0.144	0.124	0.103	0.090	0.081	0.187	0.141	30.14

Initial Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3217-ICC3217
Lab FileID: 3P67556.D

---- Quadratic regression ---- Coefficient = 0.9999
 Response Ratio = -0.00227 + 0.17196 *A + 0.00248 *A^2

22)	Phenanthrene	1.158	1.200	1.312	1.248	1.275	1.151	1.382	1.635	1.140	1.278	12.25
23)	Anthracene	1.174	1.207	1.327	1.165	1.212	1.063	1.151	1.211	1.160	1.185	5.91
24)	Fluoranthene	1.257	1.307	1.430	1.332	1.382	1.289	1.477	1.277	1.253	1.334	5.96
25)	Pyrene	1.269	1.339	1.451	1.308	1.336	1.197	1.272	1.299	1.263	1.304	5.39
26)	Terphenyl-d14	0.658	0.716	0.816	0.743	0.752	0.654	0.669	0.693	0.540	0.694	11.19
27)	Benzo[a]anthracene	1.062	1.082	1.147	1.013	0.998	1.047	1.094	1.208	1.050	1.078	6.09
28)	Chrysene	1.120	1.161	1.293	1.195	1.302	1.261	1.423	1.734	1.091	1.287	15.31
29)	I Benzo(a)pyrene-d12	-----ISTD-----										
30)	Benzo[b]fluoranthene	1.632	1.611	1.642	1.546	1.552	1.873	2.039	1.540	1.679	10.77	
31)	Benzo[k]fluoranthene	1.576	1.584	1.863	1.704	2.116	2.030	1.593	1.781	12.61		
32)	Benzo[a]pyrene	1.446	1.479	1.586	1.535	1.553	1.347	1.528	1.774	1.420	1.519	7.98
33)	Indeno[1,2,3-cd]pyrene	1.528	1.525	1.619	1.394	1.425	1.370	1.679	2.089	1.527	1.573	13.89
34)	Dibenz[a,h]anthracene	1.279	1.270	1.369	1.176	1.189	1.051	1.174	1.296	1.277	1.231	7.58
35)	Benzo[g,h,i]perylene	1.222	1.230	1.311	1.314	1.288	1.285	1.480	1.875	1.204	1.356	15.54

(#) = Out of Range ### Number of calibration levels exceeded format ###

M3P3217SIM.M Mon May 14 09:05:32 2018

7.6.1

7

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3217-ICV3217
Lab FileID: 3P67566.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3217\3p67566.D Vial: 12
Acq On : 12 May 2018 2:11 am Operator: johnbl
Sample : icv3217-1 Inst : MSGC3P
Misc : op10752a,e3p3217,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3P3217SIM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Sat May 12 15:00:58 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1-Methylnaphthalene-d10	1.000	1.000	0.0	98	0.00	7.34
2 t	1,4-dioxane	0.320	0.270	15.6	83	0.01	2.46
6 t	bis(2-Chloroethyl)ether	0.708	0.689	2.7	94	0.00	5.10
8 t	Naphthalene	2.477	2.202	11.1	90	0.00	6.60
9 t	Hexachlorobutadiene	0.466	0.446	4.3	96	0.00	6.74
10 t	2-Methylnaphthalene	1.449	1.239	14.5	88	0.00	7.28
12 I	Fluorene-d10	1.000	1.000	0.0	93	0.00	8.81
14 t	Acenaphthylene	1.804	1.591	11.8	83	0.00	8.16
15 t	Acenaphthene	1.216	1.112	8.6	86	0.00	8.33
17 t	Fluorene	1.317	1.177	10.6	85	0.00	8.84
19 I	Fluoranthene-d10	1.000	1.000	0.0	88	0.00	10.93
20 t	Hexachlorobenzene	0.280	0.274	2.1	87	0.00	9.39
22 t	Phenanthrene	1.278	1.164	8.9	85	0.00	9.78
23 t	Anthracene	1.185	1.083	8.6	79	0.00	9.83
24 t	Fluoranthene	1.334	1.194	10.5	80	0.00	10.95
25 t	Pyrene	1.304	1.158	11.2	76	0.00	11.17
27 t	Benzo[a]anthracene	1.078	0.911	15.5	74	0.00	12.35
28 t	Chrysene	1.287	1.039	19.3	78	0.00	12.39
29 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	76	0.00	13.65
30 t	Benzo[b]fluoranthene	1.679	1.231	26.7	58	0.00	13.36
31 t	Benzo[k]fluoranthene	1.781	1.644	7.7	78	0.00	13.38
32 t	Benzo[a]pyrene	1.519	1.284	15.5	66	0.00	13.67
33 t	Indeno[1,2,3-cd]pyrene	1.573	1.245	20.9	62	-0.01	14.92
34 t	Dibenz[a,h]anthracene	1.231	1.021	17.1	61	-0.01	14.94
35 t	Benzo[g,h,i]perylene	1.356	1.091	19.5	67	-0.02	15.27

(#) = Out of Range
3p67566.D M3P3217SIM.M

SPCC's out = 0 CCC's out = 0
Mon May 14 09:00:35 2018

Initial Calibration Verification

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3218-ICV3217
Lab FileID: 3P67568.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3218\3p67568.D Vial: 2
Acq On : 12 May 2018 2:40 pm Operator: johnbl
Sample : icv3217-5 Inst : MSGC3P
Misc : op10752a,e3p3218,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3P3217SIM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Sat May 12 15:00:58 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I 1-Methylnaphthalene-d10	1.000	1.000	0.0	108	0.00	7.34
5 Phenol	1.025	0.907	11.5	94	0.00	5.01
12 I Fluorene-d10	1.000	1.000	0.0	103	0.00	8.81
16 t 4,6-dinitro-2-methylpheno	5.000	3.501	30.0	64	0.00	8.89
19 I Fluoranthene-d10	1.000	1.000	0.0	101	0.00	10.94
21 t Pentachlorophenol	5.000	4.600	8.0	90	0.00	9.58

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3p67556.D M3P3217SIM.M Mon May 14 09:04:30 2018

Continuing Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3263-CC3217
Lab FileID: 3P68740.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3263\3p68740.D Vial: 2
 Acq On : 13 Jun 2018 9:00 am Operator: johnb1
 Sample : cc3217-0.5 Inst : MSGC3P
 Misc : op10752a,e3p3263,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3P3217SIM.M (RTE Integrator)
 Title : Semi Volatile Extractables by GC/MS
 Last Update : Sat May 12 15:00:58 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.050 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-Methylnaphthalene-d10	1.000	1.000	0.0	68	0.00	7.09
2 t	1,4-dioxane	0.320	0.320	0.0	59	-0.09	2.16
3 S	2-Fluorophenol	0.778	0.738	5.1	56	-0.05	3.91
4 S	Phenol-d5	0.956	0.928	2.9	57	0.01	4.84
5	Phenol	1.025	0.975	4.9	57	0.01	4.85
6 t	bis(2-Chloroethyl)ether	0.708	0.767	-8.3	66	-0.06	4.86
7 S	Nitrobenzene-d5	0.895	1.062	-18.7	69	-0.04	5.64
8 t	Naphthalene	2.477	2.308	6.8	58	-0.02	6.35
9 t	Hexachlorobutadiene	0.466	0.514	-10.3	68	-0.03	6.48
10 t	2-Methylnaphthalene	1.449	1.366	5.7	61	0.00	7.03
11 t	1-Methylnaphthalene	1.502	1.435	4.5	61	0.00	7.13
12 I	Fluorene-d10	1.000	1.000	0.0	65	0.00	8.56
13 S	2-Fluorobiphenyl	1.355	1.501	-10.8	64	-0.03	7.40
14 t	Acenaphthylene	1.804	1.744	3.3	58	-0.01	7.91
15 t	Acenaphthene	1.216	1.251	-2.9	61	-0.01	8.08
16 t	4,6-dinitro-2-methylpheno	2.500	1.423	43.1#	34	0.03	8.65
17 t	Fluorene	1.317	1.323	-0.5	60	0.00	8.59
18 S	2,4,6-Tribromophenol	0.195	0.232	-19.0	67	0.02	8.83
19 I	Fluoranthene-d10	1.000	1.000	0.0	69	0.00	10.68
20 t	Hexachlorobenzene	0.280	0.274	2.1	62	-0.03	9.13
21 t	Pentachlorophenol	2.500	2.003	19.9	51	-0.02	9.33
22 t	Phenanthrene	1.278	1.152	9.9	60	-0.03	9.52
23 t	Anthracene	1.185	1.131	4.6	59	-0.02	9.57
24 t	Fluoranthene	1.334	1.272	4.6	61	0.00	10.69
25 t	Pyrene	1.304	1.303	0.1	62	0.00	10.91
26 S	Terphenyl-d14	0.694	0.850	-22.5#	72	0.02	11.08
27 t	Benzo[a]anthracene	1.078	1.094	-1.5	66	0.01	12.09
28 t	Chrysene	1.287	1.182	8.2	63	0.01	12.13
29 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	75	0.00	13.36
30 t	Benzo[b]fluoranthene	1.679	1.624	3.3	74	0.00	13.09
31 t	Benzo[k]fluoranthene	1.781	1.488	16.5	60	0.00	13.11

7.6.4
7

Continuing Calibration Summary

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3263-CC3217
Lab FileID: 3P68740.D

32 t	Benzo[a]pyrene	1.519	1.433	5.7	68	0.00	13.38
33 t	Indeno[1,2,3-cd]pyrene	1.573	1.637	-4.1	76	-0.04	14.52
34 t	Dibenz[a,h]anthracene	1.231	1.378	-11.9	76	-0.04	14.53
35 t	Benzo[g,h,i]perylene	1.356	1.312	3.2	75	-0.05	14.83

(#) = Out of Range

3p67557.D M3P3217SIM.M

SPCC's out = 0 CCC's out = 0

Wed Jun 13 12:49:12 2018

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
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
Analyst: JA Run ID: MA44634
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:17	MA44634-STD1	1		B=1.9469E-004, C=3.3205E-002, R=0.9998385
10:18	MA44634-STD2	1		STDB
10:19	MA44634-STD3	1		STDC
10:21	MA44634-STD4	1		STDD
10:22	MA44634-STD5	1		STDE
10:23	MA44634-STD6	1		STDF
10:28	MA44634-ICV1	1		
10:32	MA44634-ICB1	1		
10:34	MA44634-CCV1	1		
10:35	MA44634-CCB1	1		
10:37	MA44634-CRI1	1		
10:48	ZZZZZZ	1		
10:52	MP7610-MB1	1		
10:53	MP7610-B1	1		
10:55	MP7610-S1	1		
10:57	MP7610-S2	1		
10:58	MP7610-D1	1		
11:00	JC67428-1	1		(sample used for QC only; not part of login JC67675)
11:01	ZZZZZZ	1		
11:03	MA44634-CCV2	1		
11:04	MA44634-CCB2	1		
11:06	ZZZZZZ	1		
11:07	ZZZZZZ	1		
11:08	ZZZZZZ	1		
11:10	ZZZZZZ	1		
11:11	ZZZZZZ	1		
11:12	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:15	ZZZZZZ	1		
11:16	ZZZZZZ	1		
11:17	MA44634-CCV3	1		
11:19	MA44634-CCB3	1		
11:23	ZZZZZZ	1		

8.1
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
Analyst: JA Run ID: MA44634
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:24	ZZZZZZ	1		
11:26	ZZZZZZ	1		
11:27	ZZZZZZ	1		
11:28	JC67675-2	1		
----->	Last reportable sample/prep for job JC67675			
11:30	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:32	ZZZZZZ	1		
11:34	MA44634-CCV4	1		
11:35	MA44634-CCB4	1		
11:36	ZZZZZZ	1		
11:38	MP7611-MB1	1		
11:39	MP7611-B1	1		
11:40	MP7611-S1	1		
11:42	MP7611-S2	1		
11:43	MP7611-S3	1		
11:45	MP7611-S4	1		
11:47	JC67755-2	1		(sample used for QC only; not part of login JC67675)
11:48	JC67755-2F	1		(sample used for QC only; not part of login JC67675)
11:50	MA44634-CCV5	1		
11:51	MA44634-CCB5	1		
11:53	ZZZZZZ	1		
11:54	ZZZZZZ	1		
11:55	ZZZZZZ	1		
11:56	ZZZZZZ	1		
11:58	ZZZZZZ	1		
11:59	ZZZZZZ	1		
12:00	ZZZZZZ	1		
12:02	ZZZZZZ	1		
12:03	ZZZZZZ	1		
12:04	MA44634-CCV6	1		
12:05	MA44634-CCB6	1		
12:07	ZZZZZZ	1		
12:08	ZZZZZZ	1		

8.1
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
Analyst: JA Run ID: MA44634
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:10	ZZZZZZ	1		
12:11	ZZZZZZ	1		
12:12	MP7612-MB1	1		
12:14	MP7612-B1	1		
12:15	MP7612-S1	1		
12:16	MP7612-S2	1		
12:18	JC67592-2	1		(sample used for QC only; not part of login JC67675)
12:20	MA44634-CCV7	1		
12:21	MA44634-CCB7	1		
12:23	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:27	MA44634-CCV8	1		
12:28	MA44634-CCB8	1		
14:01	MA44634-CCV9	1		
14:02	MA44634-CCB9	1		
14:04	MP7618-MB1	1		
14:05	MP7618-B1	1		
14:06	MP7618-S1	1		
14:08	MP7618-S2	1		
14:09	JC67677-2A	1		(sample used for QC only; not part of login JC67675)
14:15	ZZZZZZ	1		
14:16	ZZZZZZ	1		
14:18	ZZZZZZ	1		
14:19	ZZZZZZ	1		
14:20	MA44634-CCV10	1		
14:22	MA44634-CCB10	1		
14:23	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:26	ZZZZZZ	1		
14:27	ZZZZZZ	1		
14:29	ZZZZZZ	1		
14:30	ZZZZZZ	1		
14:31	ZZZZZZ	1		

8.1
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
Analyst: JA Run ID: MA44634
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:32	MA44634-CCV11	1		
14:34	MA44634-CCB11	1		
14:35	MP7618-MB2	1		
14:37	MP7618-B2	1		
14:38	JC67677-2A	1		(sample used for QC only; not part of login JC67675)
14:42	MA44634-CRI2	1		
14:44	MA44634-CCV12	1		
14:45	MA44634-CCB12	1		

-----> Last reportable CCB for job JC67675
Refer to raw data for calibration curve and standards.

8.1
8

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
 Analyst: JA Run ID: MA44634
 Parameters: Hg

Time	Sample Description	Element:	H Dilution	g
10:28	MA44634-ICV1	1	X	
10:32	MA44634-ICB1	1	X	
10:34	MA44634-CCV1	1	X	
10:35	MA44634-CCB1	1	X	
10:37	MA44634-CRI1	1	X	
10:48	ZZZZZZ	1		
10:52	MP7610-MB1	1	X	
10:53	MP7610-B1	1	X	
10:55	MP7610-S1	1	X	
10:57	MP7610-S2	1	X	
10:58	MP7610-D1	1	X	
11:00	JC67428-1	1	X (a)	
11:01	ZZZZZZ	1		
11:03	MA44634-CCV2	1	X	
11:04	MA44634-CCB2	1	X	
11:06	ZZZZZZ	1		
11:07	ZZZZZZ	1		
11:08	ZZZZZZ	1		
11:10	ZZZZZZ	1		
11:11	ZZZZZZ	1		
11:12	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:15	ZZZZZZ	1		
11:16	ZZZZZZ	1		
11:17	MA44634-CCV3	1	X	
11:19	MA44634-CCB3	1	X	
11:23	ZZZZZZ	1		
11:24	ZZZZZZ	1		
11:26	ZZZZZZ	1		
11:27	ZZZZZZ	1		
11:28	JC67675-2	1	X	
11:30	ZZZZZZ	1		
11:31	ZZZZZZ	1		

Element: H
g

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
 Analyst: JA Run ID: MA44634
 Parameters: Hg

Time	Sample Description	Element:	H Dilution	g
11:32	ZZZZZZ		1	
11:34	MA44634-CCV4		1	X
11:35	MA44634-CCB4		1	X
11:36	ZZZZZZ		1	
11:38	MP7611-MB1		1	X
11:39	MP7611-B1		1	X
11:40	MP7611-S1		1	X
11:42	MP7611-S2		1	X
11:43	MP7611-S3		1	X
11:45	MP7611-S4		1	X
11:47	JC67755-2		1	X (a)
11:48	JC67755-2F		1	X (a)
11:50	MA44634-CCV5		1	X
11:51	MA44634-CCB5		1	X
11:53	ZZZZZZ		1	
11:54	ZZZZZZ		1	
11:55	ZZZZZZ		1	
11:56	ZZZZZZ		1	
11:58	ZZZZZZ		1	
11:59	ZZZZZZ		1	
12:00	ZZZZZZ		1	
12:02	ZZZZZZ		1	
12:03	ZZZZZZ		1	
12:04	MA44634-CCV6		1	X
12:05	MA44634-CCB6		1	X
12:07	ZZZZZZ		1	
12:08	ZZZZZZ		1	
12:10	ZZZZZZ		1	
12:11	ZZZZZZ		1	
12:12	MP7612-MB1		1	X
12:14	MP7612-B1		1	X
12:15	MP7612-S1		1	X
12:16	MP7612-S2		1	X
		Element:	H	
			g	

8.1.1
8

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
 Analyst: JA Run ID: MA44634
 Parameters: Hg

Time	Sample Description	Element:	H Dilution g
12:18	JC67592-2	1	X (a)
12:20	MA44634-CCV7	1	X
12:21	MA44634-CCB7	1	X
12:23	ZZZZZ	1	
12:24	ZZZZZ	1	
12:27	MA44634-CCV8	1	X
12:28	MA44634-CCB8	1	X
14:01	MA44634-CCV9	1	X
14:02	MA44634-CCB9	1	X
14:04	MP7618-MB1	1	X
14:05	MP7618-B1	1	X
14:06	MP7618-S1	1	X
14:08	MP7618-S2	1	X
14:09	JC67677-2A	1	(a)
14:15	ZZZZZ	1	
14:16	ZZZZZ	1	
14:18	ZZZZZ	1	
14:19	ZZZZZ	1	
14:20	MA44634-CCV10	1	X
14:22	MA44634-CCB10	1	X
14:23	ZZZZZ	1	
14:25	ZZZZZ	1	
14:26	ZZZZZ	1	
14:27	ZZZZZ	1	
14:29	ZZZZZ	1	
14:30	ZZZZZ	1	
14:31	ZZZZZ	1	
14:32	MA44634-CCV11	1	X
14:34	MA44634-CCB11	1	X
14:35	MP7618-MB2	1	X
14:37	MP7618-B2	1	X
14:38	JC67677-2A	1	X (a)
14:42	MA44634-CRI2	1	X
		Element:	H g

8.1.1
8

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
Analyst: JA Run ID: MA44634
Parameters: Hg

Time	Sample Description	Element: H Dilution g
------	--------------------	--------------------------

14:44 MA44634-CCV12 1 X
14:45 MA44634-CCB12 1 X

(a) Sample used for QC only; not part of login JC67675.

Element: H
g

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA44634 Units: ug/l

	Time:		10:32		10:35		11:04		11:19	
	Sample ID:		ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.052	0.0299	<0.20	-0.0470	<0.20	-0.0277	<0.20	-0.0316	<0.20

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

8.1.2
 8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA44634 Units: ug/l

	Time:		11:35		11:51		12:05		12:21	
	Sample ID:		CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.052	-0.0303	<0.20	-0.0747	<0.20	-0.0271	<0.20	-0.0326	<0.20

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

8.1.2
 8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA44634 Units: ug/l

	Time:		12:28		14:02		14:22		14:34	
	Sample ID:		CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.052	-0.0320	<0.20	-0.0256	<0.20	-0.0229	<0.20	-0.0221	<0.20

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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA44634 Units: ug/l

Time:			14:45	
Sample ID:			CCB12	
Metal	RL	IDL	raw	final

Mercury 0.20 .052 -0.0260 <0.20

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44634 Units: ug/l

	Time:		10:28		10:34		11:03		
Sample ID:	ICV	ICV1	ICV1	CCV	CCV1	CCV	CCV2	CCV2	CCV2
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.21	107.0	2.5	2.60	104.0	2.5	2.50	100.0

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44634 Units: ug/l

	Time:	11:17		11:34		11:50			
Sample ID:	CCV	CCV3		CCV4		CCV5			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.53	101.2	2.5	2.52	100.8	2.5	2.46	98.4

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44634 Units: ug/l

	Time:	12:04		12:20		12:27			
Sample ID:	CCV	CCV6	CCV	CCV7	CCV	CCV8	CCV	Results	% Rec
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.53	101.2	2.5	2.60	104.0	2.5	2.53	101.2

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

8.1.3
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44634 Units: ug/l

	Time:		14:01		14:20		14:32		
Sample ID:	CCV		CCV9	CCV	CCV10	CCV	CCV11		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.51	100.4	2.5	2.54	101.6	2.5	2.49	99.6

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44634 Units: ug/l

Time:		14:44	
Sample ID:	CCV	CCV12	
Metal	True	Results	% Rec

Mercury 2.5 2.55 102.0

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

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061218W1.CSV Date Analyzed: 06/12/18 Methods: SW846 7470A
 QC Limits: 70 to 130 % Recovery Run ID: MA44634 Units: ug/l

	Time:		10:37		14:42	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.201	100.5	0.220	110.0

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

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV
Analyst: ZC
Parameters: As,Tl

Date Analyzed: 06/12/18
Run ID: MA44637

Methods: EPA 200.8, SW846 6020A

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:51	MA44637-STD1	1		STDA
10:56	MA44637-STD2	1		STDA
11:01	MA44637-STD3	1		STDB
11:06	MA44637-STD4	1		STDC
11:11	MA44637-STD5	1		STDD
11:16	MA44637-STD6	1		STDE
11:21	MA44637-STD7	1		STDF
11:26	MA44637-STD8	1		STDG
11:31	MA44637-STD9	1		STDH
11:36	MA44637-STD10	1		STDI
11:41	MA44637-STD11	1		STDJ
11:46	ZZZZZZ	1		
11:51	MA44637-ICVA1	1		
11:56	MA44637-ICV1	1		60ppb Al.
12:01	MA44637-ICB1	1		
12:06	MA44637-CCVA1	1		
12:11	MA44637-CCB1	1		
12:16	MA44637-CRI1	1		
12:21	MA44637-ICSA1	1		
12:26	MA44637-ICSAB1	1		
12:31	ZZZZZZ	1		
12:36	MA44637-CCVA2	1		
12:41	MA44637-CCB2	1		
12:47	ZZZZZZ	10		
12:52	ZZZZZZ	5		
12:57	ZZZZZZ	100		
13:02	ZZZZZZ	20		
13:07	ZZZZZZ	10		
13:12	ZZZZZZ	2		
13:17	MP7603A-B2	2		
13:22	MP7603A-S3	2		
13:27	MP7603A-S4	2		
13:32	MA44637-CCVA3	1		

8.2
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
Analyst: ZC Run ID: MA44637
Parameters: As,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:37	MA44637-CCB3	1		
13:42	JC67360-2	2		(sample used for QC only; not part of login JC67675)
13:47	MP7603A-SD1	10		
13:52	ZZZZZZ	2		
13:57	ZZZZZZ	1		
14:04	MP7603A-MB1	2		
14:09	ZZZZZZ	2		
14:14	ZZZZZZ	2		
14:19	ZZZZZZ	1		
14:24	ZZZZZZ	2		
14:29	ZZZZZZ	2		
14:34	MA44637-CCVA4	1		
14:39	MA44637-CCB4	1		
14:44	ZZZZZZ	2		
14:49	ZZZZZZ	2		
14:54	ZZZZZZ	2		
14:59	ZZZZZZ	2		
15:04	ZZZZZZ	1		
15:10	JC67675-2	2		
----->	Last reportable sample/prep for job JC67675			
15:15	ZZZZZZ	2		
15:20	ZZZZZZ	2		
15:25	MA44637-CCVA5	1		
15:30	MA44637-CCB5	1		
15:35	ZZZZZZ	2		
15:40	ZZZZZZ	2		
15:45	ZZZZZZ	1		
15:50	MA44637-CRI2	1		
15:55	MA44637-CCVA6	1		
16:00	MA44637-CCB6	1		
----->	Last reportable CCB for job JC67675			
16:05	MP7601-MB1	1		
16:10	MP7601-B1	1		
16:15	ZZZZZZ	1		
16:20	MP7601-S1	1		

8.2
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV
Analyst: ZC
Parameters: As,Tl

Date Analyzed: 06/12/18
Run ID: MA44637

Methods: EPA 200.8, SW846 6020A

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:25	MP7601-S2	1		
16:30	ZZZZZZ	1		
16:35	JC67408-1	1		(sample used for QC only; not part of login JC67675)
16:40	ZZZZZZ	1		
16:45	MA44637-CCVA7	1		
16:50	MA44637-CCB7	1		
16:55	ZZZZZZ	1		
17:00	ZZZZZZ	1		
17:05	ZZZZZZ	1		
17:10	ZZZZZZ	1		
17:15	ZZZZZZ	1		
17:20	ZZZZZZ	1		
17:25	ZZZZZZ	1		
17:30	ZZZZZZ	1		
17:35	ZZZZZZ	1		
17:40	MA44637-CCVA8	1		
17:45	MA44637-CCB8	1		

Refer to raw data for calibration curve and standards.

8.2
8

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Dilution	Element: s l	A s	T l
11:46	ZZZZZZ	1			
11:51	MA44637-ICVA1	1		X	X
11:56	MA44637-ICV1	1			
12:01	MA44637-ICB1	1		X	X
12:06	MA44637-CCVA1	1		X	X
12:11	MA44637-CCB1	1		X	X
12:16	MA44637-CRI1	1		X	X
12:21	MA44637-ICSA1	1		X	X
12:26	MA44637-ICSAB1	1		X	X
12:31	ZZZZZZ	1			
12:36	MA44637-CCVA2	1		X	X
12:41	MA44637-CCB2	1		X	X
12:47	ZZZZZZ	10			
12:52	ZZZZZZ	5			
12:57	ZZZZZZ	100			
13:02	ZZZZZZ	20			
13:07	ZZZZZZ	10			
13:12	ZZZZZZ	2			
13:17	MP7603A-B2	2		X	X
13:22	MP7603A-S3	2		X	X
13:27	MP7603A-S4	2		X	X
13:32	MA44637-CCVA3	1		X	X
13:37	MA44637-CCB3	1		X	X
13:42	JC67360-2	2		X	X (a)
13:47	MP7603A-SD1	10		X	X
13:52	ZZZZZZ	2			
13:57	ZZZZZZ	1			
14:04	MP7603A-MB1	2		X	X
14:09	ZZZZZZ	2			
14:14	ZZZZZZ	2			
14:19	ZZZZZZ	1			
14:24	ZZZZZZ	2			
14:29	ZZZZZZ	2			

Element: A T
s l

8.2.1
8

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Element: Dilution	A T s l
14:34	MA44637-CCVA4	1	X X
14:39	MA44637-CCB4	1	X X
14:44	ZZZZZZ	2	
14:49	ZZZZZZ	2	
14:54	ZZZZZZ	2	
14:59	ZZZZZZ	2	
15:04	ZZZZZZ	1	
15:10	JC67675-2	2	X X
15:15	ZZZZZZ	2	
15:20	ZZZZZZ	2	
15:25	MA44637-CCVA5	1	X X
15:30	MA44637-CCB5	1	X X
15:35	ZZZZZZ	2	
15:40	ZZZZZZ	2	
15:45	ZZZZZZ	1	
15:50	MA44637-CRI2	1	X X
15:55	MA44637-CCVA6	1	X X
16:00	MA44637-CCB6	1	X X
16:05	MP7601-MB1	1	
16:10	MP7601-B1	1	
16:15	ZZZZZZ	1	
16:20	MP7601-S1	1	
16:25	MP7601-S2	1	
16:30	ZZZZZZ	1	
16:35	JC67408-1	1	(a)
16:40	ZZZZZZ	1	
16:45	MA44637-CCVA7	1	X X
16:50	MA44637-CCB7	1	X X
16:55	ZZZZZZ	1	
17:00	ZZZZZZ	1	
17:05	ZZZZZZ	1	
17:10	ZZZZZZ	1	
17:15	ZZZZZZ	1	

Element: A T
s l

8.2.1
8

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Element: Dilution	A T s l
17:20	ZZZZZZ	1	
17:25	ZZZZZZ	1	
17:30	ZZZZZZ	1	
17:35	ZZZZZZ	1	
17:40	MA44637-CCVA8	1	X X
17:45	MA44637-CCB8	1	X X

(a) Sample used for QC only; not part of login JC67675.

Element: A T
s l

INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
10:51	MA44637-STD1	100	100	100	100	100	100	100	100
10:56	MA44637-STD2	100	100	100	100	100	100	100	100
11:01	MA44637-STD3	99.849	99.579	99.307	101.294	100.136	101.295	101.754	100.685
11:06	MA44637-STD4	99.229	98.145	98.264	99.655	97.005	96.42	99.697	96.983
11:11	MA44637-STD5	99.959	98.657	98.693	100.723	97.861	99.014	99.61	97.599
11:16	MA44637-STD6	99.357	98.006	98.493	100.391	97.383	97.63	97.85	97.681
11:21	MA44637-STD7	98.835	96.8	97.76	100.198	96.283	97.178	98.446	96.969
11:26	MA44637-STD8	98.597	96.665	96.689	98.007	95.649	96.159	94.038	96.167
11:31	MA44637-STD9	97.051	95.69	95.85	97.786	95.393	95.597	94.933	94.8
11:36	MA44637-STD10	95.103	94.9	95.22	96.982	94.51	94.531	95.217	93.827
11:41	MA44637-STD11	94.074	94.793	95.485	96.28	92.809	93.712	94.056	93.089
11:46	ZZZZZZ	94.724	95.203	95.539	96.674	95.248	95.604	94.776	95.493
11:51	MA44637-ICVA1	93.624	95.485	94.132	95.151	93.613	94.712	95.19	93.733
11:56	MA44637-ICV1	94.353	94.586	95.549	95.323	94.272	95.517	94.727	94.159
12:01	MA44637-ICB1	94.667	95.001	94.711	95.443	93.948	94.281	94.102	94.213
12:06	MA44637-CCVA1	93.541	94.687	94.896	95.728	93.506	94.151	92.675	93.782
12:11	MA44637-CCB1	94.077	94.295	93.566	94.996	92.826	93.769	93.866	93.345
12:16	MA44637-CRI1	94.624	95.047	94.89	95.257	94.571	94.576	94.543	93.648
12:21	MA44637-ICSA1	86.898	88.324	87.897	88.072	85.44	84.326	86.094	82.918
12:26	MA44637-ICSAB1	85.883	87.969	86.03	87.795	85.584	83.184	87.629	83.418
12:31	ZZZZZZ	88.361	89.715	88.785	96.72	90.111	90.409	95.818	91.013
12:36	MA44637-CCVA2	90.392	91.667	91.715	98.842	91.133	91.084	97.642	91.001
12:41	MA44637-CCB2	94.231	92.471	91.859	100.543	92.806	92.975	98.512	92.91
12:47	ZZZZZZ	94.86	93.869	92.927	100.653	92.554	92.164	100.106	92.646
12:52	ZZZZZZ	93.89	92.753	92.176	101.881	92.374	92.298	100.569	91.872
12:57	ZZZZZZ	94.919	92.283	92.615	101.029	91.5	91.911	100.32	91.799
13:02	ZZZZZZ	95.855	94.399	94.324	101.23	92.505	91.891	101.472	93.465
13:07	ZZZZZZ	96.67	93.66	93.24	102.778	93.112	93.905	102.513	92.991
13:12	ZZZZZZ	94.298	89.107	87.926	100.269	93.834	92.311	132.796	94.061
13:17	MP7603A-B2	94.099	89.763	89.282	102.102	97.612	97.348	134.902	97.891
13:22	MP7603A-S3	95.004	91.279	90.177	103.305	96.711	95.767	131.389	97.231
13:27	MP7603A-S4	96.492	92.024	90.956	103.225	96.654	96.337	127.208	97.178
13:32	MA44637-CCVA3	101.094	98.356	98.012	108.796	99.247	97.444	105.044	99.297

INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
13:37	MA44637-CCB3	100.71	96.02	96.29	104.62	96.282	97.798	101.932	96.764
13:42	JC67360-2	95.511	90.897	89.787	101.168	95.185	96.134	137.284	95.366
13:47	MP7603A-SD1	103.165	99.08	99.939	106.541	100.147	100.648	105.391	100.432
13:52	ZZZZZ	94.616	92.406	91.995	93.306	92.113	92.892	111.639	91.455
13:57	ZZZZZ	108.426	103.994	105.472	107.554	105.077	107.195	106.117	104.288
14:04	MP7603A-MB1	104.191	97.822	96.7	104.295	104.571	106.684	133.411	103.039
14:09	ZZZZZ	100.246	94.148	92.971	102.098	99.52	99.11	123.916	98.448
14:14	ZZZZZ	99.362	94.288	92.442	99.086	101.162	96.787	117.843	100.149
14:19	ZZZZZ	102.852	98.798	99.669	105.699	100.633	100.709	101.488	101.579
14:24	ZZZZZ	95.269	91.848	90.531	97.722	97.407	97.245	118.729	97.075
14:29	ZZZZZ	94.191	91.056	90.215	98.923	97.53	96.51	117.265	97.142
14:34	MA44637-CCVA4	99.052	95.363	96.893	104.006	97.207	97.934	99.335	96.846
14:39	MA44637-CCB4	101.779	97.134	98.5	102.83	98.401	99.466	100.082	98.902
14:44	ZZZZZ	93.791	90	88.434	97.007	95.801	97.16	121.944	95.498
14:49	ZZZZZ	90.564	87.016	85.629	96.457	92.599	93.333	124.056	92.91
14:54	ZZZZZ	94.375	90.275	91.113	98.545	97.113	96.181	125.456	97.29
14:59	ZZZZZ	94.677	90.039	89.195	98.173	97.578	97.717	123.808	97.291
15:04	ZZZZZ	102.161	97.558	97.864	101.738	100.336	100.09	102.325	100.269
15:10	JC67675-2	91.966	87.604	87.508	94.771	94.575	92.255	120.35	93.568
15:15	ZZZZZ	93.224	88.783	88.588	96.337	92.307	92.812	117.936	92.186
15:20	ZZZZZ	93.331	89.704	89.186	96.943	94.161	93.61	117.413	94.398
15:25	MA44637-CCVA5	96.508	94.476	95.084	97.925	96.555	97.565	95.405	96.589
15:30	MA44637-CCB5	98.414	95.85	95.275	98.125	97.07	97.643	96.46	97.08
15:35	ZZZZZ	90.852	87.241	86.33	93.537	93.145	95.448	125.487	92.697
15:40	ZZZZZ	88.789	86.703	85.239	92.136	91.785	91.37	120.244	91.041
15:45	ZZZZZ	97.871	94.692	95.379	98.117	96.462	97.031	96.435	96.273
15:50	MA44637-CRI2	96.307	92.955	92.898	96.22	92.992	94.368	95.586	92.93
15:55	MA44637-CCVA6	91.022	89.378	90.52	94.039	88.723	90.643	91.151	89.028
16:00	MA44637-CCB6	92.03	89.583	90.605	94.674	89.486	90.639	93.065	89.66
16:05	MP7601-MB1	93.419	91.937	92.703	94.447	91.061	91.96	93.627	90.756
16:10	MP7601-B1	92.001	91.19	92.641	94.715	90.053	91.209	92.366	90.075
16:15	ZZZZZ	89.047	91.524	90.954	91.841	85.33	87.433	90.676	85.416
16:20	MP7601-S1	81.488	89.177	85.885	83.958	75.953	76.08	75.036	76.703

INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
16:25	MP7601-S2	73.081	82.308	77.922	83.012	72.364	70.943	75.537	72.747
16:30	ZZZZZ	82.227	82.989	83.092	87.555	83.172	83.651	87.436	84.02
16:35	JC67408-1	70.022	78.009	80.445	85.915	68.965	72.907	76.604	68.703
16:40	ZZZZZ	76.884	84.476	81.723	86.411	80.492	80.015	82.824	80.769
16:45	MA44637-CCVA7	79.147	81.346	81.61	86.014	82.385	82.894	85.042	82.173
16:50	MA44637-CCB7	84.294	84.294	83.994	88.502	85.815	86.93	87.632	86.176
16:55	ZZZZZ	80.79	85.507	86.577	87.942	81.825	85.361	83.229	81.583
17:00	ZZZZZ	76.953	84.643	85.663	85.958	77.963	81.676	78.871	77.952
17:05	ZZZZZ	86.185	86.724	85.661	89.487	88.514	88.763	88.742	88.274
17:10	ZZZZZ	88.324	88.181	87.968	91.188	89.099	89.121	88.866	89.621
17:15	ZZZZZ	70.601	80.163	80.74	85.665	71.298	74.612	76.507	71.724
17:20	ZZZZZ	74.131	82.791	81.25	84.26	79.693	80.015	81.805	79.914
17:25	ZZZZZ	83.828	87.751	87.235	87.596	89.817	90.636	86.98	89.39
17:30	ZZZZZ	76.95	84.336	85.451	86.264	81.847	83.902	82.422	82.121
17:35	ZZZZZ	74.193	83.487	85.702	84.898	77.062	81.169	77.181	77.471
17:40	MA44637-CCVA8	75.723	79.613	80.328	82.37	81.392	81.629	80.028	81.908
17:45	MA44637-CCB8	78.152	80.41	81.643	82.202	81.846	84.194	81.745	82.325

! = Outside limits.

LEGEND:		CCV/CCB	
Istd#	Parameter	Limits	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 (72-1)	60-125 %	60-125 %
Istd#6	Germanium (72-2)	60-125 %	60-125 %
Istd#7	Germanium (72-3)	60-125 %	60-125 %
Istd#8	Germanium (74-1)	60-125 %	60-125 %

(a) No samples reported for the elements associated with this internal standard.

8.2.2
8

INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
10:51	MA44637-STD1	100	100	100	100	100	100	100	100
10:56	MA44637-STD2	100	100	100	100	100	100	100	100
11:01	MA44637-STD3	101.078	99.224	99.781	100.128	100.546	100.325	100.797	99.299
11:06	MA44637-STD4	98.174	99.177	98.417	99.307	99.907	99.171	99.24	98.29
11:11	MA44637-STD5	99.801	98.732	98.738	99.103	100.132	98.939	99.222	98.149
11:16	MA44637-STD6	98.251	96.299	98.128	98.772	100.056	98.841	98.522	99.018
11:21	MA44637-STD7	97.739	96.365	98.088	98.404	99.191	98.839	97.87	98.131
11:26	MA44637-STD8	96.502	94.654	96.663	97.325	99.073	98.515	97.966	98.525
11:31	MA44637-STD9	96.081	93.696	95.99	96.372	97.904	96.747	96.823	97.35
11:36	MA44637-STD10	94.86	94.226	94.154	94.023	96.629	96.043	94.577	97.246
11:41	MA44637-STD11	94.154	92.743	93.04	93.047	94.625	94.359	94.717	97.176
11:46	ZZZZZ	95.423	94.566	97.396	97.412	98.596	98.333	97.451	97.944
11:51	MA44637-ICVA1	94.684	94.103	94.271	94.402	95.699	95.187	94.782	97.621
11:56	MA44637-ICV1	93.986	93.327	96.481	96.983	98.591	96.665	97.199	96.332
12:01	MA44637-ICB1	95.339	93.23	96.909	96.858	98.296	97.293	97.711	96.112
12:06	MA44637-CCVA1	94.164	92.305	93.725	94.578	94.394	95.06	95.017	96.137
12:11	MA44637-CCB1	94.455	93.304	95.835	96.298	96.954	96.619	96.594	95.999
12:16	MA44637-CRI1	95.128	92.696	95.96	96.179	97.712	96.958	97.268	96.584
12:21	MA44637-ICSA1	83.389	84.052	81.489	80.802	82.007	85.374	82.695	90.297
12:26	MA44637-ICSAB1	82.144	85.667	82.27	81.026	82.955	86.644	82.67	92.1
12:31	ZZZZZ	89.357	93.661	96.119	95.591	99.671	98.735	93.688	99.652
12:36	MA44637-CCVA2	90.673	96.151	94.996	94.739	98.89	97.067	93.311	104.829
12:41	MA44637-CCB2	92.973	97.588	98.373	97.512	102.217	99.751	95.638	102.948
12:47	ZZZZZ	93.219	99.292	97.166	96.971	101.585	99.222	95.224	106.653
12:52	ZZZZZ	92.038	99.419	96.365	96.679	102.198	98.901	94.557	105.973
12:57	ZZZZZ	92.492	97.825	95.573	96.575	102.069	98.108	93.872	106.615
13:02	ZZZZZ	92.784	100.323	96.212	97.026	102.315	99.248	94.538	107.064
13:07	ZZZZZ	93.435	100.678	96.517	96.951	102.734	99.348	94.744	107.407
13:12	ZZZZZ	93.722	133.836	93.167	94.563	100.83	95.671	89.626	98.88
13:17	MP7603A-B2	97.53	134.127	93.358	94.123	99.98	96.075	89.605	104.887
13:22	MP7603A-S3	96.878	129.242	90.507	91.039	97.434	94.497	87.671	104.301
13:27	MP7603A-S4	95.763	125.831	90.873	91.782	98.506	95.569	87.562	108.593
13:32	MA44637-CCVA3	99.377	103.526	98.293	98.557	104.675	100.693	95.813	110.562

8.2.2
8

INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
13:37	MA44637-CCB3	96.759	100.723	99.037	99.678	104.593	101.351	97.069	109.334
13:42	JC67360-2	94.869	135.759	190.372	90.926	96.874	93.942	87.509	101.455
13:47	MP7603A-SD1	100.676	104.915	99.235	100.58	104.077	102.163	99.354	111.749
13:52	ZZZZZZ	91.778	110.953	82.797	82.064	81.985	88.151	85.329	93.25
13:57	ZZZZZZ	107.787	103.344	105.861	106.592	105.632	106.498	104.236	113.052
14:04	MP7603A-MB1	105.782	132.859	100.775	100.765	101.962	101.716	97.039	112.207
14:09	ZZZZZZ	99.813	122.776	91.683	93.539	96.36	97.172	91.315	110.428
14:14	ZZZZZZ	96.137	116.831	91.485	92.258	94.484	96.565	90.375	110.504
14:19	ZZZZZZ	102.604	101.172	99.898	101.2	102.048	102.421	98.59	112.45
14:24	ZZZZZZ	96.799	117.404	89.292	89.428	93.066	94.582	87.705	107.873
14:29	ZZZZZZ	97.052	115.929	89.068	90.29	94.657	94.387	88.132	104.646
14:34	MA44637-CCVA4	99.062	97.835	95.735	97.754	100.229	99.06	95.423	110.382
14:39	MA44637-CCB4	98.304	100.409	99.754	100.988	102.278	101.999	99.124	111.543
14:44	ZZZZZZ	97.272	120.691	91.79	91.615	96.65	96.214	90.241	108.509
14:49	ZZZZZZ	93.643	122.05	88.473	88.959	94.051	92.405	86.743	106.752
14:54	ZZZZZZ	97.096	123.053	91.493	92.074	96.766	96.132	90.358	109.998
14:59	ZZZZZZ	97.244	122.542	93.143	93.247	97.156	97.262	90.668	110.105
15:04	ZZZZZZ	100.486	101.372	100.275	100.031	101.763	101.764	98.096	111.772
15:10	JC67675-2	93.398	119.054	86.823	87.958	91.388	91.887	87.685	102.848
15:15	ZZZZZZ	93.092	118.442	86.546	87.787	91.599	91.013	85.908	103.343
15:20	ZZZZZZ	93.643	115.837	87.437	87.666	90.876	91.808	86.651	101.42
15:25	MA44637-CCVA5	97.607	94.544	94.671	94.565	94.897	97.506	93.918	105.323
15:30	MA44637-CCB5	97.144	95.74	98.461	97.31	97.375	100.226	97.173	109.453
15:35	ZZZZZZ	94.869	122.261	88.936	88.366	92.335	93.185	88.35	106.735
15:40	ZZZZZZ	90.48	118.919	83.827	84.302	87.537	89.727	85.18	98.812
15:45	ZZZZZZ	96.571	96.553	97.754	97.193	98.936	99.16	96.349	109.095
15:50	MA44637-CRI2	93.905	94.23	94.712	95.283	96.565	97.377	94.96	104.4
15:55	MA44637-CCVA6	89.252	89.351	90.169	90.152	92.047	92.877	90.487	96.077
16:00	MA44637-CCB6	90.805	91.575	92.742	93.276	95.286	95.047	93.656	101.911
16:05	MP7601-MB1	92.01	92.417	94.348	94.723	95.766	96.386	94.488	100.615
16:10	MP7601-B1	90.883	91.477	91.973	92.227	93.011	94.571	92.963	96.496
16:15	ZZZZZZ	86.713	87.755	85.65	86.07	87.457	89.816	89.552	94.111
16:20	MP7601-S1	75.439	74.643	73.379	70.602	69.306	79.904	78.257	86.464

INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
16:25	MP7601-S2	70.267	74.503	69.463	65.981	68.503	76.069	72.246	83.586
16:30	ZZZZZ	84.876	86.369	89.261	88.971	89.709	92.48	88.068	98.011
16:35	JC67408-1	72.854	75.358	67.129	68.362	70.855	74.445	75.432	81.154
16:40	ZZZZZ	80.687	82.449	80.808	78.584	79.806	88.828	82.846	93.445
16:45	MA44637-CCVA7	82.877	84.611	86.531	86.52	86.396	90.75	86.142	102.161
16:50	MA44637-CCB7	87.141	86.851	91.114	91.094	90.492	94.962	89.889	103.49
16:55	ZZZZZ	83.879	83.03	81.009	80.832	79.721	87.143	85.871	92.18
17:00	ZZZZZ	80.937	78.111	75.422	75.689	73.486	82.63	82.071	88.443
17:05	ZZZZZ	88.682	87.744	93.868	92.103	90.97	97.015	91.292	108.902
17:10	ZZZZZ	89.105	88.451	94.207	93.262	90.519	97.38	92.134	110.031
17:15	ZZZZZ	74.103	75.432	69.178	68.46	70.16	76.452	75.302	83.099
17:20	ZZZZZ	80.491	79.714	79.126	78.4	76.941	86.696	83.114	92.278
17:25	ZZZZZ	90.255	86.449	94.546	93.696	88.872	97.433	93.333	110.156
17:30	ZZZZZ	83.776	81.326	80.426	80.143	78.116	86.625	85.723	91.688
17:35	ZZZZZ	80.694	77.463	74.738	75.004	71.646	82.311	82.641	87.062
17:40	MA44637-CCVA8	83.027	79.892	84.641	84.209	82.11	88.938	84.251	91.989
17:45	MA44637-CCB8	84.528	80.134	87.198	86.874	83.592	90.343	87.024	91.868

! = Outside limits.

LEGEND:		CCV/CCB	
Istd#	Parameter	Limits	Limits
Istd#9	Germanium (74-2)	60-125 %	60-125 %
Istd#10	Germanium (74-3)	60-125 %	60-125 %
Istd#11	Rhodium (103-1)	60-125 %	60-125 %
Istd#12	Rhodium (103-2)	60-125 %	60-125 %
Istd#13	Rhodium (103-3)	60-125 %	60-125 %
Istd#14	Indium (115-1)	60-125 %	60-125 %
Istd#15	Indium (115-2)	60-125 %	60-125 %
Istd#16	Terbium (159-1)	60-125 %	60-125 %

(a) No samples reported for the elements associated with this internal standard.

8.2.2
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INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
10:51	MA44637-STD1	100	100	100	100	100	100
10:56	MA44637-STD2	100	100	100	100	100	100
11:01	MA44637-STD3	100.358	100.664	99.332	100.782	100.018	99.37
11:06	MA44637-STD4	99.033	99.893	98.55	98.877	99.232	98.891
11:11	MA44637-STD5	99.347	100.936	98.778	100.185	99.851	98.965
11:16	MA44637-STD6	99.206	100.817	99.192	99.99	99.846	98.484
11:21	MA44637-STD7	98.645	100.633	98.256	99.289	100.45	98.189
11:26	MA44637-STD8	98.405	100.414	98.924	98.397	99.247	97.211
11:31	MA44637-STD9	97.744	100.603	97.637	97.997	97.717	96.39
11:36	MA44637-STD10	97.058	100.229	97.386	97.973	95.797	94.31
11:41	MA44637-STD11	96.909	98.506	97.263	97.317	93.766	92.183
11:46	ZZZZZ	97.612	99.973	98.496	97.653	98.842	96.798
11:51	MA44637-ICVA1	97.566	98.914	97.978	97.784	95.821	94.089
11:56	MA44637-ICV1	97.431	99.59	96.171	97.908	97.935	97.646
12:01	MA44637-ICB1	96.879	98.882	96.081	98.368	97.444	96.216
12:06	MA44637-CCVA1	96.469	97.778	96.892	97.711	94.502	93.906
12:11	MA44637-CCB1	96.462	98.225	96.531	96.739	97.035	95.789
12:16	MA44637-CRI1	96.903	98.99	96.237	97.324	97.425	95.762
12:21	MA44637-ICSA1	89.018	88.016	90.273	89.423	83.709	80.896
12:26	MA44637-ICSAB1	89.044	89.193	92.074	89.924	85.04	80.975
12:31	ZZZZZ	95.681	102.042	100.202	96.904	101.238	96.045
12:36	MA44637-CCVA2	96.948	102.757	100.542	97.654	100.025	94.912
12:41	MA44637-CCB2	97.028	103.475	100.491	97.312	102.802	97.194
12:47	ZZZZZ	97.078	103.423	100.94	98.195	102.269	97.122
12:52	ZZZZZ	96.654	104.088	100.155	97.052	102.798	97.134
12:57	ZZZZZ	96.028	103.469	100.85	97.001	102.179	96.304
13:02	ZZZZZ	96.886	104.002	101.246	97.565	102.061	96.286
13:07	ZZZZZ	96.869	104.399	102.124	98.107	102.986	96.825
13:12	ZZZZZ	93.661	101.99	100.145	94.761	102.15	94.214
13:17	MP7603A-B2	93.966	102.465	101.042	94.755	100.102	93.323
13:22	MP7603A-S3	94.226	102.356	100.928	95.339	96.68	90.333
13:27	MP7603A-S4	94.578	103.492	100.986	95.929	97.551	90.149
13:32	MA44637-CCVA3	98.191	107.238	105.081	99.206	102.979	96.18

INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
13:37	MA44637-CCB3	97.332	103.697	100.977	98.422	103.104	97.475
13:42	JC67360-2	93.746	102.059	99.828	94.854	96.325	90.204
13:47	MP7603A-SD1	100.276	105.177	103.987	101.379	104.293	99.373
13:52	ZZZZZ	89.387	90.33	94.548	91.155	82.557	78.097
13:57	ZZZZZ	103.969	104.57	105.941	104.491	106.531	103.341
14:04	MP7603A-MB1	99.871	103.092	104.514	100.731	105.704	99.022
14:09	ZZZZZ	96.459	101.834	103.094	97.78	98.614	92.053
14:14	ZZZZZ	95.866	99.958	103.647	97.062	98.537	91.05
14:19	ZZZZZ	100.487	103.629	105.353	102.88	105.423	99.135
14:24	ZZZZZ	94.218	99.118	100.238	96.252	95.842	89.605
14:29	ZZZZZ	94.312	101.136	100.723	95.837	96.345	89.862
14:34	MA44637-CCVA4	98.795	103.321	102.621	100.173	101.706	96.594
14:39	MA44637-CCB4	98.563	103.224	103.704	99.704	104.318	98.793
14:44	ZZZZZ	94.787	100.483	101.207	96.115	100.474	92.691
14:49	ZZZZZ	92.47	99.742	98.683	93.35	96.755	89.802
14:54	ZZZZZ	94.98	101.151	102.115	95.889	99.567	92.572
14:59	ZZZZZ	94.094	100.21	101.114	95.448	101.542	94.221
15:04	ZZZZZ	98.579	103.097	103.558	100.153	105.959	100.445
15:10	JC67675-2	91.259	97.849	98.67	92.687	94.131	88.194
15:15	ZZZZZ	92.487	98.56	99.991	95.435	93.25	86.668
15:20	ZZZZZ	93.152	98.082	101.586	95.903	93.178	87.185
15:25	MA44637-CCVA5	96.383	98.263	100.664	97.82	98.983	94.27
15:30	MA44637-CCB5	97.046	98.348	100.119	97.438	101.787	96.131
15:35	ZZZZZ	93.349	97.45	97.516	93.781	95.317	89.95
15:40	ZZZZZ	90.919	95.587	96.96	92.122	90.66	84.616
15:45	ZZZZZ	96.82	100.05	99.716	97.56	101.71	96.225
15:50	MA44637-CRI2	95.271	98.17	98.029	95.95	99.188	94.866
15:55	MA44637-CCVA6	92.983	96.468	96.379	94.491	95.044	91.457
16:00	MA44637-CCB6	94.085	96.811	96.172	94.804	97.418	93.786
16:05	MP7601-MB1	94.612	97.898	96.572	95.498	99.749	95.859
16:10	MP7601-B1	94.266	96.388	96.044	94.718	97.343	93.041
16:15	ZZZZZ	92.415	94.531	94.554	93.497	90.42	86.75
16:20	MP7601-S1	82.623	81.219	86.855	83.975	74.485	69.203

8.2.2
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INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 Analyst: ZC Run ID: MA44637
 Parameters: As,Tl

Time	Sample Description	Istd#17	Istd#18	Istd#19	Istd#20	Istd#21	Istd#22
16:25	MP7601-S2	77.446	80.54	83.893	78.312	70.848	64.836
16:30	ZZZZZZ	90.189	92.496	95.138	91.26	96.531	91.417
16:35	JC67408-1	80.025	83.031	81.323	80.812	69.198	67.032
16:40	ZZZZZZ	87.724	90.182	94.812	88.659	85.803	79.415
16:45	MA44637-CCVA7	89.748	92.1	95.565	90.745	94.991	88.678
16:50	MA44637-CCB7	91.492	92.926	96.744	92.356	98.778	92.305
16:55	ZZZZZZ	88.857	88.829	93.111	90.529	84.205	80.217
17:00	ZZZZZZ	85.711	83.975	88.826	87.599	78.156	75.123
17:05	ZZZZZZ	92.511	93.041	98.353	93.73	101.408	94.49
17:10	ZZZZZZ	93.038	91.505	97.921	94.241	99.396	93.699
17:15	ZZZZZZ	80.089	81.88	83.28	81.194	70.862	67.2
17:20	ZZZZZZ	87.094	86.919	91.822	88.743	84.014	79.214
17:25	ZZZZZZ	93.941	90.771	97.89	95.062	99.646	94.279
17:30	ZZZZZZ	88.21	86.42	92.53	89.366	83.458	79.261
17:35	ZZZZZZ	85.295	81.722	87.819	86.901	76.06	73.286
17:40	MA44637-CCVA8	86.782	86.674	92.26	87.846	91.86	85.861
17:45	MA44637-CCB8	87.613	86.089	92.073	89.538	93.754	89.183

! = Outside limits.

LEGEND:		CCV/CCB	
Istd#	Parameter	Limits	Limits
Istd#17	Terbium (159-2)	60-125 %	60-125 %
Istd#18	Terbium (159-3)	60-125 %	60-125 %
Istd#19	Holmium (165-1)	60-125 %	60-125 %
Istd#20	Holmium (165-2)	60-125 %	60-125 %
Istd#21	Bismuth (209-1)	60-125 %	60-125 %
Istd#22	Bismuth (209-2)	60-125 %	60-125 %

8.2.2
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 QC Limits: result < RL Run ID: MA44637 Units: ug/l

Metal	Time:		12:01		12:11		12:41		13:37		
	Sample ID:	RL	IDL	ICB1	final	CCB1	final	CCB2	final	CCB3	final
Aluminum	25	1.1	anr								
Antimony	2.0	.27									
Arsenic	0.50	.017	-0.0133	<0.50	0.000303	<0.50	-0.00750	<0.50	-0.00566	<0.50	
Barium	1.0	.011									
Beryllium	0.50	.002									
Boron	25	1.5									
Cadmium	0.50	.004									
Calcium	250	21									
Chromium	1.0	.009	anr								
Cobalt	0.50	.002									
Copper	2.0	.012									
Iron	25	.87	anr								
Lead	0.50	.004									
Magnesium	250	1.9									
Manganese	1.0	.02	anr								
Molybdenum	1.0	.018									
Nickel	1.0	.02									
Potassium	250	3.3									
Selenium	0.50	.025									
Silver	0.50	.005									
Sodium	250	3.6									
Strontium	5.0	.039									
Thallium	0.50	.003	0.00386	<0.50	0.0172	<0.50	0.0106	<0.50	0.0156	<0.50	
Tin	5.0	.038									
Titanium	1.0	.042									
Vanadium	1.0	.006									
Zinc	5.0	2.2									

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

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BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 QC Limits: result < RL Run ID: MA44637 Units: ug/l

Metal	Time:		14:39		15:30		16:00	
	Sample ID:	RL	IDL	CCB4	final	CCB5	final	CCB6
Aluminum		25	1.1	anr				
Antimony		2.0	.27					
Arsenic		0.50	.017	-0.0128	<0.50	0.00619	<0.50	-0.0156
Barium		1.0	.011					
Beryllium		0.50	.002					
Boron		25	1.5					
Cadmium		0.50	.004					
Calcium		250	21					
Chromium		1.0	.009	anr				
Cobalt		0.50	.002					
Copper		2.0	.012					
Iron		25	.87	anr				
Lead		0.50	.004					
Magnesium		250	1.9					
Manganese		1.0	.02	anr				
Molybdenum		1.0	.018					
Nickel		1.0	.02					
Potassium		250	3.3					
Selenium		0.50	.025					
Silver		0.50	.005					
Sodium		250	3.6					
Strontium		5.0	.039					
Thallium		0.50	.003	0.0111	<0.50	0.0125	<0.50	0.0110
Tin		5.0	.038					
Titanium		1.0	.042					
Vanadium		1.0	.006					
Zinc		5.0	2.2					

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

8.2.3
 8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA44637 Units: ug/l

Metal	Time:	11:51			11:56			12:06		
	Sample ID:	ICVA	ICVAL	% Rec	ICV	ICV1	% Rec	CCVA	CCVAL	% Rec
Aluminum	anr									
Antimony										
Arsenic	60	61.3	102.2				50	50.9	101.8	
Barium										
Beryllium										
Boron										
Cadmium										
Calcium										
Chromium	anr									
Cobalt										
Copper										
Iron	anr									
Lead										
Magnesium										
Manganese	anr									
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium	60	61.9	103.2				50	50.7	101.4	
Tin										
Titanium										
Vanadium										
Zinc										

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

8.2.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA44637 Units: ug/l

Metal	Time:	12:36			13:32			14:34		
	Sample ID:	CCVA	CCVA2	CCVA	CCVA3	CCVA	CCVA4	CCVA	CCVA4	CCVA
	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	True
Aluminum	anr									
Antimony										
Arsenic	50	51.4	102.8	50	51.0	102.0	50	50.7	101.4	
Barium										
Beryllium										
Boron										
Cadmium										
Calcium										
Chromium	anr									
Cobalt										
Copper										
Iron	anr									
Lead										
Magnesium										
Manganese	anr									
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium	50	50.2	100.4	50	50.6	101.2	50	51.0	102.0	
Tin										
Titanium										
Vanadium										
Zinc										

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

8.2.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA44637 Units: ug/l

Metal	Time:	15:25		15:55		
	Sample ID:	CCVA	CCVA5	CCVA	CCVA6	
	True	Results	% Rec	True	Results	% Rec
Aluminum	anr					
Antimony						
Arsenic	50	50.8	101.6	50	51.2	102.4
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium	anr					
Cobalt						
Copper						
Iron	anr					
Lead						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium	50	50.9	101.8	50	51.2	102.4
Tin						
Titanium						
Vanadium						
Zinc						

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

8.2.4
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
 QC Limits: 70 to 130 % Recovery Run ID: MA44637 Units: ug/l

Metal	Time:		12:16		15:50		
	Sample ID:	CRI	CRIA	CRI1	CRI2	Results	% Rec
Aluminum	25	25	anr				
Antimony	2.0	0.25					
Arsenic	0.50	0.50	0.498	99.6	0.495	99.0	
Barium	1.0	0.50					
Beryllium	0.50	0.25					
Boron	25	2.5					
Cadmium	0.50	0.25					
Calcium	250	125					
Chromium	1.0	2.0	anr				
Cobalt	0.50	0.25					
Copper	2.0	2.0					
Iron	25	25	anr				
Lead	0.50	0.25					
Magnesium	250	125					
Manganese	1.0	0.25	anr				
Molybdenum	1.0	0.50					
Nickel	1.0	2.0					
Potassium	250	125					
Selenium	0.50	0.50					
Silver	0.50	1.0					
Sodium	250	125					
Strontium	5.0	0.50					
Thallium	0.50	0.25	0.490	98.0	0.503	100.6	
Tin	5.0	0.50					
Titanium	1.0	0.50					
Vanadium	1.0	2.0					
Zinc	5.0	2.0					

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

8.2.5
 8

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

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XA061218M1.CSV Date Analyzed: 06/12/18 Methods: EPA 200.8, SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA44637 Units: ug/l

Metal	Time:		12:21		12:26	
	Sample ID:	ICSAB	ICSAL	% Rec	ICSAB1	% Rec
Aluminum	100000	100000	98900	98.9	100000	100.0
Antimony			0.195		0.197	
Arsenic		20	0.0669		19.3	96.5
Barium			0.137		0.118	
Beryllium			0.00515		0.00522	
Boron			8.62		51.9	
Cadmium		20	0.252		18.8	94.0
Calcium	100000	100000	99300	99.3	99200	99.2
Chromium		20	0.222		19.6	98.0
Cobalt		20	0.0829		18.5	92.5
Copper		20	0.535		18.0	90.0
Iron	100000	100000	94900	94.9	95400	95.4
Lead			0.102		0.116	
Magnesium	100000	100000	96700	96.7	98200	98.2
Manganese		20	0.444		19.4	97.0
Molybdenum	2000	2000	2220	111.0	2220	111.0
Nickel		20	0.901		18.6	93.0
Potassium	100000	100000	101000	101.0	103000	103.0
Selenium		20	0.0724		19.1	95.5
Silver		20	0.0303		18.0	90.0
Sodium	100000	100000	96200	96.2	97300	97.3
Strontium	2000	2000	2200	110.0	2210	110.5
Thallium			0.0295		0.0270	
Tin	2000	2000	2040	102.0	2030	101.5
Titanium	2000	2000	1900	95.0	1930	96.5
Vanadium		20	0.0128		21.1	105.5
Zinc		20	0.411		18.2	91.0

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

8.2.6
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44646
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:22	MA44646-STD1	1		STDA
12:26	MA44646-STD2	1		STDB
12:30	ZZZZZZ	1		
12:35	ZZZZZZ	1		
12:47	MA44646-ICV1	1		
13:02	MA44646-ICB1	1		
13:08	MA44646-ICCV1	1		See rerun
13:13	MA44646-ICCV2	1		
13:31	MA44646-CCB1	1		
13:36	MA44646-CRI1	1		
13:40	MA44646-CRID1	1		
13:44	MA44646-ICSA1	1		
13:49	MA44646-ICSAB1	1		
13:53	MA44646-HSTD1	1		
13:58	MA44646-HSTD2	1		Minerals
14:02	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:11	ZZZZZZ	1		
14:15	MA44646-CCV1	1		
14:19	MA44646-CCB2	1		
14:23	MP7603-MB1	1		
14:28	MP7603-B1	1		
14:32	MP7603-S1	1		
14:36	MP7603-S2	1		
14:40	JC67360-2	1		(sample used for QC only; not part of login JC67675)
14:44	MP7603-SD1	5		
14:49	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:57	ZZZZZZ	1		
15:02	MA44646-CCV2	1		
15:06	MA44646-CCB3	1		
15:10	ZZZZZZ	1		
15:14	ZZZZZZ	1		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44646
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:19	ZZZZZZ	1		
15:23	ZZZZZZ	1		
15:27	ZZZZZZ	1		
15:32	ZZZZZZ	1		
15:36	ZZZZZZ	1		
15:40	ZZZZZZ	1		
15:44	JC67675-2	1		
----->	Last reportable sample/prep for job JC67675			
15:49	MA44646-CCV3	1		
15:53	MA44646-CCB4	1		
15:57	ZZZZZZ	1		
16:01	ZZZZZZ	1		
16:06	ZZZZZZ	1		
16:10	MP7626-MB1	1		
16:14	MP7626-B1	1		
16:19	MP7626-S1	1		PS not needed
16:23	MP7626-S2	1		PS not needed
16:27	TD22329-1	1		(sample used for QC only; not part of login JC67675)
16:32	MP7626-D1	1		
16:36	MA44646-CCV4	1		
16:40	MA44646-CCB5	1		
16:44	MP7626-SD1	5		Saturation
16:49	ZZZZZZ	1		
16:56	MP7626-SD1	5		
17:01	ZZZZZZ	1		
17:07	ZZZZZZ	1		
17:11	ZZZZZZ	1		
17:16	MA44646-CRID2	1		
17:20	MA44646-CRI2	1		
17:24	MA44646-ICSA2	1		
17:28	MA44646-ICSAB2	1		
17:33	MA44646-CCV5	1		
----->	Last reportable CCB for job JC67675			
17:37	MA44646-CCB6	1		
17:41	ZZZZZZ	1		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44646
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:46	ZZZZZZ	1		
17:50	ZZZZZZ	1		
17:54	ZZZZZZ	1		
17:58	ZZZZZZ	1		
18:03	ZZZZZZ	1		
18:07	ZZZZZZ	1		
18:11	ZZZZZZ	1		
18:16	ZZZZZZ	1		
18:20	MA44646-CCV6	1		
18:24	MA44646-CCB7	1		Y3600 saturation
18:31	MA44646-CCV7	1		
18:36	MA44646-CCB8	1		
18:40	ZZZZZZ	1		
18:44	ZZZZZZ	1		
18:48	ZZZZZZ	1		
18:53	ZZZZZZ	1		
18:57	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:05	ZZZZZZ	1		
19:10	ZZZZZZ	1		
19:14	ZZZZZZ	1		
19:18	MA44646-CCV8	1		
19:22	MA44646-CCB9	1		
19:27	MP7622-MB1	1		
19:31	MP7622-B1	1		
19:35	MP7622-S1	1		
19:40	MP7622-S2	1		
19:44	JC67646-4	1		(sample used for QC only; not part of login JC67675)
19:48	MP7622-SD1	5		
19:52	ZZZZZZ	1		
19:56	ZZZZZZ	1		
20:01	ZZZZZZ	1		
20:05	MA44646-CCV9	1		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44646
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:09	MA44646-CCB10	1		
20:14	ZZZZZZ	1		
20:18	ZZZZZZ	1		
20:23	ZZZZZZ	1		
20:27	ZZZZZZ	1		
20:31	ZZZZZZ	1		
20:36	ZZZZZZ	1		
20:40	ZZZZZZ	1		
20:44	ZZZZZZ	1		
20:48	ZZZZZZ	1		
20:53	MA44646-CCV10	1		
20:57	MA44646-CCB11	1		
21:01	ZZZZZZ	1		
21:06	ZZZZZZ	1		
21:10	ZZZZZZ	1		
21:15	ZZZZZZ	1		
21:19	ZZZZZZ	1		
21:23	ZZZZZZ	1		
21:28	ZZZZZZ	1		
21:32	MP7623-B1	1		
21:36	MP7623-MB1	1		
21:41	MA44646-CCV11	1		
21:45	MA44646-CCB12	1		
21:49	MP7623-MB2	1		
21:54	MP7623-B2	1		
21:58	MP7623-S1	1		
22:02	MP7623-S2	1		
22:07	JC67646-16	1		(sample used for QC only; not part of login JC67675)
22:11	MP7623-SD1	5		
22:15	ZZZZZZ	1		
22:20	MP7507-MB4	5		
22:24	MP7507-B4	5		
22:28	MA44646-CCV12	1		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44646
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:32	MA44646-CCB13	1		
22:37	ZZZZZZ	1		
22:41	MP7636-MB1	1		
22:45	MP7636-B1	1		
22:49	MP7636-S1	1		
22:54	MP7636-S2	1		
22:58	JC67585-1	1		(sample used for QC only; not part of login JC67675)
23:02	MP7636-SD1	5		
23:06	ZZZZZZ	10		
23:14	ZZZZZZ	10		
23:18	ZZZZZZ	1		
23:25	MA44646-CCV13	1		
23:29	MA44646-CCB14	1		
23:33	MA44646-CRI3	1		
23:38	MA44646-CRID3	1		
23:42	MA44646-ICSA3	1		
23:46	MA44646-ICSAB3	1		
23:51	MA44646-CCV14	1		
23:55	MA44646-CCB15	1		
00:03	ZZZZZZ	1		
00:07	ZZZZZZ	1		
00:12	ZZZZZZ	1		
00:16	ZZZZZZ	1		
00:20	MA44646-CCV15	1		
00:25	MA44646-CCB16	1		
00:29	ZZZZZZ	1		
00:33	ZZZZZZ	1		
00:38	ZZZZZZ	1		
00:42	ZZZZZZ	1		
00:46	ZZZZZZ	1		
00:51	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.



REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
12:30	ZZZZZZ	1											
12:35	ZZZZZZ	1											
12:47	MA44646-ICV1	1	X	X	X	X	X	X	X	X	X	X	X
13:02	MA44646-ICB1	1	X	X	X	X	X	X	X	X	X	X	X
13:08	MA44646-ICCV1	1	See rerun										
13:13	MA44646-ICCV2	1	X	X	X	X	X	X	X	X	X	X	X
13:31	MA44646-CCB1	1	X	X	X	X	X	X	X	X	X	X	X
13:36	MA44646-CRI1	1	X	X	X	X	X	X	X	X	X	X	X
13:40	MA44646-CRID1	1	X	X	X	X	X	X	X	X	X	X	X
13:44	MA44646-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X
13:49	MA44646-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X
13:53	MA44646-HSTD1	1	X	X	X	X		X	X	X	X	X	X
13:58	MA44646-HSTD2	1						X					
14:02	ZZZZZZ	1											
14:06	ZZZZZZ	1											
14:11	ZZZZZZ	1											
14:15	MA44646-CCV1	1	X	X	X	X	X	X	X	X	X	X	X
14:19	MA44646-CCB2	1	X	X	X	X	X	X	X	X	X	X	X
14:23	MP7603-MB1	1	X	X	X	X	X	X	X	X	X	X	X
14:28	MP7603-B1	1	X	X	X	X	X	X	X	X	X	X	X
14:32	MP7603-S1	1	X	X	X	X	X	X	X	X	X	X	X
14:36	MP7603-S2	1	X	X	X	X	X	X	X	X	X	X	X
14:40	JC67360-2	1	X	X	X	X	X	X	X	X	X	X	(a)
14:44	MP7603-SD1	5	X	X	X	X	X	X	X	X	X	X	X
14:49	ZZZZZZ	1											
14:53	ZZZZZZ	1											
14:57	ZZZZZZ	1											
15:02	MA44646-CCV2	1	X	X	X	X	X	X	X	X	X	X	X
15:06	MA44646-CCB3	1	X	X	X	X	X	X	X	X	X	X	X
15:10	ZZZZZZ	1											
15:14	ZZZZZZ	1											
15:19	ZZZZZZ	1											
15:23	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	Ba	Be	B	Cr	Cu	Fe	Pb	Mn	Ni	Se	Zn
15:27	ZZZZZZ	1											
15:32	ZZZZZZ	1											
15:36	ZZZZZZ	1											
15:40	ZZZZZZ	1											
15:44	JC67675-2	1	X	X	X	X	X	X	X	X	X	X	X
15:49	MA44646-CCV3	1	X	X	X	X	X	X	X	X	X	X	X
15:53	MA44646-CCB4	1	X	X	X	X	X	X	X	X	X	X	X
15:57	ZZZZZZ	1											
16:01	ZZZZZZ	1											
16:06	ZZZZZZ	1											
16:10	MP7626-MB1	1	X	X	X	X	X	X	X	X	X	X	X
16:14	MP7626-B1	1	X	X	X	X	X	X	X	X	X	X	X
16:19	MP7626-S1	1	X	X	X					X		X	
16:23	MP7626-S2	1	X	X	X					X		X	
16:27	TD22329-1	1				X				X		X	(a)
16:32	MP7626-D1	1	X	X	X					X		X	
16:36	MA44646-CCV4	1	X	X	X	X	X	X	X	X	X	X	X
16:40	MA44646-CCB5	1	X	X	X	X	X	X	X	X	X	X	X
16:44	MP7626-SD1	5	Saturation										
16:49	ZZZZZZ	1											
16:56	MP7626-SD1	5	X	X	X	X				X		X	
17:01	ZZZZZZ	1											
17:07	ZZZZZZ	1											
17:11	ZZZZZZ	1											
17:16	MA44646-CRID2	1	X	X	X	X	X	X	X	X	X	X	X
17:20	MA44646-CRI2	1	X	X	X	X	X	X	X	X	X	X	X
17:24	MA44646-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X
17:28	MA44646-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X
17:33	MA44646-CCV5	1	X	X	X	X	X	X	X	X	X	X	X
17:37	MA44646-CCB6	1	X	X	X	X	X	X	X	X	X	X	X
17:41	ZZZZZZ	1											
17:46	ZZZZZZ	1											
17:50	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

8.3.1
 8

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
17:54	ZZZZZZ	1											
17:58	ZZZZZZ	1											
18:03	ZZZZZZ	1											
18:07	ZZZZZZ	1											
18:11	ZZZZZZ	1											
18:16	ZZZZZZ	1											
18:20	MA44646-CCV6	1	X	X	X	X	X	X	X	X	X	X	X
18:24	MA44646-CCB7	1	X	X	X	X	X	X	X	X	X	X	X
18:31	MA44646-CCV7	1	X	X	X	X	X	X	X	X	X	X	X
18:36	MA44646-CCB8	1	X	X	X	X	X	X	X	X	X	X	X
18:40	ZZZZZZ	1											
18:44	ZZZZZZ	1											
18:48	ZZZZZZ	1											
18:53	ZZZZZZ	1											
18:57	ZZZZZZ	1											
19:01	ZZZZZZ	1											
19:05	ZZZZZZ	1											
19:10	ZZZZZZ	1											
19:14	ZZZZZZ	1											
19:18	MA44646-CCV8	1	X	X	X	X	X	X	X	X	X	X	X
19:22	MA44646-CCB9	1	X	X	X	X	X	X	X	X	X	X	X
19:27	MP7622-MB1	1						X		X			
19:31	MP7622-B1	1						X		X			
19:35	MP7622-S1	1						X		X			
19:40	MP7622-S2	1						X		X			
19:44	JC67646-4	1						X		X			(a)
19:48	MP7622-SD1	5						X		X			
19:52	ZZZZZZ	1											
19:56	ZZZZZZ	1											
20:01	ZZZZZZ	1											
20:05	MA44646-CCV9	1	X	X	X	X	X	X	X	X	X	X	X
20:09	MA44646-CCB10	1	X	X	X	X	X	X	X	X	X	X	X
20:14	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
20:18	ZZZZZZ	1											
20:23	ZZZZZZ	1											
20:27	ZZZZZZ	1											
20:31	ZZZZZZ	1											
20:36	ZZZZZZ	1											
20:40	ZZZZZZ	1											
20:44	ZZZZZZ	1											
20:48	ZZZZZZ	1											
20:53	MA44646-CCV10	1	X	X	X	X	X	X	X	X	X	X	X
20:57	MA44646-CCB11	1	X	X	X	X	X	X	X	X	X	X	X
21:01	ZZZZZZ	1											
21:06	ZZZZZZ	1											
21:10	ZZZZZZ	1											
21:15	ZZZZZZ	1											
21:19	ZZZZZZ	1											
21:23	ZZZZZZ	1											
21:28	ZZZZZZ	1											
21:32	MP7623-B1	1						X	X	X			
21:36	MP7623-MB1	1						X	X	X			
21:41	MA44646-CCV11	1	X	X	X	X	X	X	X	X	X	X	X
21:45	MA44646-CCB12	1	X	X	X	X	X	X	X	X	X	X	X
21:49	MP7623-MB2	1						X	X	X			
21:54	MP7623-B2	1						X	X	X			
21:58	MP7623-S1	1						X	X	X			
22:02	MP7623-S2	1						X	X	X			
22:07	JC67646-16	1						X		X			(a)
22:11	MP7623-SD1	5						X	X	X			
22:15	ZZZZZZ	1											
22:20	MP7507-MB4	5	X			X			X			X	
22:24	MP7507-B4	5	X			X			X			X	
22:28	MA44646-CCV12	1	X	X	X	X	X	X	X	X	X	X	X
22:32	MA44646-CCB13	1	X	X	X	X	X	X	X	X	X	X	X
22:37	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	Ba	Be	B	Cr	Cu	Fe	Pb	Mn	Ni	Se	Zn
22:41	MP7636-MB1	1	X	X	X	X	X	X	X	X	X	X	X
22:45	MP7636-B1	1	X	X	X	X	X	X	X	X	X	X	X
22:49	MP7636-S1	1	X	X	X	X	X	X	X	X	X	X	X
22:54	MP7636-S2	1	X	X	X	X	X	X	X	X	X	X	X
22:58	JC67585-1	1	X	X		X	X	X	X	X	X	X	(a)
23:02	MP7636-SD1	5	X	X	X	X	X	X	X	X	X	X	X
23:06	ZZZZZ	10											
23:14	ZZZZZ	10											
23:18	ZZZZZ	1											
23:25	MA44646-CCV13	1	X	X	X	X	X	X	X	X	X	X	X
23:29	MA44646-CCB14	1	X	X	X	X	X	X	X	X	X	X	X
23:33	MA44646-CRI3	1	X	X	X	X	X	X	X	X	X	X	X
23:38	MA44646-CRID3	1	X	X	X	X	X	X	X	X	X	X	X
23:42	MA44646-ICSA3	1	X	X	X	X	X	X	X	X	X	X	X
23:46	MA44646-ICSAB3	1	X	X	X	X	X	X	X	X	X	X	X
23:51	MA44646-CCV14	1	X	X	X	X	X	X	X	X	X	X	X
23:55	MA44646-CCB15	1	X	X	X	X	X	X	X	X	X	X	X
00:03	ZZZZZ	1											
00:07	ZZZZZ	1											
00:12	ZZZZZ	1											
00:16	ZZZZZ	1											
00:20	MA44646-CCV15	1	X	X	X	X	X	X	X	X	X	X	X
00:25	MA44646-CCB16	1	X	X	X	X	X	X	X	X	X	X	X
00:29	ZZZZZ	1											
00:33	ZZZZZ	1											
00:38	ZZZZZ	1											
00:42	ZZZZZ	1											
00:46	ZZZZZ	1											
00:51	ZZZZZ	1											

(a) Sample used for QC only; not part of login JC67675.

Element: B B B C C F P M N S Z
 a e r u e b n i e n

INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:22	MA44646-STD1	4843 R	192560 R	26422 R	9109 R
12:26	MA44646-STD2	4520	175260	25856	8098
12:30	ZZZZZZ	4647	181420	26170	8344
12:35	ZZZZZZ	4840	193790	26564	9121
12:47	MA44646-ICV1	4627	181930	26276	8310
13:02	MA44646-ICB1	4862	192530	26450	9129
13:08	MA44646-ICCV1	No results reported for the elements associated with this internal standard.			
13:13	MA44646-ICCV2	4653	182840	26371	8371
13:31	MA44646-CCB1	4852	192380	26221	9114
13:36	MA44646-CRI1	4779	190140	26043	8922
13:40	MA44646-CRID1	4782	191640	26314	8986
13:44	MA44646-ICSA1	4205	163500	25185	7428
13:49	MA44646-ICSAB1	4179	161890	25149	7420
13:53	MA44646-HSTD1	4740	187650	26458	8919
13:58	MA44646-HSTD2	4302	166270	25163	7481
14:02	ZZZZZZ	4741	187390	26335	9101
14:06	ZZZZZZ	4724	191940	26245	9058
14:11	ZZZZZZ	4810	191010	26068	9042
14:15	MA44646-CCV1	4614	179640	25809	8288
14:19	MA44646-CCB2	4871	191480	26124	9171
14:23	MP7603-MB1	4777	192560	26368	9004
14:28	MP7603-B1	4660	184030	26529	8472
14:32	MP7603-S1	4494	177250	26246	8055
14:36	MP7603-S2	4513	177520	26137	8083
14:40	JC67360-2	4557	179040	25873	8295
14:44	MP7603-SD1	4766	190120	26322	8896
14:49	ZZZZZZ	4127	157820	25735	7047
14:53	ZZZZZZ	4569	180620	26128	8291
14:57	ZZZZZZ	4493	175170	25670	8079
15:02	MA44646-CCV2	4588	178630	25865	8261
15:06	MA44646-CCB3	4801	191570	26394	9060
15:10	ZZZZZZ	4563	179760	26261	8228
15:14	ZZZZZZ	4579	180360	25790	8261

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:19	ZZZZZZ	4671	185230	26438	8583
15:23	ZZZZZZ	4734	186570	25232	8723
15:27	ZZZZZZ	4648	184560	26376	8520
15:32	ZZZZZZ	4654	184130	26383	8584
15:36	ZZZZZZ	4812	190380	26561	9008
15:40	ZZZZZZ	4694	184470	26176	8557
15:44	JC67675-2	4586	179910	25981	8234
15:49	MA44646-CCV3	4590	180060	25675	8278
15:53	MA44646-CCB4	4815	191540	26570	9072
15:57	ZZZZZZ	4467	177940	25955	8025
16:01	ZZZZZZ	4460	177210	25820	8003
16:06	ZZZZZZ	4437	176410	25827	7919
16:10	MP7626-MB1	4828	193290	26468	9117
16:14	MP7626-B1	4678	183980	26357	8510
16:19	MP7626-S1	4407	174980	26246	8957
16:23	MP7626-S2	4411	175000	26266	8964
16:27	TD22329-1	4495	178300	26279	9209
16:32	MP7626-D1	4533	179450	26355	9252
16:36	MA44646-CCV4	4582	179110	25810	8247
16:40	MA44646-CCB5	4830	191200	26347	9089
16:44	MP7626-SD1	No results reported for the elements associated with this internal standard.			
16:49	ZZZZZZ	4842	185720	27959	8448
16:56	MP7626-SD1	4799	189530	26374	9120
17:01	ZZZZZZ	4799	191130	25968	9033
17:07	ZZZZZZ	4805	185010	26248	9018
17:11	ZZZZZZ	4836	187780	26011	9117
17:16	MA44646-CRID2	4793	187870	26061	8979
17:20	MA44646-CRI2	4763	186260	25705	8869
17:24	MA44646-ICSA2	4187	164290	25035	7377
17:28	MA44646-ICSAB2	4158	161030	25191	7383
17:33	MA44646-CCV5	4623	181250	25709	8291
17:37	MA44646-CCB6	4843	188620	26515	9111
17:41	ZZZZZZ	4786	187480	26534	8681

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:46	ZZZZZZ	4803	187410	27373	8601
17:50	ZZZZZZ	4848	186940	27344	8546
17:54	ZZZZZZ	4894	188350	27772	8586
17:58	ZZZZZZ	4741	185420	26646	8574
18:03	ZZZZZZ	4396	167710	26279	7310
18:07	ZZZZZZ	4384	169610	25809	7467
18:11	ZZZZZZ	4442	171730	25883	7575
18:16	ZZZZZZ	4492	177230	25748	7566
18:20	MA44646-CCV6	4586	178410	25825	8235
18:24	MA44646-CCB7	4821	999999 !a	26227	9054
18:31	MA44646-CCV7	4552	177400	25807	8158
18:36	MA44646-CCB8	4711	187500	25866	8787
18:40	ZZZZZZ	4760	184250	27118	8433
18:44	ZZZZZZ	4655	179110	26866	8438
18:48	ZZZZZZ	4681	183740	26713	8317
18:53	ZZZZZZ	4774	184930	27191	8354
18:57	ZZZZZZ	4643	186190	26457	8660
19:01	ZZZZZZ	4709	183200	26524	8650
19:05	ZZZZZZ	4506	179080	26751	8919
19:10	ZZZZZZ	4512	177020	26111	8062
19:14	ZZZZZZ	4787	187690	26597	8740
19:18	MA44646-CCV8	4539	177660	25750	8130
19:22	MA44646-CCB9	4751	187740	25889	8852
19:27	MP7622-MB1	4724	188700	26281	8799
19:31	MP7622-B1	4573	180050	25930	8265
19:35	MP7622-S1	4334	169870	25635	7686
19:40	MP7622-S2	4325	169610	25590	7679
19:44	JC67646-4	4370	173140	25536	7824
19:48	MP7622-SD1	4618	181790	26063	8474
19:52	ZZZZZZ	4491	178630	25204	7965
19:56	ZZZZZZ	4388	173300	25952	7806
20:01	ZZZZZZ	4590	180710	25864	8330
20:05	MA44646-CCV9	4513	176510	25566	8107

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:09	MA44646-CCB10	4723	187700	25830	8789
20:14	ZZZZZZ	4323	169220	25396	7637
20:18	ZZZZZZ	4435	175050	25394	7952
20:23	ZZZZZZ	4435	174430	25491	7933
20:27	ZZZZZZ	4395	174420	25428	7874
20:31	ZZZZZZ	4373	174120	25291	7848
20:36	ZZZZZZ	4565	180250	25807	8214
20:40	ZZZZZZ	4399	173650	25345	7896
20:44	ZZZZZZ	4354	172590	25441	7762
20:48	ZZZZZZ	4353	171280	25525	7787
20:53	MA44646-CCV10	4508	176550	25526	8087
20:57	MA44646-CCB11	4730	187630	25746	8827
21:01	ZZZZZZ	4296	170350	25172	7673
21:06	ZZZZZZ	4298	168680	25313	7589
21:10	ZZZZZZ	4421	173910	25621	7950
21:15	ZZZZZZ	4422	174440	25404	7948
21:19	ZZZZZZ	4377	173990	25277	7856
21:23	ZZZZZZ	4373	172740	25526	7854
21:28	ZZZZZZ	4225	166810	24975	7438
21:32	MP7623-B1	4535	177180	25886	8206
21:36	MP7623-MB1	4722	188550	26115	8797
21:41	MA44646-CCV11	4511	175940	25326	8091
21:45	MA44646-CCB12	4716	186620	25910	8798
21:49	MP7623-MB2	4715	186860	26424	8776
21:54	MP7623-B2	4544	179770	25816	8225
21:58	MP7623-S1	4323	169970	25842	7698
22:02	MP7623-S2	4364	169150	25915	7779
22:07	JC67646-16	4353	171680	25515	7824
22:11	MP7623-SD1	4634	184470	26312	8516
22:15	ZZZZZZ	4603	183110	26292	8388
22:20	MP7507-MB4	4702	188330	26029	8784
22:24	MP7507-B4	4672	186330	26073	8607
22:28	MA44646-CCV12	4486	176360	25772	8050

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44646
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:32	MA44646-CCB13	4663	187300	26185	8701
22:37	ZZZZZ	No results reported for the elements associated with this internal standard.			
22:41	MP7636-MB1	4666	187120	25843	8709
22:45	MP7636-B1	4507	178740	25667	8190
22:49	MP7636-S1	4577	179500	26818	8173
22:54	MP7636-S2	4591	179770	26821	8156
22:58	JC67585-1	4660	181720	26694	8296
23:02	MP7636-SD1	4729	184770	25937	8616
23:06	ZZZZZ	9770 !	339600 !	31756	18081 !
23:14	ZZZZZ	5415	213400	29985	8773
23:18	ZZZZZ	4538	176560	26104	8132
23:25	MA44646-CCV13	4447	176480	25588	7983
23:29	MA44646-CCB14	4692	188980	25923	8753
23:33	MA44646-CRI3	4693	185170	25814	8655
23:38	MA44646-CRID3	4712	187130	25892	8738
23:42	MA44646-ICSA3	4079	157600	24584	7222
23:46	MA44646-ICSAB3	4086	157750	24516	7277
23:51	MA44646-CCV14	4494	176060	25371	8070
23:55	MA44646-CCB15	4706	187770	25408	8767
00:03	ZZZZZ	4678	185950	25567	8670
00:07	ZZZZZ	4713	187190	25546	8779
00:12	ZZZZZ	4657	184460	25122	8662
00:16	ZZZZZ	4334	169320	24784	7715
00:20	MA44646-CCV15	4499	174540	25403	8061
00:25	MA44646-CCB16	4712	185950	25414	8777
00:29	ZZZZZ	4225	166310	24252	7535
00:33	ZZZZZ	4621	166710	27089	7913
00:38	ZZZZZ	4687	186800	25798	8793
00:42	ZZZZZ	4713	187350	25802	8841
00:46	ZZZZZ	4758	187890	25554	8849
00:51	ZZZZZ	4671	185410	25008	8703

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %

INTERNAL STANDARD SUMMARY

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44646
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
Istd#4	Yttrium (3600)		70-130 %		
Istd#3	Yttrium (3710)		70-130 %		
Istd#4	Indium		70-130 %		

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA44646 Units: ug/l

Metal	Time:		13:02		13:31		14:19		15:06		
	Sample ID:	RL	IDL	ICB1	final	CCB1	final	CCB2	final	CCB3	final
Aluminum	200		8.7	anr							
Antimony	6.0		1.3	anr							
Arsenic	3.0		1.2	anr							
Barium	200		.4	0.100	<200	0.100	<200	0.300	<200	0.100	<200
Beryllium	1.0		.1	-0.100	<1.0	0.00	<1.0	0.100	<1.0	0.100	<1.0
Bismuth	20		1.7								
Boron	100		1.5	1.00	<100	0.600	<100	0.900	<100	1.00	<100
Cadmium	3.0		.2	anr							
Calcium	2000		3.6	anr							
Chromium	10		.5	0.100	<10	0.200	<10	0.100	<10	0.300	<10
Cobalt	50		.4	anr							
Copper	10		.6	-0.100	<10	-0.100	<10	-0.200	<10	-0.100	<10
Iron	100		2.3	0.500	<100	1.20	<100	5.00	<100	5.20	<100
Lead	3.0		1.4	0.200	<3.0	0.400	<3.0	0.100	<3.0	0.300	<3.0
Lithium	50		1.9								
Magnesium	2000		24	anr							
Manganese	15		.1	0.00	<15	0.00	<15	0.00	<15	0.100	<15
Molybdenum	20		.3								
Nickel	10		.3	0.00	<10	-0.200	<10	-0.100	<10	0.00	<10
Phosphorus	50		1.4								
Potassium	2000		41	anr							
Selenium	10		3.6	1.30	<10	0.400	<10	-0.300	<10	0.200	<10
Silicon	200		1.9								
Silver	10		.4	anr							
Sodium	2000		17	anr							
Strontium	10		.1								
Sulfur	50		4.1	anr							
Thallium	2.0		1.9	anr							
Tin	10		1.1	anr							
Titanium	10		.3								
Tungsten	50		1.2								
Vanadium	50		.4	anr							
Zinc	20		.2	0.00	<20	-0.100	<20	0.400	<20	0.500	<20

8.3.3
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

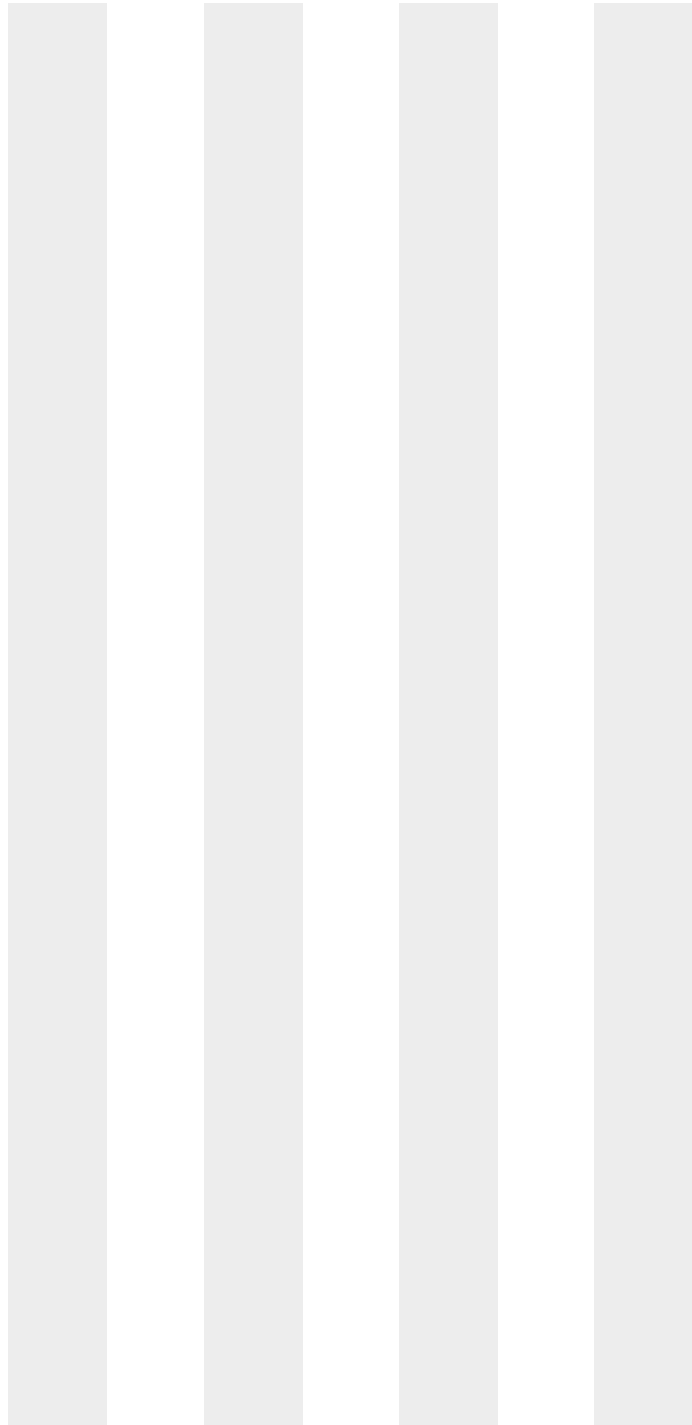
Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44646 Units: ug/l

Time:			13:02		13:31		14:19		15:06	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .2

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



8.3.3
 8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA44646 Units: ug/l

Metal	RL	IDL	15:53	final	16:40	final	17:37	final
			CCB4 raw		CCB5 raw		CCB6 raw	
Aluminum	200	8.7	anr					
Antimony	6.0	1.3	anr					
Arsenic	3.0	1.2	anr					
Barium	200	.4	0.100	<200	0.00	<200	0.100	<200
Beryllium	1.0	.1	0.100	<1.0	0.100	<1.0	0.00	<1.0
Bismuth	20	1.7						
Boron	100	1.5	0.800	<100	1.70	<100	0.100	<100
Cadmium	3.0	.2	anr					
Calcium	2000	3.6	anr					
Chromium	10	.5	0.100	<10	0.100	<10	0.200	<10
Cobalt	50	.4	anr					
Copper	10	.6	-0.300	<10	-0.100	<10	-0.400	<10
Iron	100	2.3	4.50	<100	4.50	<100	3.30	<100
Lead	3.0	1.4	-0.800	<3.0	-1.10	<3.0	-0.400	<3.0
Lithium	50	1.9						
Magnesium	2000	24	anr					
Manganese	15	.1	0.100	<15	0.100	<15	0.100	<15
Molybdenum	20	.3						
Nickel	10	.3	0.00	<10	0.100	<10	0.300	<10
Phosphorus	50	1.4						
Potassium	2000	41	anr					
Selenium	10	3.6	0.300	<10	2.10	<10	-0.400	<10
Silicon	200	1.9						
Silver	10	.4	anr					
Sodium	2000	17	anr					
Strontium	10	.1						
Sulfur	50	4.1	anr					
Thallium	2.0	1.9	anr					
Tin	10	1.1	anr					
Titanium	10	.3						
Tungsten	50	1.2						
Vanadium	50	.4	anr					
Zinc	20	.2	0.500	<20	0.500	<20	0.500	<20

8.3.3
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44646 Units: ug/l

Time:	15:53	16:40	17:37					
Sample ID:	CCB4	CCB5	CCB6					
Metal	RL	IDL	raw	final	raw	final	raw	final

Zirconium 10 .2

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



8.3.3
 8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44646 Units: ug/l

Time:	13:13		
Sample ID:	ICCV	ICCV2	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	2000	2040	102.0
Beryllium	2000	2020	101.0
Bismuth			
Boron	2000	2000	100.0
Cadmium	anr		
Calcium	anr		
Chromium	2000	1980	99.0
Cobalt	anr		
Copper	2000	1960	98.0
Iron	40000	40200	100.5
Lead	2000	2020	101.0
Lithium			
Magnesium	anr		
Manganese	2000	2020	101.0
Molybdenum			
Nickel	2000	2010	100.5
Phosphorus			
Potassium	anr		
Selenium	2000	1980	99.0
Silicon			
Silver	anr		
Sodium	anr		
Strontium			
Sulfur	anr		
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		
Zinc	2000	2000	100.0

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44646 Units: ug/l

Time:	13:13
Sample ID:	ICCV ICCV2
Metal	True Results % Rec

Zirconium

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

8.3.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44646 Units: ug/l

Metal	ICV True	12:47	% Rec	CCV True	14:15	% Rec	CCV True	15:02	% Rec
		ICV1 Results			CCV1 Results			CCV2 Results	
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	2040	102.0	2000	2040	102.0	2000	2030	101.5
Beryllium	2000	2080	104.0	2000	2010	100.5	2000	2000	100.0
Bismuth									
Boron	2000	2060	103.0	2000	2010	100.5	2000	2020	101.0
Cadmium	anr								
Calcium	anr								
Chromium	2000	1950	97.5	2000	2010	100.5	2000	2020	101.0
Cobalt	anr								
Copper	2000	2030	101.5	2000	1980	99.0	2000	2000	100.0
Iron	40000	39600	99.0	40000	40000	100.0	40000	39600	99.0
Lead	2000	2020	101.0	2000	2040	102.0	2000	2040	102.0
Lithium									
Magnesium	anr								
Manganese	2000	2020	101.0	2000	2070	103.5	2000	2070	103.5
Molybdenum									
Nickel	2000	2020	101.0	2000	2030	101.5	2000	2030	101.5
Phosphorus									
Potassium	anr								
Selenium	2000	1970	98.5	2000	1980	99.0	2000	1980	99.0
Silicon									
Silver	anr								
Sodium	anr								
Strontium									
Sulfur	anr								
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0

8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44646 Units: ug/l

	Time:								
	Sample ID:	ICV	12:47 ICV1	CCV	14:15 CCV1	CCV	15:02 CCV2	CCV	CCV2
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zirconium

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



8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44646 Units: ug/l

Metal	Sample ID:	15:49			16:36			17:33		
		CCV	CCV3	% Rec	CCV	CCV4	% Rec	CCV	CCV5	% Rec
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	2000	2040	102.0	2000	2040	102.0	2000	2010	100.5	
Beryllium	2000	2000	100.0	2000	1990	99.5	2000	1960	98.0	
Bismuth										
Boron	2000	2010	100.5	2000	2010	100.5	2000	1980	99.0	
Cadmium	anr									
Calcium	anr									
Chromium	2000	1990	99.5	2000	1990	99.5	2000	1960	98.0	
Cobalt	anr									
Copper	2000	1970	98.5	2000	1990	99.5	2000	1940	97.0	
Iron	40000	39500	98.8	40000	38800	97.0	40000	38000	95.0	
Lead	2000	2030	101.5	2000	2040	102.0	2000	2030	101.5	
Lithium										
Magnesium	anr									
Manganese	2000	2040	102.0	2000	2060	103.0	2000	2040	102.0	
Molybdenum										
Nickel	2000	2010	100.5	2000	2020	101.0	2000	2010	100.5	
Phosphorus										
Potassium	anr									
Selenium	2000	1980	99.0	2000	1990	99.5	2000	1970	98.5	
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur	anr									
Thallium	anr									
Tin	anr									
Titanium										
Tungsten										
Vanadium	anr									
Zinc	2000	2030	101.5	2000	2050	102.5	2000	2040	102.0	

8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44646 Units: ug/l

	Time:				15:49			16:36		17:33	
Sample ID:	CCV		CCV3	CCV	CCV4	CCV	CCV5				
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec		

Zirconium

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



8.3.5
8

HIGH STANDARD CHECK SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44646 Units: ug/l

Metal	Time: 13:53		% Rec	Time: 13:58		% Rec
	HSTD	HSTD1		HSTD	HSTD2	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	5000	5170	103.4			
Beryllium	5000	5150	103.0			
Bismuth						
Boron	5000	5080	101.6			
Cadmium	anr					
Calcium						
Chromium	5000	5210	104.2			
Cobalt	anr					
Copper	5000	5140	102.8			
Iron				150000	148000	98.7
Lead	5000	5200	104.0			
Lithium						
Magnesium						
Manganese	5000	5250	105.0			
Molybdenum						
Nickel	5000	5130	102.6			
Phosphorus						
Potassium						
Selenium	5000	5040	100.8			
Silicon						
Silver	anr					
Sodium						
Strontium						
Sulfur	anr					
Thallium	anr					
Tin	anr					
Titanium						
Tungsten						
Vanadium	anr					
Zinc	5000	5230	104.6			

8.3.6
8

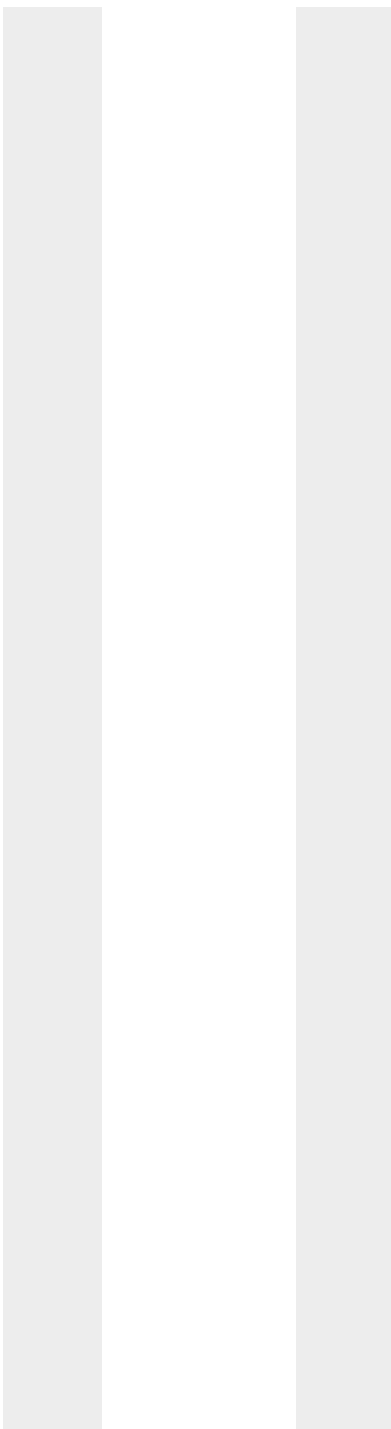
HIGH STANDARD CHECK SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44646 Units: ug/l

Time:	13:53	13:58	
Sample ID:	HSTD1	HSTD2	
Metal	True	True	
	Results	Results	% Rec

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



8.3.6
 8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44646 Units: ug/l

Time:				13:36			13:40			17:16
Sample ID:	CRI	CRIA	CRID	CR11	% Rec	CRID1	% Rec	CRID2	% Rec	
Metal	True	True	True	Results		Results		Results		
Aluminum	200	500	100	anr						
Antimony	6.0	20	3.0	anr						
Arsenic	8.0	20	3.0	anr						
Barium	200		4.0	203	101.5	4.20	105.0	4.10	102.5	
Beryllium	2.0		1.0	1.90	95.0	1.00	100.0	0.900	90.0	
Bismuth	20									
Boron	100		10	102	102.0	0.400U	0.0* (a)	-0.100U	0.0* (a)	
Cadmium	3.0		1.0	anr						
Calcium	5000	2000	1000	anr						
Chromium	10		2.0	10.1	101.0	2.20	110.0	2.10	105.0	
Cobalt	50		3.0	anr						
Copper	10		2.0	9.50	95.0	-0.100U	0.0* (a)	-0.200U	0.0* (a)	
Iron	100	500		109	109.0					
Lead	3.0	20	2.5	3.10	103.3	-0.100U	0.0* (a)	0.400U	0.0* (a)	
Lithium	50									
Magnesium	5000	2000	100	anr						
Manganese	15		3.0	15.6	104.0	3.10	103.3	3.20	106.7	
Molybdenum	20									
Nickel	10		4.0	10.2	102.0	4.10	102.5	4.10	102.5	
Phosphorus	50									
Potassium	5000		2000	anr						
Selenium	10	20	5.0	11.1	111.0	5.00	100.0	6.40	128.0	
Silicon	200									
Silver	5.0		2.0	anr						
Sodium	5000		1000	anr						
Strontium	10									
Sulfur	50			anr						
Thallium	10		2.0	anr						
Tin	10			anr						
Titanium	10									
Tungsten	50									
Vanadium	50		2.0	anr						
Zinc	20		10	20.6	103.0	10.6	106.0	10.6	106.0	

8.3.7
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44646 Units: ug/l

Time:				13:36			13:40			17:16
Sample ID:	CRI	CRIA	CRID	CRID1			CRID1			CRID2
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec	

Zirconium 10

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

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44646 Units: ug/l

Time: Sample ID:	CRI	CRIA	CRID	17:20 CRI2	Results	% Rec
Metal	True	True	True			
Aluminum	200	500	100	anr		
Antimony	6.0	20	3.0	anr		
Arsenic	8.0	20	3.0	anr		
Barium	200		4.0	201	100.5	
Beryllium	2.0		1.0	1.90	95.0	
Bismuth	20					
Boron	100		10	99.8	99.8	
Cadmium	3.0		1.0	anr		
Calcium	5000	2000	1000	anr		
Chromium	10		2.0	10.3	103.0	
Cobalt	50		3.0	anr		
Copper	10		2.0	9.10	91.0	
Iron	100	500		102	102.0	
Lead	3.0	20	2.5	2.20	73.3	
Lithium	50					
Magnesium	5000	2000	100	anr		
Manganese	15		3.0	16.0	106.7	
Molybdenum	20					
Nickel	10		4.0	9.80	98.0	
Phosphorus	50					
Potassium	5000		2000	anr		
Selenium	10	20	5.0	10.4	104.0	
Silicon	200					
Silver	5.0		2.0	anr		
Sodium	5000		1000	anr		
Strontium	10					
Sulfur	50			anr		
Thallium	10		2.0	anr		
Tin	10			anr		
Titanium	10					
Tungsten	50					
Vanadium	50		2.0	anr		
Zinc	20		10	21.0	105.0	

8.3.7
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44646 Units: ug/l

Time:				17:20		
Sample ID:	CRI	CRIA	CRID	CRI2		
Metal	True	True	True	Results	% Rec	

Zirconium 10

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

8.3.7

8

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

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA44646 Units: ug/l

Metal	Time:		13:44		13:49		17:24		17:28	
	Sample ID:	ICSA	ICSAB	ICSAL	ICSAB1	ICSAB2	ICSAB2	ICSAB2	ICSAB2	ICSAB2
	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	500000	500000	526000	105.2	511000	102.2	515000	103.0	505000	101.0
Antimony		1000	-1.20		1020	102.0	0.500		1020	102.0
Arsenic		1000	1.00		1040	104.0	-0.100		1040	104.0
Barium		500	1.20		511	102.2	1.30		503	100.6
Beryllium		500	-0.600		484	96.8	-0.600		468	93.6
Bismuth		500	6.70		513	102.6	6.00		518	103.6
Boron		500	0.500		499	99.8	-0.500		492	98.4
Cadmium		1000	0.600		1020	102.0	0.200		1000	100.0
Calcium	400000	400000	382000	95.5	389000	97.3	370000	92.5	376000	94.0
Chromium		500	0.400		479	95.8	0.300		475	95.0
Cobalt		500	-0.200		472	94.4	-0.300		477	95.4
Copper		500	1.10		502	100.4	1.00		502	100.4
Iron	200000	200000	185000	92.5	198000	99.0	173000	86.5	186000	93.0
Lead		1000	3.30		945	94.5	3.50		944	94.4
Lithium		500	12.7		532	106.4	10.8		521	104.2
Magnesium	500000	500000	508000	101.6	520000	104.0	485000	97.0	496000	99.2
Manganese		500	1.10		504	100.8	-0.700		508	101.6
Molybdenum		500	-1.80		483	96.6	-1.90		487	97.4
Nickel		1000	-0.800		954	95.4	-0.300		947	94.7
Phosphorus		500	6.40		507	101.4	8.20		504	100.8
Potassium			219		140		212		155	
Selenium		1000	-2.30		1040	104.0	-3.00		1040	104.0
Silicon		500	-11.5		495	99.0	-11.4		491	98.2
Silver		1000	7.20		1040	104.0	3.60		1030	103.0
Sodium			31.4		38.2		30.1		51.2	
Strontium		500	0.600		527	105.4	0.600		513	102.6
Sulfur		500	0.400		489	97.8	18.0		508	101.6
Thallium		1000	0.700		1020	102.0	1.50		990	99.0
Tin		500	0.100		463	92.6	-1.00		461	92.2
Titanium		500	-0.500		490	98.0	-0.600		489	97.8
Tungsten		500	-0.600		472	94.4	-2.80		477	95.4
Vanadium		500	-1.20		486	97.2	-0.800		494	98.8
Zinc		1000	-1.20		939	93.9	-0.600		957	95.7

8.3.8
8

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

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SD061318M1.ICP Date Analyzed: 06/13/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 80 to 120 % Recovery Run ID: MA44646 Units: ug/l

Time:			13:44			13:49			17:24			17:28
Sample ID:	ICSA	ICSAB	ICSAL	% Rec	ICSAB1	% Rec	ICSA2	% Rec	ICSAB2	% Rec		

Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Zirconium		500	0.300		502	100.4	-0.800		502	100.4

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

8.3.8
 8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/11/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.7	33		
Antimony	6.0	1.3	4.3		
Arsenic	3.0	1.2	2.7		
Barium	200	.4	1.3	0.0	<200
Beryllium	1.0	.1	.4	-0.10	<1.0
Bismuth	20	1.7	5		
Boron	100	1.5	13	0.70	<100
Cadmium	3.0	.2	.7		
Calcium	5000	3.6	29		
Chromium	10	.5	.85	0.20	<10
Cobalt	50	.4	.72		
Copper	10	.6	3.2	-0.20	<10
Iron	100	2.3	32	2.7	<100
Lead	3.0	1.4	2.6	-0.80	<3.0
Lithium	50	1.9	15		
Magnesium	5000	24	64		
Manganese	15	.1	.42	0.0	<15
Molybdenum	20	.3	1.4		
Nickel	10	.3	1.3	-0.20	<10
Phosphorus	50	1.4	13		
Potassium	10000	41	230		
Selenium	10	3.6	6.6	3.4	<10
Silicon	200	1.9	45		
Silver	10	.4	3.1		
Sodium	10000	17	130		
Strontium	10	.1	.3		
Sulfur	50	4.1	15		
Thallium	2.0	1.9	1.6		
Tin	10	1.1	2.4		
Titanium	10	.3	1.8		
Tungsten	50	1.2	14		
Vanadium	50	.4	1.3		
Zinc	20	.2	4	0.90	<20

8.4.1
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/11/18

Metal	RL	IDL	MDL	MB raw	final
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Zirconium 10 .2 2

Associated samples MP7603: JC67675-2

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

8.4.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2 Original MS	SpikeLot MPSPK2	% Rec	QC Limits	
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	182	2210	2000	101.4	75-125
Beryllium	0.0	2010	2000	100.5	75-125
Bismuth					
Boron	3.9	2020	2000	100.8	75-125
Cadmium	anr				
Calcium	anr				
Chromium	0.60	1970	2000	98.5	75-125
Cobalt	anr				
Copper	0.80	2010	2000	100.5	75-125
Iron	3410	28000	25000	98.4	75-125
Lead	0.0	2010	2000	100.5	75-125
Lithium					
Magnesium	anr				
Manganese	805	2780	2000	98.8	75-125
Molybdenum					
Nickel	13.6	2020	2000	100.3	75-125
Phosphorus					
Potassium	anr				
Selenium	0.0	2000	2000	100.0	75-125
Silicon					
Silver	anr				
Sodium	anr				
Strontium					
Sulfur					
Thallium	anr				
Tin					
Titanium					
Tungsten					
Vanadium	anr				
Zinc	1.3	1960	2000	97.9	75-125

8.4.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2 Original MS	SpikeLot MPSPK2	% Rec	QC Limits
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Zirconium

Associated samples MP7603: JC67675-2

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

8.4.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2 Original MSD	SpikeLot MPSPK2	% Rec	MSD RPD	QC Limit	
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	182	2230	2000	102.4	0.9	20
Beryllium	0.0	2030	2000	101.5	1.0	20
Bismuth						
Boron	3.9	2020	2000	100.8	0.0	20
Cadmium	anr					
Calcium	anr					
Chromium	0.60	1980	2000	99.0	0.5	20
Cobalt	anr					
Copper	0.80	2010	2000	100.5	0.0	20
Iron	3410	28300	25000	99.6	1.1	20
Lead	0.0	2030	2000	101.5	1.0	20
Lithium						
Magnesium	anr					
Manganese	805	2800	2000	99.8	0.7	20
Molybdenum						
Nickel	13.6	2030	2000	100.8	0.5	20
Phosphorus						
Potassium	anr					
Selenium	0.0	1990	2000	99.5	0.5	20
Silicon						
Silver	anr					
Sodium	anr					
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	1.3	1980	2000	98.9	1.0	20

8.4.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2 Original MSD	SpikeLot MPSPK2	% Rec	MSD RPD	QC Limit
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Zirconium

Associated samples MP7603: JC67675-2

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

8.4.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/11/18

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	2000	2000	100.0	80-120
Beryllium	1980	2000	99.0	80-120
Bismuth				
Boron	1960	2000	98.0	80-120
Cadmium	anr			
Calcium	anr			
Chromium	1950	2000	97.5	80-120
Cobalt	anr			
Copper	1940	2000	97.0	80-120
Iron	24700	25000	98.8	80-120
Lead	1990	2000	99.5	80-120
Lithium				
Magnesium	anr			
Manganese	2020	2000	101.0	80-120
Molybdenum				
Nickel	1970	2000	98.5	80-120
Phosphorus				
Potassium	anr			
Selenium	1930	2000	96.5	80-120
Silicon				
Silver	anr			
Sodium	anr			
Strontium				
Sulfur				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	anr			
Zinc	1970	2000	98.5	80-120

8.4.3
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/11/18

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
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Zirconium

Associated samples MP7603: JC67675-2

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

8.4.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	182	180	1.2	0-10
Beryllium	0.00	0.00	NC	0-10
Bismuth				
Boron	3.90	0.00	100.0(a)	0-10
Cadmium	anr			
Calcium	anr			
Chromium	0.600	0.00	100.0(a)	0-10
Cobalt	anr			
Copper	0.800	0.00	100.0(a)	0-10
Iron	3410	3400	0.1	0-10
Lead	0.00	0.00	NC	0-10
Lithium				
Magnesium	anr			
Manganese	805	784	2.7	0-10
Molybdenum				
Nickel	13.6	13.6	0.0	0-10
Phosphorus				
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	anr			
Sodium	anr			
Strontium				
Sulfur				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	anr			
Zinc	1.30	2.50	92.3 (a)	0-10

8.4.4
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2	QC
	Original SDL 1:5 %DIF	Limits

Zirconium

Associated samples MP7603: JC67675-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603A
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 06/11/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	2.3	16		
Antimony	4.0	.55	1.8		
Arsenic	1.0	.034	.33	0.037	<1.0
Barium	2.0	.022	.54		
Beryllium	1.0	.004	.024		
Boron	50	3	17		
Cadmium	1.0	.008	.073		
Calcium	500	42	91		
Chromium	2.0	.018	.59		
Cobalt	1.0	.004	.068		
Copper	4.0	.024	2.8		
Iron	50	1.7	15		
Lead	1.0	.008	.53		
Magnesium	500	3.8	5.1		
Manganese	2.0	.04	.67		
Molybdenum	2.0	.036	.23		
Nickel	2.0	.04	.56		
Potassium	500	6.5	68		
Selenium	1.0	.05	.34		
Silver	1.0	.01	.34		
Sodium	500	7.1	15		
Strontium	10	.078	3.2		
Thallium	1.0	.006	.047	0.0066	<1.0
Tin	10	.076	3.7		
Titanium	2.0	.084	.71		
Vanadium	2.0	.012	1.4		
Zinc	10	4.4	9.3		

Associated samples MP7603A: JC67675-2

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

8.5.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603A
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2 Original MS		Spike/lot MP6020A Q1% Rec	QC Limits
Aluminum	anr			
Antimony				
Arsenic	7.6	85.4	80	97.3 75-125
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium	0.015	81.4	80	101.7 75-125
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP7603A: JC67675-2

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

8.5.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603A
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2 Original MSD		SpikeLot MP6020AQ1% Rec		MSD RPD	QC Limit
Aluminum	anr					
Antimony						
Arsenic	7.6	84.9	80	96.6	0.6	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium	0.015	81.8	80	102.2	0.5	20
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP7603A: JC67675-2

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

8.5.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603A
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 06/11/18

Metal	BSP Result	Spikelot MP6020A Q1% Rec	QC Limits
Aluminum	anr		
Antimony			
Arsenic	80.5	80	100.6 80-120
Barium			
Beryllium			
Boron			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Molybdenum			
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Strontium			
Thallium	81.1	80	101.4 80-120
Tin			
Titanium			
Vanadium			
Zinc			

Associated samples MP7603A: JC67675-2

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

8.5.3
 8

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7603A
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 06/11/18

Metal	JC67360-2		QC	
	Original	SDL 2:10	%DIF	Limits
Aluminum	anr			
Antimony				
Arsenic	7.61	8.80	15.5*(a)	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium	0.0146	0.00	100.0(b)	0-10
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP7603A: JC67675-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.5.4
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7610
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/12/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.052	.13	0.075	<0.20

Associated samples MP7610: JC67675-2

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: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7610
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 06/12/18

Metal	JC67428-1 Original MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0	12.8	12	106.7 75-125

Associated samples MP7610: JC67675-2

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

8.6.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC67675
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7610
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 06/12/18 06/12/18

Metal	JC67428-1 Original MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit	JC67428-1 Original DUP	RPD	QC Limits	
Mercury	0.0	12.9	12	107.5	0.8	20	0.0	0.0 (a) NC	0-20

Associated samples MP7610: JC67675-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Elevated sample detection limit due to difficult sample matrix.

8.6.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7610
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 06/12/18

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	2.2	2	110.0	80-120

Associated samples MP7610: JC67675-2

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

8.6.3
8

Instrument Detection Limits

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: AGICPMS1	Effective Date: 05/30/18
--------------------------------	---------------------------------

Analyte	IDL ug/l
Aluminum	.162
Aluminum	1.132
Antimony	.274
Arsenic	.511
Arsenic	.017
Barium	.011
Beryllium	.002
Boron	1.488
Cadmium	.009
Cadmium	.004
Calcium	21.1
Chromium	.028
Chromium	.009
Cobalt	.007
Cobalt	.002
Copper	.018
Copper	.012
Iron	1.37
Iron	.87
Lead	.004
Magnesium	.16
Magnesium	1.894
Manganese	.011
Manganese	.02
Molybdenum	.018
Nickel	.015
Nickel	.02
Potassium	1.74
Potassium	3.269
Selenium	.789
Selenium	.025
Silver	.005
Sodium	.571
Sodium	3.563
Strontium	.039
Thallium	.003
Tin	.023
Tin	.038
Titanium	.025
Titanium	.042
Vanadium	.11
Vanadium	.006
Zinc	.117
Zinc	2.2

8.7
8

Instrument Detection Limits

Job Number: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: AGICPMS1	Effective Date: 05/30/18
--------------------------------	---------------------------------

Analyte	IDL ug/l

The above applies to the following instrument runs:
MA44637

Instrument Detection Limits

Job Number: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: LEEMANHG9	Effective Date: 05/30/18
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Analyte	IDL ug/l
Mercury	.0521

The above applies to the following instrument runs:
MA44634

Instrument Detection Limits

Job Number: JC67675
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: SSTRACE4	Effective Date: 05/29/18
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Analyte	IDL ug/l
Aluminum	8.7
Antimony	1.3
Arsenic	1.2
Barium	.4
Beryllium	.1
Bismuth	1.7
Boron	1.5
Cadmium	.2
Calcium	3.6
Chromium	.5
Cobalt	.4
Copper	.6
Iron	2.3
Lead	1.4
Lithium	1.9
Magnesium	24.3
Manganese	.1
Molybdenum	.3
Nickel	.3
Phosphorus	1.4
Potassium	40.5
Selenium	3.6
Silicon	1.9
Silver	.4
Sodium	17
Sulfur	4.1
Strontium	.1
Thallium	1.9
Tin	1.1
Titanium	.3
Tungsten	1.2
Vanadium	.4
Zinc	.2
Zirconium	.2

The above applies to the following instrument runs:
MA44646

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Instrument Linear Ranges

Job Number: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: AGICPMS1

Effective Date: 09/26/17

Analyte	Linear Range ug/l
Aluminum	100000
Aluminum	100000
Antimony	500
Arsenic	500
Arsenic	500
Barium	500
Beryllium	500
Boron	500
Cadmium	500
Cadmium	500
Calcium	100000
Chromium	500
Chromium	500
Cobalt	500
Cobalt	500
Copper	500
Copper	500
Iron	100000
Iron	100000
Lithium	100
Lead	500
Magnesium	100000
Magnesium	100000
Manganese	500
Manganese	500
Molybdenum	500
Nickel	500
Nickel	500
Potassium	100000
Potassium	100000
Selenium	250
Selenium	250
Silver	100
Sodium	100000
Sodium	100000
Strontium	500
Thallium	500
Tin	500
Tin	500
Titanium	500
Titanium	500
Tungsten	100
Uranium	100
Vanadium	500
Vanadium	500
Zinc	500

Instrument Linear Ranges

Job Number: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: AGICPMS1	Effective Date: 09/26/17
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Analyte	Linear Range ug/l
Zinc	500

The above applies to the following instrument runs:
MA44637

Instrument Linear Ranges

Job Number: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: LEEMANHG9	Effective Date: 02/26/18
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Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA44634

Instrument Linear Ranges

Job Number: JC67675

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: SSTRACE4

Effective Date: 12/04/17

Analyte	Linear Range ug/l
Aluminum	600000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Bismuth	10000
Boron	10000
Cadmium	10000
Calcium	300000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	300000
Lead	10000
Lithium	10000
Magnesium	600000
Manganese	10000
Molybdenum	10000
Nickel	10000
Palladium	10000
Phosphorus	50000
Potassium	300000
Selenium	10000
Silicon	50000
Silver	1250
Sodium	300000
Sulfur	100000
Strontium	10000
Thallium	10000
Tin	10000
Titanium	10000
Tungsten	10000
Vanadium	10000
Zinc	10000
Zirconium	10000

The above applies to the following instrument runs:
MA44646

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: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN81422	5.0	0.0	mg/l	250	248	99.2	90-110%
Alkalinity, Total as CaCO3	GN81422			mg/l	50	53.3	106.6	90-110%
Bromide	GP14027/GN81878	0.50	0.0	mg/l	1	1.03	103.0	90-110%
Chemical Oxygen Demand	GP13708/GN81286	20	0.0	mg/l	50.00	47.5	95.0	90-110%
Chemical Oxygen Demand	GP13708/GN81286	20	0.0	mg/l				
Chloride	GP14027/GN81878	2.0	0.0	mg/l	10	9.60	96.0	90-110%
Chloride	GP14027/GN81976	2.0	0.0	mg/l	80	77.6	97.0	90-110%
Hardness, Total as CaCO3	GN81231	4.0	0.0	mg/l	160	160	100.0	80-120%
Hardness, Total as CaCO3	GN81231			mg/l	160	162	101.3	80-120%
Hardness, Total as CaCO3	GN81231			mg/l	80	79.8	99.8	80-120%
Hardness, Total as CaCO3	GN81231			mg/l	80	79.8	99.8	80-120%
Nitrogen, Ammonia	GP13706/GN81287	0.20	0.0	mg/l	1	0.994	99.4	80-120%
Solids, Total Dissolved	GN81240	10	0.0	mg/l				
Sulfate	GP14027/GN81878	2.0	0.0	mg/l	10	9.81	98.1	90-110%
Total Organic Carbon	GP13784/GN81398	1.0	0.0	mg/l	10	10.6	106.0	90-110%

Associated Samples:

Batch GN81231: JC67675-2
Batch GN81240: JC67675-2
Batch GN81422: JC67675-2
Batch GP13706: JC67675-2
Batch GP13708: JC67675-2
Batch GP13784: JC67675-2
Batch GP14027: JC67675-2
(*) Outside of QC limits

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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN81422	JC67506-2	mg/l	441	436	1.1	0-10%
Bromide	GP14027/GN81878	JC67675-2	mg/l	0.52	0.50	3.9	0-20%
Bromide	GP14027/GN81878	JC67675-2	mg/l	0.14	0.50	3.9	0-20%
Chemical Oxygen Demand	GP13708/GN81286	JC67577-1	mg/l	30.0	30.0	0.0	0-25%
Chloride	GP14027/GN81976	JC67675-2	mg/l	151	151	0.0	0-20%
Hardness, Total as CaCO3	GN81231	JC67672-2	mg/l	101	98.8	2.2	0-10%
Nitrogen, Ammonia	GP13706/GN81287	JC67644-1	mg/l	0.0	0.0	0.0	0-33%
Solids, Total Dissolved	GN81240	JC67673-3	mg/l	14.0	14.0	0.0	0-16%
Sulfate	GP14027/GN81878	JC67675-2	mg/l	6.5	5.5	0.0	0-20%
Sulfate	GP14027/GN81878	JC67675-2	mg/l	5.5	5.5	0.0	0-20%

Associated Samples:

Batch GN81231: JC67675-2
Batch GN81240: JC67675-2
Batch GN81422: JC67675-2
Batch GP13706: JC67675-2
Batch GP13708: JC67675-2
Batch GP14027: JC67675-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP14027/GN81878	JC67675-2	mg/l	0.52	1	1.6	108.0	80-120%
Bromide	GP14027/GN81878	JC67675-2	mg/l	0.14	1	1.6	108.0	80-120%
Chemical Oxygen Demand	GP13708/GN81286	JC67577-1	mg/l	30.0	50.00	72.5	85.0	55-133%
Chloride	GP14027/GN81976	JC67675-2	mg/l	151	80	224	91.3	80-120%
Hardness, Total as CaCO3	GN81231	JC67672-2	mg/l	101	160	266	103.1	67-130%
Nitrogen, Ammonia	GP13706/GN81287	JC67644-1	mg/l	0.0	1	1.0	100.0	75-131%
Sulfate	GP14027/GN81878	JC67675-2	mg/l	6.5	10	14.7	92.0	80-120%
Sulfate	GP14027/GN81878	JC67675-2	mg/l	5.5	10	14.7	92.0	80-120%
Total Organic Carbon	GP13784/GN81398	JC67675-2	mg/l	2.5	10	12.4	99.0	50-150%

Associated Samples:

Batch GN81231: JC67675-2
Batch GP13706: JC67675-2
Batch GP13708: JC67675-2
Batch GP13784: JC67675-2
Batch GP14027: JC67675-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Ammonia	GP13706/GN81287	JC67644-1	mg/l	0.0	1	1.0	0.0	14%
Total Organic Carbon	GP13784/GN81398	JC67675-2	mg/l	2.5	10	12.8	3.2	11%

Associated Samples:

Batch GP13706: JC67675-2

Batch GP13784: JC67675-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061318W1.AMN

Date Analyzed: 06/13/18

Methods: SM4500NH3 H-11LACHAT

Analyst: BM

Run ID: GN81287

Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:46	GN81287-STD1	1		STDA
09:48	GN81287-STD2	1		STDB
09:49	GN81287-STD3	1		STDC
09:51	GN81287-STD4	1		STDD
09:52	GN81287-STD5	1		STDE
09:54	GN81287-STD6	1		STDF
09:55	GN81287-STD7	1		STDG
09:56	GN81287-ICV1	1		
09:58	GN81287-ICB1	1		
09:59	GN81287-CCV1	1		
10:01	GN81287-CCB1	1		
10:02	GP13705-MB1	1		
10:04	GP13705-B1	1		
10:05	GP13705-S1	1		Over calibration curve. See rerun at dilution.
10:06	GP13705-MSD1	1		Over calibration curve. See rerun at dilution.
10:08	GP13705-D1	1		
10:09	JC67508-1	1		(sample used for QC only; not part of login JC67675)
10:11	ZZZZZZ	1		
10:12	ZZZZZZ	1		
10:14	ZZZZZZ	1		
10:15	ZZZZZZ	1		
10:16	GN81287-CCVA1	1		
10:18	GN81287-CCB2	1		
10:19	ZZZZZZ	1		
10:21	ZZZZZZ	1		
10:22	ZZZZZZ	1		
10:24	ZZZZZZ	1		
10:25	ZZZZZZ	1		
10:27	ZZZZZZ	1		
10:28	ZZZZZZ	1		
10:29	ZZZZZZ	1		
10:31	ZZZZZZ	1		
10:32	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061318W1.AMN

Date Analyzed: 06/13/18

Methods: SM4500NH3 H-11LACHAT

Analyst: BM

Run ID: GN81287

Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:34	GN81287-CCV2	1		
10:35	GN81287-CCB3	1		
10:37	ZZZZZZ	1		
10:38	ZZZZZZ	1		
10:39	ZZZZZZ	1		
10:41	ZZZZZZ	1		
10:42	ZZZZZZ	1		
10:44	GP13706-MB1	1		
10:45	GP13706-B1	1		
10:47	GP13706-S1	1		
10:48	GP13706-MSD1	1		
10:50	GP13706-D1	1		
10:51	GN81287-CCVA2	1		
10:52	GN81287-CCB4	1		
10:54	ZZZZZZ	1		
10:55	ZZZZZZ	1		
10:57	ZZZZZZ	1		
10:58	ZZZZZZ	1		
11:00	JC67644-1	1		(sample used for QC only; not part of login JC67675)
11:01	ZZZZZZ	1		
11:03	ZZZZZZ	1		
11:04	ZZZZZZ	1		
11:05	ZZZZZZ	1		
11:07	ZZZZZZ	1		
11:08	GN81287-CCV3	1		
11:10	GN81287-CCB5	1		
11:11	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:14	ZZZZZZ	1		
11:16	ZZZZZZ	1		
11:17	JC67675-2	1		
11:18	ZZZZZZ	1		
11:20	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061318W1.AMN

Date Analyzed: 06/13/18

Methods: SM4500NH3 H-11LACHAT

Analyst: BM

Run ID: GN81287

Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:21	ZZZZZZ	1		
11:23	ZZZZZZ	1		
11:24	ZZZZZZ	1		
11:26	GN81287-CCVA3	1		
11:27	GN81287-CCB6	1		
11:28	GP13705-S1	2		
11:30	GP13705-MSD1	2		
11:31	ZZZZZZ	10		
11:33	ZZZZZZ	20		
11:34	ZZZZZZ	10		
11:36	ZZZZZZ	20		
11:37	ZZZZZZ	10		
11:38	ZZZZZZ	20		
11:40	ZZZZZZ	10		
11:41	ZZZZZZ	20		
11:43	GN81287-CCV4	1		
11:44	GN81287-CCB7	1		
11:46	ZZZZZZ	10		
11:47	ZZZZZZ	20		
11:48	GN81287-CCVA4	1		
11:50	GN81287-CCB8	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061318W1.AMN Date Analyzed: 06/13/18 Methods: SM4500NH3 H-11LACHAT
Run ID: GN81287 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN81287-ICV1	Nitrogen, Ammonia	1.52	0.20	0.14	1.5	101.3	90-110
GN81287-ICB1	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81287-CCV1	Nitrogen, Ammonia	1.51	0.20	0.14	1.5	100.7	90-110
GN81287-CCB1	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81287-CCVA1	Nitrogen, Ammonia	2.96	0.20	0.14	3	98.7	
GN81287-CCB2	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81287-CCV2	Nitrogen, Ammonia	1.50	0.20	0.14	1.5	100.0	90-110
GN81287-CCB3	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81287-CCVA2	Nitrogen, Ammonia	2.95	0.20	0.14	3	98.3	
GN81287-CCB4	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81287-CCV3	Nitrogen, Ammonia	1.48	0.20	0.14	1.5	98.7	90-110
GN81287-CCB5	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81287-CCVA3	Nitrogen, Ammonia	2.93	0.20	0.14	3	97.7	
GN81287-CCB6	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81287-CCV4	Nitrogen, Ammonia	1.47	0.20	0.14	1.5	98.0	90-110
GN81287-CCB7	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81287-CCVA4	Nitrogen, Ammonia	2.93	0.20	0.14	3	97.7	
GN81287-CCB8	Nitrogen, Ammonia	0.14 U	0.20	0.14			

(!) Outside of QC limits

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: E80615W1.TXT Date Analyzed: 06/15/18 Methods: SW846 9060A
Analyst: CD Run ID: GN81398
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:19	GN81398-STD1	1		STDA
13:41	GN81398-STD2	1		STDB
13:55	GN81398-STD3	1		STDC
14:07	GN81398-STD4	1		STDD
14:24	GN81398-STD5	1		STDE
14:37	GN81398-STD6	1		STDF
14:50	GN81398-STD7	1		STDG
15:04	GN81398-STD8	1		STDH
08:16	ZZZZZZ	1		
08:36	GN81398-CRI1	1		
08:50	GN81398-HSTD1	1		
09:05	GN81398-ICV1	1		
09:40	GN81398-ICB1	1		
09:58	GN81398-CCV1	1		
10:18	GN81398-CCB1	1		
10:35	ZZZZZZ	1		
10:59	GP13783-MB1	1		
11:26	GP13783-B1	1		
11:39	ZZZZZZ	1		
11:57	JC67803-4	1		(sample used for QC only; not part of login JC67675)
12:10	GP13783-S1	1		
12:24	GP13783-MSD1	1		
12:38	GN81398-CCVA1	1		
12:53	GN81398-CCB2	1		
13:12	ZZZZZZ	1		
13:48	ZZZZZZ	1		
14:26	ZZZZZZ	1		
14:51	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:25	ZZZZZZ	1		
15:37	ZZZZZZ	1		
15:55	ZZZZZZ	1		
16:08	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: E80615W1.TXT Date Analyzed: 06/15/18 Methods: SW846 9060A
Analyst: CD Run ID: GN81398
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:23	GN81398-CCV2	1		
16:37	GN81398-CCB3	1		
16:55	GP13784-MB1	1		
17:11	GP13784-B1	1		
17:26	JC67675-2	1		average of 5 injections
17:53	GP13784-S1	1		
18:07	GP13784-MSD1	1		
18:21	ZZZZZZ	1		
18:37	ZZZZZZ	1		
19:08	ZZZZZZ	1		
19:33	GN81398-CCVA2	1		
19:50	GN81398-CCB4	1		
20:04	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: E80615W1.TXT Date Analyzed: 06/15/18 Methods: SW846 9060A
Run ID: GN81398 Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN81398-CRI1	Total Organic Carbon	0.903	1.0	0.60	1	90.3	70-130
GN81398-HSTD1	Total Organic Carbon	50.6	1.0	0.60	50	101.2	90-110
GN81398-ICV1	Total Organic Carbon	19.8	1.0	0.60	20	99.0	90-110
GN81398-ICB1	Total Organic Carbon	0.60 U	1.0	0.60			
GN81398-CCV1	Total Organic Carbon	24.8	1.0	0.60	25	99.2	90-110
GN81398-CCB1	Total Organic Carbon	0.60 U	1.0	0.60			
GN81398-CCVA1	Total Organic Carbon	50.3	1.0	0.60	50	100.6	
GN81398-CCB2	Total Organic Carbon	0.60 U	1.0	0.60			
GN81398-CCV2	Total Organic Carbon	25.0	1.0	0.60	25	100.0	90-110
GN81398-CCB3	Total Organic Carbon	0.60 U	1.0	0.60			
GN81398-CCVA2	Total Organic Carbon	51.1	1.0	0.60	50	102.2	
GN81398-CCB4	Total Organic Carbon	0.60 U	1.0	0.60			

(!) Outside of QC limits

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118062401.TXT

Date Analyzed: 06/24/18

Methods: EPA 300/SW846 9056A

Analyst: KS

Run ID: GN81878

Parameters: Bromide,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:33	GN81878-STD1	1		Manually integrated chrom. peaks reviewed and verified to comply with criteria of Accutest SOP EQA044.
18:05	GN81878-STD2	1		STDB
18:32	GN81878-STD3	1		STDC
19:00	GN81878-STD4	1		STDD
19:28	GN81878-STD5	1		STDE
19:56	GN81878-STD6	1		STDF
15:30	GN81878-ICV1	1		
16:47	GN81878-CCV1	1		
17:14	GN81878-CCB1	1		
18:17	GP14027-MB1	1		
18:45	GP14027-B1	1		
19:12	ZZZZZZ	1		
19:40	ZZZZZZ	1		
20:08	ZZZZZZ	1		
20:36	ZZZZZZ	1		
21:04	ZZZZZZ	1		
21:32	ZZZZZZ	1		
22:00	JC67646-10	1		(sample used for QC only; not part of login JC67675)
22:28	GP14027-S2	1		CCV fail for so4
22:56	GN81878-CCV2	1		
23:24	GN81878-CCB2	1		
23:52	ZZZZZZ	1		
00:20	ZZZZZZ	1		
00:47	ZZZZZZ	1		
01:15	ZZZZZZ	1		
01:43	ZZZZZZ	1		
02:11	ZZZZZZ	1		
02:39	ZZZZZZ	1		
03:07	ZZZZZZ	1		
03:35	ZZZZZZ	1		
04:03	GN81878-CCV3	1		
04:31	GN81878-CCB3	1		
04:59	JC67675-2	1		Over calibration curve. See rerun at dilution for chl. reporting for so4 and bro

9.7
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118062401.TXT

Date Analyzed: 06/24/18

Methods: EPA 300/SW846 9056A

Analyst: KS

Run ID: GN81878

Parameters: Bromide,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:27	GP14027-D1	1		Over calibration curve. See rerun at dilution for chl. reporting for so4 and bro
05:55	GP14027-S1	1		Over calibration curve. See rerun at dilution for chl. reporting for so4 and bro
06:22	GN81878-CCV4	1		
06:50	GN81878-CCB4	1		
07:18	GP13963-MB2	1		
07:46	GP13963-B2	1		
08:14	ZZZZZZ	4		
08:42	ZZZZZZ	3		
09:10	ZZZZZZ	200		
10:07	ZZZZZZ	3		
10:35	ZZZZZZ	3		
11:03	ZZZZZZ	2		
11:31	ZZZZZZ	4		
11:58	ZZZZZZ	2		
12:26	ZZZZZZ	3		
12:54	ZZZZZZ	2		
13:22	GN81878-CCV5	1		
13:50	GN81878-CCB5	1		
14:35	ZZZZZZ	1		
15:02	ZZZZZZ	1		
15:39	JC67646-10	1		(sample used for QC only; not part of login JC67675)
16:16	GP14027-S2	1		Over calibration curve. See rerun at dilution.
16:44	ZZZZZZ	1		
17:12	ZZZZZZ	1		
17:40	ZZZZZZ	1		
18:08	ZZZZZZ	1		
18:36	ZZZZZZ	1		
19:03	ZZZZZZ	1		
19:31	GN81878-CCV6	1		
19:59	GN81878-CCB6	1		

Refer to raw data for calibration curve and standards.

9.7
6

Instrument QC Summary
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118062401.TXT

Date Analyzed: 06/24/18
Run ID: GN81878

Methods: EPA 300/SW846 9056A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN81878-ICV1	Bromide	1.02	0.50	0.060	1	102.0	90-110
GN81878-ICV1	Sulfate	9.85	2.0	0.53	10	98.5	90-110
GN81878-CCV1	Bromide	2.65	0.50	0.060	2.5	106.0	90-110
GN81878-CCV1	Sulfate	12.1	2.0	0.53	12.5	96.8	90-110
GN81878-CCB1	Bromide	0.060 U	0.50	0.060			
GN81878-CCB1	Sulfate	0.53 U	2.0	0.53			
GN81878-CCV2	Bromide	2.45	0.50	0.060	2.5	98.0	90-110
GN81878-CCV2	Sulfate	11.2	2.0	0.53	12.5	89.6!(a)	90-110
GN81878-CCB2	Bromide	0.060 U	0.50	0.060			
GN81878-CCB2	Sulfate	0.53 U	2.0	0.53			
GN81878-CCV3	Bromide	2.55	0.50	0.060	2.5	102.0	90-110
GN81878-CCV3	Sulfate	11.4	2.0	0.53	12.5	91.2	90-110
GN81878-CCB3	Bromide	0.060 U	0.50	0.060			
GN81878-CCB3	Sulfate	0.53 U	2.0	0.53			
GN81878-CCV4	Bromide	2.56	0.50	0.060	2.5	102.4	90-110
GN81878-CCV4	Sulfate	11.3	2.0	0.53	12.5	90.4	90-110
GN81878-CCB4	Bromide	0.060 U	0.50	0.060			
GN81878-CCB4	Sulfate	0.53 U	2.0	0.53			
GN81878-CCV5	Bromide	2.63	0.50	0.060	2.5	105.2	90-110
GN81878-CCV5	Sulfate	11.4	2.0	0.53	12.5	91.2	90-110
GN81878-CCB5	Bromide	0.060 U	0.50	0.060			
GN81878-CCB5	Sulfate	0.53 U	2.0	0.53			
GN81878-CCV6	Bromide	2.47	0.50	0.060	2.5	98.8	90-110
GN81878-CCV6	Sulfate	11.7	2.0	0.53	12.5	93.6	90-110
GN81878-CCB6	Bromide	0.060 U	0.50	0.060			
GN81878-CCB6	Sulfate	0.53 U	2.0	0.53			

(!) Outside of QC limits

(a) No samples reported for this test in the area associated with this QC.

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 318062602.TXT
Analyst: NV
Parameters: Chloride

Date Analyzed: 06/26/18
Run ID: GN81976
Methods: EPA 300/SW846 9056A

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:54	GN81976-STD1	1		Manually integrated chrom. peaks reviewed and verified to comply with criteria of Accutest SOP EQA044. retention time: F=3.031 min CHL=4.471 min SO4= 6.801 min
18:18	GN81976-STD2	1		
18:42	GN81976-STD3	1		STDC
19:06	GN81976-STD4	1		STDCD
19:30	GN81976-STD5	1		STDD
19:54	GN81976-STD6	1		STDDE
20:18	GN81976-STD7	1		STDE
20:42	GN81976-STD8	1		STDF
21:06	GN81976-STD9	1		STDG
14:36	GN81976-ICV1	1		
15:00	GN81976-CCV1	1		
15:24	GN81976-CCB1	1		
15:48	GP14062-MB1	1		
15:48	GP14016-MB3	1		
15:48	GP14027-MB3	1		
15:48	GP14003-MB3	1		
16:12	ZZZZZZ	1		
16:36	ZZZZZZ	1		
16:59	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:47	GP14062-D1	1		
18:11	JC68371-1	1		(sample used for QC only; not part of login JC67675)
18:36	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:27	ZZZZZZ	1		
19:51	GN81976-CCV2	1		
20:14	GN81976-CCB2	1		
20:38	ZZZZZZ	1		
21:02	ZZZZZZ	1		
21:28	ZZZZZZ	1		
21:52	ZZZZZZ	1		
22:16	GN81976-CCV3	1		
22:40	GN81976-CCB3	1		

8.6
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 318062602.TXT Date Analyzed: 06/26/18 Methods: EPA 300/SW846 9056A
Analyst: NV Run ID: GN81976
Parameters: Chloride

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:04	GP14063-MB1	1		
23:28	ZZZZZZ	1		
23:53	GP14063-S1	1		
00:20	GP14063-D1	1		
00:47	JC68527-1	1		(sample used for QC only; not part of login JC67675)
01:12	GP14063-S2	1		
01:38	JC68527-2	1		(sample used for QC only; not part of login JC67675)
02:02	ZZZZZZ	1		
02:28	ZZZZZZ	1		
02:55	ZZZZZZ	1		
03:20	GN81976-CCV4	1		
03:44	GN81976-CCB4	1		
04:11	ZZZZZZ	1		
04:36	ZZZZZZ	1		
05:01	ZZZZZZ	1		
05:26	ZZZZZZ	1		
05:52	ZZZZZZ	1		
06:16	ZZZZZZ	1		
06:40	ZZZZZZ	1		
07:04	ZZZZZZ	1		
07:31	ZZZZZZ	1		
07:56	ZZZZZZ	1		
08:25	GN81976-CCV5	1		
09:03	GN81976-CCB5	1		
09:28	GP14062-B1	1		
09:28	GP14016-B3	1		
09:28	GP14027-B3	1		
09:28	GP14003-B3	1		
09:52	ZZZZZZ	1		
10:24	ZZZZZZ	1		
10:49	ZZZZZZ	1		
11:15	ZZZZZZ	1		
11:41	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 318062602.TXT
Analyst: NV
Parameters: Chloride

Date Analyzed: 06/26/18
Run ID: GN81976
Methods: EPA 300/SW846 9056A

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:08	GP14062-S1	1		
12:34	ZZZZZZ	2		
13:34	GN81976-CCV6	1		
14:01	GN81976-CCB6	1		
14:57	GP14063-B1	1		
15:21	ZZZZZZ	1		
15:47	GP14027-S1	1		
16:12	GP14027-D1	1		
16:36	JC67675-2	1		
17:02	ZZZZZZ	1		
17:37	GN81976-CCV7	1		
18:03	GN81976-CCB7	1		
18:33	GP14065-MB1	1		
18:59	GP14065-B1	1		
19:23	ZZZZZZ	1		
19:48	GP14065-S1	1		
20:12	GP14065-D1	1		
20:38	JC67917-1	1		(sample used for QC only; not part of login JC67675)
21:03	GP14065-S2	1		
21:29	JC67917-2	1		(sample used for QC only; not part of login JC67675)
21:54	ZZZZZZ	1		
22:20	ZZZZZZ	1		
22:46	GN81976-CCV8	1		
23:10	GN81976-CCB8	1		
23:36	ZZZZZZ	1		
00:03	ZZZZZZ	1		
00:27	ZZZZZZ	1		
00:51	ZZZZZZ	1		
01:16	ZZZZZZ	1		
01:42	ZZZZZZ	1		
02:09	ZZZZZZ	1		
02:36	ZZZZZZ	1		
03:03	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 318062602.TXT Date Analyzed: 06/26/18 Methods: EPA 300/SW846 9056A
Analyst: NV Run ID: GN81976
Parameters: Chloride

Time	Sample Description	Dilution Factor	PS Recov	Comments
03:29	ZZZZZZ	1		
03:53	GN81976-CCV9	1		
04:19	GN81976-CCB9	1		
04:46	GP14132-MB1	1		
05:13	ZZZZZZ	1		
05:39	ZZZZZZ	1		
06:05	ZZZZZZ	1		
06:32	ZZZZZZ	1		
06:59	ZZZZZZ	10		
07:23	ZZZZZZ	10		
07:49	ZZZZZZ	3		
08:20	ZZZZZZ	4		
08:46	GN81976-CCV10	1		
09:13	GN81976-CCB10	1		
09:48	GP14022-MB2	1		
10:14	ZZZZZZ	1		
10:42	ZZZZZZ	5		
11:27	ZZZZZZ	1		
13:27	ZZZZZZ	1		
13:50	ZZZZZZ	1		
14:14	ZZZZZZ	1		
14:54	GN81976-CCV11	1		
15:18	GN81976-CCB11	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC67675
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 318062602.TXT

Date Analyzed: 06/26/18
Run ID: GN81976

Methods: EPA 300/SW846 9056A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN81976-ICV1	Chloride	99.7	2.0	0.070	100	99.7	90-110
GN81976-CCV1	Chloride	199	2.0	0.070	200	99.5	90-110
GN81976-CCB1	Chloride	-0.324	2.0	0.070			
GN81976-CCV2	Chloride	209	2.0	0.070	200	104.5	90-110
GN81976-CCB2	Chloride	-0.316	2.0	0.070			
GN81976-CCV3	Chloride	198	2.0	0.070	200	99.0	90-110
GN81976-CCB3	Chloride	-0.318	2.0	0.070			
GN81976-CCV4	Chloride	199	2.0	0.070	200	99.5	90-110
GN81976-CCB4	Chloride	-0.272	2.0	0.070			
GN81976-CCV5	Chloride	192	2.0	0.070	200	96.0	90-110
GN81976-CCB5	Chloride	-0.324	2.0	0.070			
GN81976-CCV6	Chloride	198	2.0	0.070	200	99.0	90-110
GN81976-CCB6	Chloride	-0.326	2.0	0.070			
GN81976-CCV7	Chloride	198	2.0	0.070	200	99.0	90-110
GN81976-CCB7	Chloride	-0.323	2.0	0.070			
GN81976-CCV8	Chloride	198	2.0	0.070	200	99.0	90-110
GN81976-CCB8	Chloride	-0.323	2.0	0.070			
GN81976-CCV9	Chloride	199	2.0	0.070	200	99.5	90-110
GN81976-CCB9	Chloride	-0.322	2.0	0.070			
GN81976-CCV10	Chloride	198	2.0	0.070	200	99.0	90-110
GN81976-CCB10	Chloride	-0.321	2.0	0.070			
GN81976-CCV11	Chloride	198	2.0	0.070	200	99.0	90-110
GN81976-CCB11	Chloride	-0.329	2.0	0.070			

(!) Outside of QC limits

8.6
6

Misc. Forms

Custody Documents and Other Forms

(SGS Orlando, FL)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle

2235 Route 130, Dayton, NJ 08810
 TEL: 732-329-0200 FAX: 732-329-3499/3480

Client / Reporting Information Company Name: SGS North America Inc. Street Address: 2235 Route 130 City: Dayton NJ 08810 Project Contact: kristin.degraw@sgs.com Phone #: 732-329-0200 Sampler(s) Name(s): SH			Project Information Project Name: OBGNYA: ILI - Region 1, Denton Avenue Landfill Street: _____ Billing Information (if different from Report to): Company Name: _____ Project #: _____ Client Purchase Order #: _____ Project Manager: _____			Requested Analysis (see TEST CODE sheet) LOIDSGNY21				Matrix Codes DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank			
Turnaround Time (Business days): <input type="checkbox"/> Std, 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input checked="" type="checkbox"/> other 14 <small>Emergency & Rush T/A data available via eblink</small>			Approved By (SGS PM) / Date: _____ _____			Data Deliverable Information <input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> NYASP Category A <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NYASP Category B <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> State Forms <input type="checkbox"/> NJ Reduced <input type="checkbox"/> EDD Format <input type="checkbox"/> Commercial "C" <input checked="" type="checkbox"/> Other NYASPB <small>Commercial "A" = Results Only Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data</small>				Comments / Special Instructions			
Sample Custody must be documented below each time samples change possession, including courier delivery.													
Relinquished by Sampler: Date Time: _____ Received By: 1 Date Time: _____ Relinquished by: Date Time: _____ Received By: 5 Date Time: _____	1700 6/12/18 FEDEX		Relinquished By: Date Time: _____ Received By: 2 Date Time: _____ Relinquished By: Date Time: _____ Received By: 4 Date Time: _____	6/13/18 6/13/18		Relinquished By: Date Time: _____ Received By: _____	Relinquished By: Date Time: _____ Received By: _____						
Custody Seal # 620 <input type="checkbox"/> Intact <input type="checkbox"/> Not intact		Preserved where applicable <input type="checkbox"/>		On Ice <input type="checkbox"/>		Cooler Temp. <input type="checkbox"/>							

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SGS Sample Receipt Summary

Job Number: JC67675

Client: SGS-DAYTON

Project: OBGNYA-DENTON LANDFILL

Date / Time Received: 6/13/2018 9:00:00 AM

Delivery Method: FED EX

Airbill #'s: 563393517919

Therm ID: IR 1;	Therm CF: 0.4;	# of Coolers: 1
Cooler Temps (Raw Measured) °C: Cooler 1: (2.6);		
Cooler Temps (Corrected) °C: Cooler 1: (3.0);		

Cooler Information

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Temp criteria achieved	<input checked="" type="checkbox"/>		<input type="checkbox"/>
4. Cooler temp verification	<u>IR Gun</u>		
5. Cooler media	<u>Ice (Bag)</u>		

Sample Information

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Sample labels present on bottles	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Samples preserved properly	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Sufficient volume/containers recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Condition of sample	<u>Intact</u>			
5. Sample recvd within HT	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
6. Dates/Times/IDs on COC match Sample Label	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
7. VOCs have headspace	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
9. Compositing instructions clear	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Voa Soil Kits/Jars received past 48hrs?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. % Solids Jar received?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Residual Chlorine Present?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Trip Blank Information

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>W</u>	<u>or</u>	<u>S</u>	<u>N/A</u>
3. Type Of TB Received	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Misc. Information

Number of Encores: 25-Gram 5-Gram
 Test Strip Lot #'s: pH 0-3 230315
 Residual Chlorine Test Strip Lot #:

Number of 5035 Field Kits:
 pH 10-12 219813A

Number of Lab Filtered Metals:
 Other: (Specify)

Comments

SM001
Rev. Date 05/24/17

Technician: HEATHERW

Date: 6/13/2018 9:00:00 AM

Reviewer: BR

Date: 6/13/2018

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JC67675: Chain of Custody

Page 2 of 2

Internal Sample Tracking Chronicle

SGS Dayton, NJ

Job No: JC67675

ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill
 Project No: 450619

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC67675-2 Collected: 07-JUN-18 12:15 By: SH Received: 08-JUN-18 By: HW 1-NAS-002-001-02						
JC67675-2	EPA 537M BY ID	20-JUN-18 18:59	NG	15-JUN-18 AF		LCID537NY21
JC67675-2	EPA 537M BY ID	29-JUN-18 18:01	NG	27-JUN-18 AF		LCID537NY21
JC67675-4 Collected: 07-JUN-18 12:20 By: SH Received: 08-JUN-18 By: HW 1-NAS-002-001-04						
JC67675-4	EPA 537M BY ID	20-JUN-18 19:20	NG	15-JUN-18 AF		LCID537NY21
JC67675-6 Collected: 07-JUN-18 13:35 By: SH Received: 08-JUN-18 By: HW 1-NAS-002-001-06						
JC67675-6	EPA 537M BY ID	20-JUN-18 19:40	NG	15-JUN-18 AF		LCID537NY21

10.2 10

MS Semi-volatiles

QC Data Summaries

(SGS Orlando, FL)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Injection Standard Area Summaries
- Isotope Dilution Standard Recovery Summaries
- Initial and Continuing Calibration Summaries



Method Blank Summary

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70507-MB	2Q15640.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC67675-2, JC67675-4, JC67675-6

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0080	0.0020	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0040	0.0015	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.0010	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.0010	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.0010	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.0010	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.0010	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.0010	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.0015	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.0010	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.0010	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.0010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.0015	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.0010	ug/l	
754-91-6	PFOSA	ND	0.0040	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.020	0.0040	ug/l	
2991-50-6	EtFOSAA	ND	0.020	0.0040	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0080	0.0020	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0080	0.0020	ug/l	

CAS No.	ID Standard Recoveries	Limits	
	13C4-PFBA	104%	30-140%
	13C5-PFPeA	104%	40-140%
	13C5-PFHxA	110%	50-150%
	13C4-PFHpA	113%	50-150%
	13C8-PFOA	123%	50-150%
	13C9-PFNA	117%	50-150%
	13C6-PFDA	108%	50-150%
	13C7-PFUnDA	96%	50-150%
	13C2-PFDoDA	78%	50-150%
	13C2-PFTeDA	71%	40-150%
	13C3-PFBS	114%	50-150%

11.1.1
11

Method Blank Summary

Job Number: JC67675

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70507-MB	2Q15640.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC67675-2, JC67675-4, JC67675-6

CAS No.	ID Standard Recoveries	Limits
	13C3-PFHxS	123% 50-150%
	13C8-PFOS	117% 50-150%
	13C8-FOSA	50% 30-140%
	d3-MeFOSAA	105% 50-150%
	13C2-6:2FTS	127% 50-150%
	13C2-8:2FTS	88% 50-150%

Instrument Blank

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q278-IBLK	2Q15717.D	1	06/20/18	NG	n/a	n/a	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M QSM5.1 B-15

JC67675-2, JC67675-4, JC67675-6

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.015	0.0038	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0077	0.0029	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0077	0.0019	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0077	0.0019	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0077	0.0019	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0077	0.0019	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0077	0.0019	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0077	0.0019	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0077	0.0029	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0077	0.0019	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0077	0.0019	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0077	0.0019	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0077	0.0019	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0077	0.0019	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.015	0.0038	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0077	0.0019	ug/l	
754-91-6	PFOSA	ND	0.0077	0.0019	ug/l	
2355-31-9	MeFOSAA	ND	0.038	0.0077	ug/l	
2991-50-6	EtFOSAA	ND	0.038	0.0077	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.015	0.0038	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.015	0.0038	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	93% 50-150%
	13C5-PFPeA	92% 50-150%
	13C5-PFHxA	94% 50-150%
	13C4-PFHpA	92% 50-150%
	13C8-PFOA	96% 50-150%
	13C9-PFNA	93% 50-150%
	13C6-PFDA	93% 50-150%
	13C7-PFUnDA	88% 50-150%
	13C2-PFDoDA	84% 50-150%
	13C2-PFTeDA	84% 50-150%
	13C3-PFBS	91% 50-150%

11.12 11

Instrument Blank

Job Number: JC67675

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q278-IBLK	2Q15717.D	1	06/20/18	NG	n/a	n/a	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M QSM5.1 B-15

JC67675-2, JC67675-4, JC67675-6

CAS No.	ID Standard Recoveries	Limits
	13C3-PFHxS	94% 50-150%
	13C8-PFOS	92% 50-150%
	13C8-FOSA	96% 50-150%
	d3-MeFOSAA	100% 50-150%
	13C2-4:2FTS	88% 50-150%
	13C2-6:2FTS	92% 50-150%
	13C2-8:2FTS	86% 50-150%

Instrument Blank

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q277-IBLK	2Q15582.D	1	06/18/18	NG	n/a	n/a	S2Q277

The QC reported here applies to the following samples:

Method: EPA 537M QSM5.1 B-15

OP70507-BS, OP70507-MS, OP70507-MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.015	0.0038	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0077	0.0029	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0077	0.0019	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0077	0.0019	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0077	0.0019	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0077	0.0019	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0077	0.0019	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0077	0.0019	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0077	0.0029	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0077	0.0019	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0077	0.0019	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0077	0.0019	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0077	0.0019	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0077	0.0019	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.015	0.0038	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0077	0.0019	ug/l	
754-91-6	PFOSA	ND	0.0077	0.0019	ug/l	
2355-31-9	MeFOSAA	ND	0.038	0.0077	ug/l	
2991-50-6	EtFOSAA	ND	0.038	0.0077	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.015	0.0038	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.015	0.0038	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	90% 50-150%
	13C5-PFPeA	91% 50-150%
	13C5-PFHxA	91% 50-150%
	13C4-PFHpA	92% 50-150%
	13C8-PFOA	95% 50-150%
	13C9-PFNA	91% 50-150%
	13C6-PFDA	89% 50-150%
	13C7-PFUnDA	85% 50-150%
	13C2-PFDoDA	86% 50-150%
	13C2-PFTeDA	86% 50-150%
	13C3-PFBS	91% 50-150%

11.1.3
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Instrument Blank

Job Number: JC67675

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q277-IBLK	2Q15582.D	1	06/18/18	NG	n/a	n/a	S2Q277

The QC reported here applies to the following samples:

Method: EPA 537M QSM5.1 B-15

OP70507-BS, OP70507-MS, OP70507-MSD

CAS No.	ID Standard Recoveries	Limits
	13C3-PFHxS	93% 50-150%
	13C8-PFOS	92% 50-150%
	13C8-FOSA	97% 50-150%
	d3-MeFOSAA	90% 50-150%
	13C2-4:2FTS	86% 50-150%
	13C2-6:2FTS	89% 50-150%
	13C2-8:2FTS	75% 50-150%

Blank Spike Summary

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70507-BS	2Q15639.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC67675-2, JC67675-4, JC67675-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.08	0.0802	100	70-130
2706-90-3	Perfluoropentanoic acid	0.08	0.0844	106	70-130
307-24-4	Perfluorohexanoic acid	0.08	0.0789	99	70-130
375-85-9	Perfluoroheptanoic acid	0.08	0.0839	105	71-130
335-67-1	Perfluorooctanoic acid	0.08	0.0816	102	74-130
375-95-1	Perfluorononanoic acid	0.08	0.0734	92	76-130
335-76-2	Perfluorodecanoic acid	0.08	0.0729	91	70-130
2058-94-8	Perfluoroundecanoic acid	0.08	0.0839	105	70-130
307-55-1	Perfluorododecanoic acid	0.08	0.0922	115	70-130
72629-94-8	Perfluorotridecanoic acid	0.08	0.0903	113	70-139
376-06-7	Perfluorotetradecanoic acid	0.08	0.0757	95	70-130
375-73-5	Perfluorobutanesulfonic acid	0.0708	0.0725	102	73-130
355-46-4	Perfluorohexanesulfonic acid	0.0728	0.0785	108	74-130
375-92-8	Perfluoroheptanesulfonic acid	0.076	0.0784	103	74-130
1763-23-1	Perfluorooctanesulfonic acid	0.074	0.0835	113	70-130
335-77-3	Perfluorodecanesulfonic acid	0.0772	0.0677	88	70-130
754-91-6	PFOSA	0.08	0.0984	123	70-131
2355-31-9	MeFOSAA	0.08	0.0831	104	70-130
2991-50-6	EtFOSAA	0.08	0.0854	107	70-130
27619-97-2	6:2 Fluorotelomer sulfonate	0.076	0.0917	121	70-133
39108-34-4	8:2 Fluorotelomer sulfonate	0.0768	0.0878	114	70-130

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	102%	30-140%
	13C5-PFPeA	104%	40-140%
	13C5-PFHxA	111%	50-150%
	13C4-PFHpA	114%	50-150%
	13C8-PFOA	123%	50-150%
	13C9-PFNA	120%	50-150%
	13C6-PFDA	111%	50-150%
	13C7-PFUnDA	95%	50-150%
	13C2-PFDoDA	82%	50-150%
	13C2-PFTeDA	80%	40-150%
	13C3-PFBS	114%	50-150%

* = Outside of Control Limits.

11.21
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Blank Spike Summary

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70507-BS	2Q15639.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC67675-2, JC67675-4, JC67675-6

CAS No.	ID Standard Recoveries	BSP	Limits
	13C3-PFHxS	123%	50-150%
	13C8-PFOS	121%	50-150%
	13C8-FOSA	51%	30-140%
	d3-MeFOSAA	107%	50-150%
	13C2-6:2FTS	133%	50-150%
	13C2-8:2FTS	95%	50-150%

11.2.1

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67675

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70507-MS	2Q15645.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277
OP70507-MSD	2Q15646.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277
JC67530-2	2Q15644.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC67675-2, JC67675-4, JC67675-6

CAS No.	Compound	JC67530-2 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
375-22-4	Perfluorobutanoic acid	0.00915	0.08	0.0931	105	0.0833	0.0961	104	3	70-130/30
2706-90-3	Perfluoropentanoic acid	0.0101	0.08	0.0960	107	0.0833	0.0914	98	5	70-130/30
307-24-4	Perfluorohexanoic acid	0.00930	0.08	0.0914	103	0.0833	0.0898	97	2	70-130/30
375-85-9	Perfluoroheptanoic acid	0.00565	0.08	0.0917	108	0.0833	0.0931	105	2	71-130/30
335-67-1	Perfluorooctanoic acid	0.00884	0.08	0.0897	101	0.0833	0.0937	102	4	74-130/30
375-95-1	Perfluorononanoic acid	ND	0.08	0.0777	97	0.0833	0.0772	93	1	76-130/30
335-76-2	Perfluorodecanoic acid	0.00110 J	0.08	0.0776	96	0.0833	0.0792	94	2	70-130/30
2058-94-8	Perfluoroundecanoic acid	ND	0.08	0.0855	107	0.0833	0.0885	106	3	70-130/30
307-55-1	Perfluorododecanoic acid	ND	0.08	0.0954	119	0.0833	0.0993	119	4	70-130/30
72629-94-8	Perfluorotridecanoic acid	ND	0.08	0.0927	116	0.0833	0.0942	113	2	70-139/30
376-06-7	Perfluorotetradecanoic acid	ND	0.08	0.0769	96	0.0833	0.0803	96	4	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.0104	0.0708	0.0824	102	0.0738	0.0846	101	3	73-130/30
355-46-4	Perfluorohexanesulfonic acid	0.00311	0.0728	0.0839	111	0.0758	0.0864	110	3	74-130/30
375-92-8	Perfluoroheptanesulfonic acid	ND	0.076	0.0913	120	0.0792	0.0921	116	1	74-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.0147	0.074	0.100	115	0.0771	0.103	115	3	70-130/30
335-77-3	Perfluorodecanesulfonic acid	ND	0.0772	0.0721	93	0.0804	0.0743	92	3	70-130/30
754-91-6	PFOSA	ND	0.08	0.100	125	0.0833	0.105	126	5	70-131/30
2355-31-9	MeFOSAA	ND	0.08	0.0850	106	0.0833	0.0872	105	3	70-130/30
2991-50-6	EtFOSAA	ND	0.08	0.0915	114	0.0833	0.0928	111	1	70-130/30
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.076	0.0958	126	0.0792	0.0963	122	1	70-133/30
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0768	0.0899	117	0.08	0.0937	117	4	70-130/30

CAS No.	ID Standard Recoveries	MS	MSD	JC67530-2	Limits
13C4-PFBA		63%	61%	65%	30-140%
13C5-PFPeA		63%	62%	65%	40-140%
13C5-PFHxA		68%	66%	70%	50-150%
13C4-PFHpA		76%	73%	77%	50-150%
13C8-PFOA		94%	89%	92%	50-150%
13C9-PFNA		101%	98%	103%	50-150%
13C6-PFDA		95%	91%	94%	50-150%
13C7-PFU _n DA		84%	80%	86%	50-150%
13C2-PFD _o DA		76%	74%	77%	50-150%
13C2-PFT _e DA		77%	76%	72%	40-150%
13C3-PFBS		74%	72%	74%	50-150%

* = Outside of Control Limits.

11.3.1 11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70507-MS	2Q15645.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277
OP70507-MSD	2Q15646.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277
JC67530-2	2Q15644.D	1	06/19/18	NG	06/15/18	OP70507	S2Q277

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC67675-2, JC67675-4, JC67675-6

CAS No.	ID Standard Recoveries	MS	MSD	JC67530-2	Limits
13C3-PFHxS		80%	79%	81%	50-150%
13C8-PFOS		97%	93%	97%	50-150%
13C8-FOSA		25% * b	11% * b	13% * a	30-140%
d3-MeFOSAA		98%	91%	100%	50-150%
13C2-6:2FTS		112%	109%	106%	50-150%
13C2-8:2FTS		90%	87%	82%	50-150%

(a) Outside control limits due to matrix interference. Confirmed by MS/MSD.

(b) Outside control limits.

11.3.1

11

* = Outside of Control Limits.

Injection Standard Area Summary

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Check Std: S2Q288-ICC288	Injection Date: 06/29/18
Lab File ID: 2Q16213.D	Injection Time: 15:33
Instrument ID: GCMS2Q	Method: EPA 537M BY ID

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal ^a	31980	6.53	15329	7.08
Check Std ^b	31980	6.53	15329	7.08
Upper Limit ^c	47970	7.53	22994	8.08
Lower Limit ^d	15990	5.53	7665	6.08

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
S2Q288-IBLK	31172	6.53	14587	7.08
ZZZZZZ	31326	6.54	13900	7.08
OP70681-BS				
OP70681-MB				
JC67675-2 ^e				
ZZZZZZ				
JC68285-1				
OP70681-MS				
OP70681-DUP				
JC68517-7				

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS

- (a) Initial Cal is: S2Q288-ICC288 2Q16213.D 06/29/18 15:33
- (b) Check Std Limit = -50 to + 50% of initial cal area.
- (c) Upper Limit = + 50% of initial standard area; Retention time + 1 minutes of check standard.
- (d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.
- (e) Confirmation run for surrogate recoveries.

11.4.1
11

Isotope Dilution Standard Recovery Summary

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: EPA 537M BY ID	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6	S7	S8
JC67675-2	2Q16221.D	84	78	82	82	89	93	82	73
JC67675-2	2Q15729.D	78	80	85	91	95	90	82	78
JC67675-4	2Q15730.D	92	94	95	101	107	93	79	76
JC67675-6	2Q15731.D	95	93	98	104	110	101	95	92
OP70507-BS	2Q15639.D	102	104	111	114	123	120	111	95
OP70507-MB	2Q15640.D	104	104	110	113	123	117	108	96
OP70507-MS	2Q15645.D	63	63	68	76	94	101	95	84
OP70507-MSD	2Q15646.D	61	62	66	73	89	98	91	80

Isotope Dilution Standards

Recovery Limits

S1 = 13C4-PFBA	30-140%
S2 = 13C5-PFPeA	40-140%
S3 = 13C5-PFHxA	50-150%
S4 = 13C4-PFHpA	50-150%
S5 = 13C8-PFOA	50-150%
S6 = 13C9-PFNA	50-150%
S7 = 13C6-PFDA	50-150%
S8 = 13C7-PFUnDA	50-150%

11.5.1
11

Isotope Dilution Standard Recovery Summary

Job Number: JC67675
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: EPA 537M BY ID	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S9	S10	S11	S12	S13	S14	S15	S16
JC67675-2	2Q16221.D	64	65	82	80	82	17*	73	87
JC67675-2	2Q15729.D	73	76	84	85	82	24* a	79	93
JC67675-4	2Q15730.D	77	81	95	95	72	74	80	99
JC67675-6	2Q15731.D	85	87	100	103	100	72	99	105
OP70507-BS	2Q15639.D	82	80	114	123	121	51	107	133
OP70507-MB	2Q15640.D	78	71	114	123	117	50	105	127
OP70507-MS	2Q15645.D	76	77	74	80	97	25* b	98	112
OP70507-MSD	2Q15646.D	74	76	72	79	93	11* b	91	109

Isotope Dilution Standards	Recovery Limits
S9 = 13C2-PFDoDA	50-150%
S10 = 13C2-PFTeDA	40-150%
S11 = 13C3-PFBS	50-150%
S12 = 13C3-PFHxS	50-150%
S13 = 13C8-PFOS	50-150%
S14 = 13C8-FOSA	30-140%
S15 = d3-MeFOSAA	50-150%
S16 = 13C2-6:2FTS	50-150%

- (a) Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.
- (b) Outside control limits.

11.5.1
11

Isotope Dilution Standard Recovery Summary

Job Number: JC67675

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: EPA 537M BY ID	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S17
JC67675-2	2Q16221.D	79
JC67675-2	2Q15729.D	79
JC67675-4	2Q15730.D	72
JC67675-6	2Q15731.D	94
OP70507-BS	2Q15639.D	95
OP70507-MB	2Q15640.D	88
OP70507-MS	2Q15645.D	90
OP70507-MSD	2Q15646.D	87

Isotope Dilution Standards	Recovery Limits
S17 = 13C2-8:2FTS	50-150%

Initial Calibration Summary

Job Number: JC67675

Sample: S2Q277-ICC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15579.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Initial Calibration ReSponse Factors - D:\MassHunter\Data\0617_PFC_ID_S2Q277\S2Q277A.batch.bin

Level ID : Calibration File

- 1 : D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15574.d
- 2 : D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15575.d
- 3 : D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15576.d
- 4 : D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15577.d
- 5 : D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15578.d
- 6 : D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15579.d
- 7 : D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15580.d
- 8 : D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15581.d

Compound	1	2	3	4	5	6	7	8	AvgRF	%RSD	r^2
1) 13C2-4:2PTS	2.95e+3	3.47e+3	3.49e+3	3.61e+3	3.75e+3	3.69e+3	4.16e+3	4.15e+3	3.66e+3	10.668	0.0000
2) 13C2-6:2PTS	2.72e+3	3.21e+3	3.21e+3	3.40e+3	3.54e+3	3.59e+3	4.01e+3	4.02e+3	3.46e+3	12.564	0.0000
3) 13C2-8:2PTS	7.97e+3	8.73e+3	8.41e+3	8.15e+3	8.12e+3	8.06e+3	9.33e+3	9.40e+3	8.52e+3	6.712	0.0000
4) 13C2-PFDoDA	3.57e+3	4.08e+3	3.93e+3	4.08e+3	3.98e+3	3.90e+3	4.13e+3	3.63e+3	3.91e+3	5.411	0.0000
6) 13C2-PFTeDA	1.69e+3	1.95e+3	1.90e+3	1.96e+3	1.95e+3	1.86e+3	2.02e+3	1.78e+3	1.89e+3	5.627	0.0000
7) 13C3-PFBS	4.27e+2	4.99e+2	5.05e+2	5.25e+2	5.19e+2	5.02e+2	5.35e+2	4.65e+2	4.97e+2	7.105	0.0000
8) 13C3-PFHxS	4.73e+2	5.54e+2	5.69e+2	5.80e+2	5.94e+2	5.82e+2	6.13e+2	5.29e+2	5.62e+2	7.823	0.0000
9) 13C4-PFBA	2.98e+3	3.46e+3	3.43e+3	3.52e+3	3.56e+3	3.43e+3	3.58e+3	3.08e+3	3.38e+3	6.665	0.0000
10) 13C4-PFHpA	1.26e+3	1.49e+3	1.52e+3	1.56e+3	1.58e+3	1.52e+3	1.62e+3	1.37e+3	1.49e+3	7.906	0.0000
12) 13C5-PFHxA	1.19e+3	1.43e+3	1.44e+3	1.49e+3	1.51e+3	1.45e+3	1.49e+3	1.29e+3	1.41e+3	7.922	0.0000
13) 13C5-PFPeA	1.23e+3	1.45e+3	1.44e+3	1.48e+3	1.48e+3	1.43e+3	1.51e+3	1.30e+3	1.41e+3	6.935	0.0000
14) 13C6-PFDA	3.91e+3	4.56e+3	4.47e+3	4.58e+3	4.67e+3	4.49e+3	4.73e+3	4.15e+3	4.45e+3	6.267	0.0000
15) 13C7-PFUnDA	3.61e+3	4.20e+3	4.00e+3	4.11e+3	4.06e+3	3.92e+3	4.09e+3	3.55e+3	3.94e+3	6.014	0.0000
16) 13C8-FOSA	2.09e+3	2.43e+3	2.40e+3	2.51e+3	2.53e+3	2.43e+3	2.48e+3	2.02e+3	2.36e+3	8.315	0.0000
17) 13C8-PFOA	1.10e+3	1.34e+3	1.30e+3	1.38e+3	1.36e+3	1.37e+3	1.51e+3	1.24e+3	1.32e+3	8.756	0.0000
18) 13C8-PFOS	4.84e+2	5.56e+2	5.62e+2	5.76e+2	5.87e+2	5.72e+2	5.98e+2	5.25e+2	5.57e+2	6.634	0.0000
19) 13C9-PFNA	1.38e+3	1.64e+3	1.69e+3	1.71e+3	1.77e+3	1.70e+3	1.84e+3	1.58e+3	1.66e+3	8.416	0.0000
23) d3-MeFOSAA	1.73e+3	2.01e+3	2.01e+3	2.10e+3	2.15e+3	2.10e+3	2.19e+3	1.91e+3	2.03e+3	7.370	0.0000
5) 13C2-PFOA	-----ISTD-----										
24) M2-PFOA	1.0008	1.0005	1.0001	1.0009	1.0003	1.0001	0.9990	0.9998	1.0002	0.060	0.0000
11) 13C4-PFOS	-----ISTD-----										
46) M4-PFOS	1.0017	1.0002	1.0003	1.0015	0.9994	1.0010	0.9990	1.0018	1.0006	0.105	0.0000
47) M4-PFBA	-----ISTD-----										
28) PFBA	0.2839	0.2391	0.2158	0.2062	0.2358	0.2276	0.2110	0.2471	0.2333	10.693	0.9947
48) M5-PFPeA	-----ISTD-----										
41) PFPeA	-----	2.4604	2.0558	1.8447	2.0920	2.0007	1.8458	2.1327	2.0617	10.144	0.9952
49) M5-PFHxA	-----ISTD-----										
35) PFHxA	0.7228	0.5163	0.5381	0.4766	0.5380	0.5242	0.4919	0.5696	0.5472	13.994	0.9976
50) M4-PFHpA	-----ISTD-----										
33) PFHpA	1.7746	1.4077	1.3166	1.2368	1.3853	1.3633	1.2707	1.4617	1.4021	11.936	0.9958
51) M8-PFOA	-----ISTD-----										
39) PFOA	1.1283	0.8914	0.8468	0.7654	0.8943	0.8080	0.7639	0.9281	0.8783	13.417	0.9919
52) M9-PFNA	-----ISTD-----										
37) PFNA	0.8871	0.7631	0.6708	0.6498	0.7516	0.7280	0.6829	0.8287	0.7453	10.909	0.9920
53) M6-PFDA	-----ISTD-----										
30) PFDA	0.6322	0.4977	0.4819	0.4213	0.4798	0.4745	0.4581	0.5058	0.4939	12.467	0.9977
54) M7-PFUnDA	-----ISTD-----										
32) PFDS	0.2585	0.2106	0.1977	0.1874	0.2158	0.2117	0.1974	0.2294	0.2136	10.436	0.9951
45) PFUnDA	0.7950	0.6464	0.6280	0.5717	0.6433	0.6290	0.5960	0.6909	0.6500	10.517	0.9952
55) M2-PFDoDA	-----ISTD-----										
31) PFDoDA	-----	0.7727	0.6888	0.6102	0.6912	0.6540	0.6085	0.7013	0.6752	8.497	0.9972
56) M2-PFTeDA	-----ISTD-----										
43) PFTeDA	1.0938	0.8462	0.7677	0.6699	0.7694	0.7439	0.6881	0.7953	0.7968	16.634	0.9955
44) PFTrDA	1.4689	1.1863	1.1084	0.9977	1.1495	1.1287	1.0464	1.2149	1.1626	12.253	0.9952
57) M8-FOSA	-----ISTD-----										
26) FOSA	1.0590	0.8719	0.8494	0.7672	0.8820	0.8614	0.7981	0.9466	0.8795	10.283	0.9988

Initial Calibration Summary

Job Number: JC67675

Sample: S2Q277-ICC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15579.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

58) M3-PFBS	-----ISTD-----										
29) PFBS	3.4927	2.8993	2.5383	2.3781	2.7372	2.6610	2.4687	2.8683	2.7555	12.705	0.9952
42) PFPeS	2.2237	1.8305	1.6455	1.5647	1.8569	1.7837	1.6588	1.9267	1.8113	11.394	0.9952
59) M3-PFHxS	-----ISTD-----										
34) PFHpS	2.6205	2.2807	1.9301	1.9457	2.1662	2.0730	1.9494	2.2622	2.1535	10.925	0.9952
36) PFHxS	3.1721	2.5228	2.3359	2.2158	2.4793	2.3981	2.2453	2.6454	2.5018	12.242	0.9974
60) M8-PFOS	-----ISTD-----										
38) PFNS	3.7407	3.0081	2.6471	2.5888	2.9196	2.7816	2.6397	3.0289	2.9193	12.785	0.9958
40) PFOS	2.8711	2.7309	2.2518	2.1226	2.4431	2.3274	2.1914	2.5262	2.4331	10.853	0.9956
61) M2-4:2FTS	-----ISTD-----										
20) 4:2FTS	0.7221	0.5950	0.5417	0.5056	0.5535	0.5401	0.4707	0.4743	0.5504	14.699	0.9990
62) M2-6:2FTS	-----ISTD-----										
21) 6:2FTS	-----	0.7747	0.7028	0.6628	0.7405	0.6923	0.6146	0.6161	0.6863	8.761	0.9991
63) M2-8:2FTS	-----ISTD-----										
22) 8:2FTS	1.1590	0.9652	0.8816	0.8115	0.9093	0.8631	0.7559	0.7686	0.8893	14.604	0.9990
64) M3-MeFOSAA	-----ISTD-----										
25) EtFOSAA	0.4468	0.3377	0.3213	0.3106	0.3421	0.3296	0.3088	0.3428	0.3424	12.906	0.9976
27) MeFOSAA	0.5042	0.4233	0.3902	0.3600	0.4149	0.3879	0.3768	0.4312	0.4111	10.875	0.9959

 *(value) - Average RF below (value)

Initial Calibration Verification

Job Number: JC67675

Sample: S2Q277-ICV277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15583.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0617_PFC_ID_S2Q277\S2Q277A.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15574.d
- 2:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15575.d
- 3:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15576.d
- 4:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15577.d
- 5:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15578.d
- 6:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15579.d
- 7:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15580.d
- 8:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15581.d

Data File: 2Q15583

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	19.140	-4.3	95.7
13C2-6:2FTS	20.000	20.364	1.8	101.8
13C2-8:2FTS	20.000	17.681	-11.6	88.4
13C2-PFDoDA	20.000	17.258	-13.7	86.3
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	17.374	-13.1	86.9
13C3-PFBS	20.000	19.322	-3.4	96.6
13C3-PFHxS	20.000	20.267	1.3	101.3
13C4-PFBA	20.000	19.108	-4.5	95.5
13C4-PFHpA	20.000	19.785	-1.1	98.9
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	19.218	-3.9	96.1
13C5-PFPeA	20.000	19.343	-3.3	96.7
13C6-PFDA	20.000	18.367	-8.2	91.8
13C7-PFUnDA	20.000	17.553	-12.2	87.8
13C8-FOSA	20.000	19.989	-0.1	99.9
13C8-PFOA	20.000	20.616	3.1	103.1
13C8-PFOS	20.000	19.508	-2.5	97.5
13C9-PFNA	20.000	20.049	0.2	100.2
4:2FTS	20.000	22.226	11.1	111.1
6:2FTS	20.000	22.263	11.3	111.3
8:2FTS	20.000	21.995	10.0	110.0
d3-MeFOSAA	20.000	20.353	1.8	101.8
M2-PFOA	20.000	20.000	0.0	100.0
EtFOSAA	20.000	21.298	6.5	106.5
FOSA	20.000	24.296	21.5	121.5
MeFOSAA	20.000	20.423	2.1	102.1
PFBA	20.000	20.933	4.7	104.7
PFBS	20.000	17.883	-10.6	89.4
PFDA	20.000	19.558	-2.2	97.8
PFDoDA	20.000	22.902	14.5	114.5
PFDS	20.000	19.474	-2.6	97.4
PFHpA	20.000	20.430	2.1	102.1
PFHpS	20.000	19.097	-4.5	95.5
PFHxA	20.000	21.065	5.3	105.3
PFHxS	20.000	16.083	-19.6	80.4
PFNA	20.000	17.583	-12.1	87.9

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Initial Calibration Verification

Job Number: JC67675

Sample: S2Q277-ICV277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15583.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	19.130	-4.3	95.7
PFOA	20.000	19.904	-0.5	99.5
PFOS	20.000	15.254	-23.7	76.3
PFPeA	20.000	20.461	2.3	102.3
PFPeS	20.000	19.324	-3.4	96.6
PFTeDA	20.000	19.636	-1.8	98.2
PFTrDA	20.000	21.788	8.9	108.9
PFUnDA	20.000	20.602	3.0	103.0
M4-PFOS	20.000	20.001	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q277-CC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15594.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0617_PFC_ID_S2Q277\S2Q277A.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15574.d
- 2:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15575.d
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- 4:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15577.d
- 5:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15578.d
- 6:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15579.d
- 7:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15580.d
- 8:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15581.d

Data File: 2Q15594

Type : QC

Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.982	4.9	104.9
13C2-6:2FTS	20.000	22.530	12.6	112.6
13C2-8:2FTS	20.000	17.988	-10.1	89.9
13C2-PFDoDA	20.000	21.135	5.7	105.7
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.215	6.1	106.1
13C3-PFBS	20.000	21.185	5.9	105.9
13C3-PFHxS	20.000	22.602	13.0	113.0
13C4-PFBA	20.000	20.751	3.8	103.8
13C4-PFHpA	20.000	22.727	13.6	113.6
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	22.036	10.2	110.2
13C5-PFPeA	20.000	21.550	7.8	107.8
13C6-PFDA	20.000	21.723	8.6	108.6
13C7-PFUnDA	20.000	21.389	6.9	106.9
13C8-FOSA	20.000	23.176	15.9	115.9
13C8-PFOA	20.000	23.222	16.1	116.1
13C8-PFOS	20.000	21.881	9.4	109.4
13C9-PFNA	20.000	22.938	14.7	114.7
4:2FTS	1.000	1.154	15.4	115.4
6:2FTS	1.000	1.129	12.9	112.9
8:2FTS	1.000	1.204	20.4	120.4
d3-MeFOSAA	20.000	20.761	3.8	103.8
M2-PFOA	20.000	19.997	0.0	100.0
EtFOSAA	1.000	1.079	7.9	107.9
FOSA	1.000	1.214	21.4	121.4
MeFOSAA	1.000	0.984	-1.6	98.4
PFBA	1.000	0.985	-1.5	98.5
PFBS	1.000	1.029	2.9	102.9
PFDA	1.000	1.035	3.5	103.5
PFDoDA	1.000	1.213	21.3	121.3
PFDS	1.000	0.995	-0.5	99.5
PFHpA	1.000	0.962	-3.8	96.2
PFHpS	1.000	0.968	-3.2	96.8
PFHxA	1.000	1.176	17.6	117.6
PFHxS	1.000	1.103	10.3	110.3
PFNA	1.000	0.989	-1.1	98.9

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Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q277-CC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15594.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	1.000	0.976	-2.4	97.6
PFOA	1.000	0.994	-0.6	99.4
PFOS	1.000	1.070	7.0	107.0
PFPeA	1.000	1.170	17.0	117.0
PFPeS	1.000	0.941	-5.9	94.1
PFTeDA	1.000	1.070	7.0	107.0
PFTrDA	1.000	1.018	1.8	101.8
PFUnDA	1.000	0.980	-2.0	98.0
M4-PFOS	20.000	19.999	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q277-CC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15595.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0617_PFC_ID_S2Q277\S2Q277A.batch.bin

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- 4:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15577.d
- 5:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15578.d
- 6:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15579.d
- 7:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15580.d
- 8:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15581.d

Data File: 2Q15595

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.668	8.3	108.3
13C2-6:2FTS	20.000	23.274	16.4	116.4
13C2-8:2FTS	20.000	18.828	-5.9	94.1
13C2-PFDoDA	20.000	21.173	5.9	105.9
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.213	6.1	106.1
13C3-PFBS	20.000	20.850	4.2	104.2
13C3-PFHxS	20.000	21.869	9.3	109.3
13C4-PFBA	20.000	20.291	1.5	101.5
13C4-PFHpA	20.000	22.465	12.3	112.3
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	21.668	8.3	108.3
13C5-PFPeA	20.000	21.212	6.1	106.1
13C6-PFDA	20.000	21.776	8.9	108.9
13C7-PFUnDA	20.000	21.136	5.7	105.7
13C8-FOSA	20.000	22.279	11.4	111.4
13C8-PFOA	20.000	24.215	21.1	121.1
13C8-PFOS	20.000	22.008	10.0	110.0
13C9-PFNA	20.000	23.689	18.4	118.4
4:2FTS	20.000	21.487	7.4	107.4
6:2FTS	20.000	21.837	9.2	109.2
8:2FTS	20.000	21.810	9.1	109.1
d3-MeFOSAA	20.000	20.710	3.6	103.6
M2-PFOA	20.000	20.010	0.1	100.1
EtFOSAA	20.000	19.426	-2.9	97.1
FOSA	20.000	22.165	10.8	110.8
MeFOSAA	20.000	18.920	-5.4	94.6
PFBA	20.000	18.667	-6.7	93.3
PFBS	20.000	19.024	-4.9	95.1
PFDA	20.000	18.615	-6.9	93.1
PFDoDA	20.000	20.546	2.7	102.7
PFDS	20.000	19.098	-4.5	95.5
PFHpA	20.000	18.623	-6.9	93.1
PFHpS	20.000	19.382	-3.1	96.9
PFHxA	20.000	20.417	2.1	102.1
PFHxS	20.000	20.812	4.1	104.1
PFNA	20.000	17.794	-11.0	89.0

11.6.4
11

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q277-CC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15595.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.888	-5.6	94.4
PFOA	20.000	18.554	-7.2	92.8
PFOS	20.000	19.048	-4.8	95.2
PFPeA	20.000	18.577	-7.1	92.9
PFPeS	20.000	19.085	-4.6	95.4
PFTeDA	20.000	19.059	-4.7	95.3
PFTrDA	20.000	18.769	-6.2	93.8
PFUnDA	20.000	18.980	-5.1	94.9
M4-PFOS	20.000	19.947	-0.3	99.7
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q277-CC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15638.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0617_PFC_ID_S2Q277\S2Q277A.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15574.d
- 2:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15575.d
- 3:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15576.d
- 4:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15577.d
- 5:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15578.d
- 6:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15579.d
- 7:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15580.d
- 8:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15581.d

Data File: 2Q15638

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	22.797	14.0	114.0
13C2-6:2FTS	20.000	24.908	24.5	124.5
13C2-8:2FTS	20.000	18.083	-9.6	90.4
13C2-PFDoDA	20.000	19.969	-0.2	99.8
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	20.159	0.8	100.8
13C3-PFBS	20.000	21.975	9.9	109.9
13C3-PFHxS	20.000	23.670	18.3	118.3
13C4-PFBA	20.000	20.179	0.9	100.9
13C4-PFHpA	20.000	22.368	11.8	111.8
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	21.688	8.4	108.4
13C5-PFPeA	20.000	20.480	2.4	102.4
13C6-PFDA	20.000	21.209	6.0	106.0
13C7-PFUnDA	20.000	20.549	2.7	102.7
13C8-FOSA	20.000	21.940	9.7	109.7
13C8-PFOA	20.000	23.957	19.8	119.8
13C8-PFOS	20.000	23.702	18.5	118.5
13C9-PFNA	20.000	23.242	16.2	116.2
4:2FTS	20.000	21.159	5.8	105.8
6:2FTS	20.000	22.053	10.3	110.3
8:2FTS	20.000	21.586	7.9	107.9
d3-MeFOSAA	20.000	22.237	11.2	111.2
M2-PFOA	20.000	19.990	-0.1	99.9
EtFOSAA	20.000	20.158	0.8	100.8
FOSA	20.000	22.512	12.6	112.6
MeFOSAA	20.000	18.703	-6.5	93.5
PFBA	20.000	18.208	-9.0	91.0
PFBS	20.000	19.111	-4.4	95.6
PFDA	20.000	18.736	-6.3	93.7
PFDoDA	20.000	20.340	1.7	101.7
PFDS	20.000	19.739	-1.3	98.7
PFHpA	20.000	19.383	-3.1	96.9
PFHpS	20.000	19.059	-4.7	95.3
PFHxA	20.000	19.929	-0.4	99.6
PFHxS	20.000	20.835	4.2	104.2
PFNA	20.000	17.964	-10.2	89.8

11.6.5
11

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q277-CC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15638.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	17.368	-13.2	86.8
PFOA	20.000	18.657	-6.7	93.3
PFOS	20.000	18.411	-7.9	92.1
PFPeA	20.000	19.746	-1.3	98.7
PFPeS	20.000	18.343	-8.3	91.7
PFTeDA	20.000	18.143	-9.3	90.7
PFTrDA	20.000	18.725	-6.4	93.6
PFUnDA	20.000	18.473	-7.6	92.4
M4-PFOS	20.000	19.951	-0.2	99.8
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q277-CC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15647.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0617_PFC_ID_S2Q277\S2Q277A.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15574.d
- 2:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15575.d
- 3:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15576.d
- 4:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15577.d
- 5:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15578.d
- 6:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15579.d
- 7:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15580.d
- 8:D:\MassHunter\Data\0617_PFC_ID_S2Q277\2Q15581.d

Data File: 2Q15647

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	23.195	16.0	116.0
13C2-6:2FTS	20.000	25.513	27.6	127.6
13C2-8:2FTS	20.000	18.343	-8.3	91.7
13C2-PFDoDA	20.000	20.345	1.7	101.7
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.190	6.0	106.0
13C3-PFBS	20.000	22.161	10.8	110.8
13C3-PFHxS	20.000	23.396	17.0	117.0
13C4-PFBA	20.000	20.434	2.2	102.2
13C4-PFHpA	20.000	22.899	14.5	114.5
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	22.547	12.7	112.7
13C5-PFPeA	20.000	21.161	5.8	105.8
13C6-PFDA	20.000	22.029	10.1	110.1
13C7-PFUnDA	20.000	20.765	3.8	103.8
13C8-FOSA	20.000	22.652	13.3	113.3
13C8-PFOA	20.000	25.155	25.8	125.8
13C8-PFOS	20.000	22.903	14.5	114.5
13C9-PFNA	20.000	24.199	21.0	121.0
4:2FTS	20.000	21.648	8.2	108.2
6:2FTS	20.000	21.790	8.9	108.9
8:2FTS	20.000	21.648	8.2	108.2
d3-MeFOSAA	20.000	22.067	10.3	110.3
M2-PFOA	20.000	19.996	0.0	100.0
EtFOSAA	20.000	20.624	3.1	103.1
FOSA	20.000	22.285	11.4	111.4
MeFOSAA	20.000	19.222	-3.9	96.1
PFBA	20.000	18.173	-9.1	90.9
PFBS	20.000	19.036	-4.8	95.2
PFDA	20.000	18.245	-8.8	91.2
PFDoDA	20.000	20.667	3.3	103.3
PFDS	20.000	19.603	-2.0	98.0
PFHpA	20.000	19.291	-3.5	96.5
PFHpS	20.000	19.172	-4.1	95.9
PFHxA	20.000	20.349	1.7	101.7
PFHxS	20.000	21.160	5.8	105.8
PFNA	20.000	17.352	-13.2	86.8

11.6.6
11

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q277-CC277

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15647.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.220	-8.9	91.1
PFOA	20.000	18.238	-8.8	91.2
PFOS	20.000	18.988	-5.1	94.9
PFPeA	20.000	19.239	-3.8	96.2
PFPeS	20.000	18.338	-8.3	91.7
PFTeDA	20.000	19.168	-4.2	95.8
PFTTrDA	20.000	18.847	-5.8	94.2
PFUnDA	20.000	19.141	-4.3	95.7
M4-PFOS	20.000	19.989	-0.1	99.9
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Initial Calibration Summary

Job Number: JC67675

Sample: S2Q278-ICC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15714.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Initial Calibration ReSponse Factors - D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID : Calibration File

- 1 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Compound	1	2	3	4	5	6	7	8	AvgRF	%RSD	r^2
1) 13C2-4:2FTS	2.85e+3	3.17e+3	3.10e+3	3.18e+3	3.37e+3	3.37e+3	3.68e+3	3.61e+3	3.29e+3	8.288	0.0000
2) 13C2-6:2FTS	2.86e+3	3.16e+3	3.09e+3	3.10e+3	3.31e+3	3.28e+3	3.59e+3	3.50e+3	3.24e+3	7.216	0.0000
3) 13C2-8:2FTS	4.84e+3	5.66e+3	5.48e+3	5.56e+3	5.88e+3	5.91e+3	6.55e+3	6.59e+3	5.81e+3	9.891	0.0000
4) 13C2-PFDoDA	1.42e+3	1.71e+3	1.68e+3	1.70e+3	1.83e+3	1.77e+3	1.79e+3	1.57e+3	1.68e+3	8.003	0.0000
6) 13C2-PFTEdA	7.35e+2	9.07e+2	8.96e+2	8.81e+2	9.48e+2	9.17e+2	9.32e+2	8.11e+2	8.78e+2	8.112	0.0000
7) 13C3-PFBS	4.85e+2	5.39e+2	5.23e+2	5.32e+2	5.52e+2	5.40e+2	5.43e+2	4.60e+2	5.22e+2	6.190	0.0000
8) 13C3-PFHxS	5.94e+2	6.54e+2	6.44e+2	6.50e+2	6.67e+2	6.57e+2	6.52e+2	5.56e+2	6.34e+2	6.039	0.0000
9) 13C4-PFBA	3.14e+3	3.49e+3	3.35e+3	3.38e+3	3.48e+3	3.38e+3	3.38e+3	2.87e+3	3.31e+3	6.228	0.0000
10) 13C4-PFHpA	1.32e+3	1.48e+3	1.43e+3	1.45e+3	1.47e+3	1.41e+3	1.44e+3	1.23e+3	1.40e+3	6.141	0.0000
12) 13C5-PFHxA	1.25e+3	1.39e+3	1.35e+3	1.39e+3	1.44e+3	1.39e+3	1.39e+3	1.14e+3	1.34e+3	7.411	0.0000
13) 13C5-PFPeA	1.29e+3	1.42e+3	1.38e+3	1.39e+3	1.44e+3	1.40e+3	1.41e+3	1.19e+3	1.37e+3	6.232	0.0000
14) 13C6-PFDA	2.52e+3	2.76e+3	2.71e+3	2.75e+3	2.87e+3	2.73e+3	2.72e+3	2.27e+3	2.67e+3	6.954	0.0000
15) 13C7-PFUnDA	1.48e+3	1.77e+3	1.74e+3	1.83e+3	1.86e+3	1.80e+3	1.81e+3	1.54e+3	1.73e+3	8.085	0.0000
16) 13C8-FOSA	2.42e+3	2.77e+3	2.65e+3	2.66e+3	2.75e+3	2.64e+3	2.56e+3	2.09e+3	2.57e+3	8.702	0.0000
17) 13C8-PFOA	1.18e+3	1.38e+3	1.26e+3	1.30e+3	1.33e+3	1.31e+3	1.32e+3	1.13e+3	1.28e+3	6.540	0.0000
18) 13C8-PFOS	5.33e+2	5.95e+2	5.73e+2	5.81e+2	6.00e+2	5.94e+2	5.96e+2	5.09e+2	5.73e+2	5.857	0.0000
19) 13C9-PFNA	1.25e+3	1.40e+3	1.33e+3	1.36e+3	1.43e+3	1.39e+3	1.41e+3	1.22e+3	1.35e+3	5.719	0.0000
23) d3-MeFOSAA	1.94e+3	2.02e+3	1.99e+3	1.97e+3	2.06e+3	2.01e+3	2.03e+3	1.70e+3	1.97e+3	5.706	0.0000
5) 13C2-PFOA	-----ISTD-----										
24) M2-PFOA	1.0004	1.0000	0.9997	1.0003	0.9999	0.9987	1.0000	1.0007	1.0000	0.058	0.0000
11) 13C4-PFOS	-----ISTD-----										
46) M4-PFOS	0.9997	0.9998	1.0002	0.9999	1.0003	0.9995	0.9998	0.9999	0.9999	0.027	0.0000
47) M4-PFBA	-----ISTD-----										
28) PFBA	0.2915	0.2363	0.2235	0.2033	0.2329	0.2241	0.2092	0.2438	0.2331	11.653	0.9950
48) M5-PFPeA	-----ISTD-----										
41) PFPeA	-----	2.3875	1.9845	1.8088	1.9592	1.8943	1.7770	-----	1.9686	11.213	0.9999
49) M5-PFHxA	-----ISTD-----										
35) PFHxA	0.7365	0.5527	0.5201	0.4722	0.5404	0.5088	0.4839	0.5802	0.5493	15.199	0.9968
50) M4-PFHpA	-----ISTD-----										
33) PFHpA	1.6812	1.3597	1.2988	1.1861	1.3622	1.3489	1.2409	1.4195	1.3621	10.924	0.9961
51) M8-PFOA	-----ISTD-----										
39) PFOA	1.0573	0.8919	0.7980	0.7666	0.8747	0.8297	0.7753	0.8939	0.8609	10.928	0.9956
52) M9-PFNA	-----ISTD-----										
37) PFNA	1.0178	0.8364	0.7454	0.6727	0.7544	0.7062	0.6786	0.7745	0.7733	14.543	0.9961
53) M6-PFDA	-----ISTD-----										
30) PFDA	0.5932	0.4968	0.4629	0.4105	0.4824	0.4659	0.4438	0.5149	0.4838	11.275	0.9951
54) M7-PFUnDA	-----ISTD-----										
32) PFDS	0.4290	0.3519	0.3060	0.2952	0.3449	0.3335	0.3178	0.3704	0.3436	12.354	0.9948
45) PFUnDA	0.9177	0.7439	0.6401	0.5846	0.6543	0.6330	0.6025	-----	0.6823	16.933	0.9998
55) M2-PFDoDA	-----ISTD-----										
31) PFDoDA	-----	0.8368	0.6756	0.6172	0.6780	0.6467	0.6152	-----	0.6783	12.131	0.9986
56) M2-PFTEdA	-----ISTD-----										
43) PFTEdA	-----	0.8355	0.7779	0.7028	0.7886	0.7317	0.6848	0.7764	0.7568	6.986	0.9989
44) PFTrDA	1.4551	1.2438	1.0680	1.0531	1.1873	1.1475	1.0597	1.2434	1.1822	11.438	0.9946
57) M8-FOSA	-----ISTD-----										
26) FOSA	1.1341	0.9646	0.8518	0.7840	0.9023	0.8759	0.8258	0.9479	0.9108	11.897	0.9992

Initial Calibration Summary

Job Number: JC67675

Sample: S2Q278-ICC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15714.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

58) M3-PFBS	-----ISTD-----											
29) PFBS	3.5422	2.7785	2.5454	2.3877	2.7217	2.6447	2.4793	2.8993	2.7498	13.105	0.9947	
42) PFPeS	2.3943	1.8643	1.7426	1.6430	1.8361	1.7779	1.6855	1.9537	1.8622	12.722	0.9952	
59) M3-PFHxS	-----ISTD-----											
34) PFHpS	2.7165	2.1400	1.9307	1.8161	2.1311	2.0363	1.9284	2.2152	2.1143	13.101	0.9958	
36) PFHxS	2.9272	2.4199	2.2806	2.0901	2.4365	2.3295	2.2354	2.5959	2.4144	10.603	0.9980	
60) M8-PFOS	-----ISTD-----											
38) PFNS	2.6648	2.2204	2.0416	1.9016	2.1791	2.0547	1.9671	2.2876	2.1646	11.099	0.9950	
40) PFOS	3.2380	2.6872	2.2588	2.1798	2.4556	2.3100	2.2243	2.5415	2.4869	14.052	0.9960	
61) M2-4:2FTS	-----ISTD-----											
20) 4:2FTS	0.7200	0.5986	0.5512	0.5003	0.5565	0.5335	0.4584	0.4724	0.5489	15.157	0.9986	
62) M2-6:2FTS	-----ISTD-----											
21) 6:2FTS	-----	0.7678	0.7149	0.6600	0.7386	0.7095	0.6130	0.6212	0.6893	8.575	0.9987	
63) M2-8:2FTS	-----ISTD-----											
22) 8:2FTS	1.1884	0.9753	0.9047	0.8501	0.9259	0.8806	0.7673	0.7559	0.9060	15.069	0.9991	
64) M3-MeFOSAA	-----ISTD-----											
25) EtFOSAA	0.3874	0.3086	0.2933	0.2762	0.3094	0.2997	0.2745	0.3102	0.3074	11.488	0.9968	
27) MeFOSAA	-----	0.4197	0.3833	0.3609	0.4024	0.4012	0.3698	0.4299	0.3953	6.411	0.9989	

 *(value) - Average RF below (value)

11.67

11

Initial Calibration Verification

Job Number: JC67675

Sample: S2Q278-ICV278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15718.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Data File: 2Q15718

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	17.407	-13.0	87.0
13C2-6:2FTS	20.000	17.745	-11.3	88.7
13C2-8:2FTS	20.000	17.268	-13.7	86.3
13C2-PFDoDA	20.000	18.008	-10.0	90.0
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	17.948	-10.3	89.7
13C3-PFBS	20.000	17.377	-13.1	86.9
13C3-PFHxS	20.000	17.386	-13.1	86.9
13C4-PFBA	20.000	17.177	-14.1	85.9
13C4-PFHpA	20.000	17.468	-12.7	87.3
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	17.687	-11.6	88.4
13C5-PFPeA	20.000	17.345	-13.3	86.7
13C6-PFDA	20.000	18.072	-9.6	90.4
13C7-PFUnDA	20.000	17.833	-10.8	89.2
13C8-FOSA	20.000	17.765	-11.2	88.8
13C8-PFOA	20.000	17.562	-12.2	87.8
13C8-PFOS	20.000	18.188	-9.1	90.9
13C9-PFNA	20.000	18.378	-8.1	91.9
4:2FTS	20.000	22.448	12.2	112.2
6:2FTS	20.000	22.488	12.4	112.4
8:2FTS	20.000	21.546	7.7	107.7
d3-MeFOSAA	20.000	17.992	-10.0	90.0
M2-PFOA	20.000	19.986	-0.1	99.9
EtFOSAA	20.000	21.796	9.0	109.0
FOSA	20.000	24.046	20.2	120.2
MeFOSAA	20.000	23.633	18.2	118.2
PFBA	20.000	20.822	4.1	104.1
PFBS	20.000	17.743	-11.3	88.7
PFDA	20.000	18.571	-7.1	92.9
PFDoDA	20.000	21.726	8.6	108.6
PFDS	20.000	18.984	-5.1	94.9
PFHpA	20.000	21.086	5.4	105.4
PFHpS	20.000	19.306	-3.5	96.5
PFHxA	20.000	20.452	2.3	102.3
PFHxS	20.000	19.627	-1.9	98.1
PFNA	20.000	19.117	-4.4	95.6

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Initial Calibration Verification

Job Number: JC67675

Sample: S2Q278-ICV278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15718.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.630	-6.8	93.2
PFOA	20.000	21.867	9.3	109.3
PFOS	20.000	20.421	2.1	102.1
PFPeA	20.000	22.138	10.7	110.7
PFPeS	20.000	18.914	-5.4	94.6
PFTeDA	20.000	22.276	11.4	111.4
PFTrDA	20.000	21.521	7.6	107.6
PFUnDA	20.000	22.166	10.8	110.8
M4-PFOS	20.000	19.990	-0.1	99.9
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15721.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Data File: 2Q15721

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.642	3.2	103.2
13C2-6:2FTS	20.000	20.918	4.6	104.6
13C2-8:2FTS	20.000	20.110	0.6	100.6
13C2-PFDoDA	20.000	21.527	7.6	107.6
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.412	7.1	107.1
13C3-PFBS	20.000	20.467	2.3	102.3
13C3-PFHxS	20.000	20.460	2.3	102.3
13C4-PFBA	20.000	20.040	0.2	100.2
13C4-PFHpA	20.000	20.614	3.1	103.1
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	20.742	3.7	103.7
13C5-PFPeA	20.000	20.159	0.8	100.8
13C6-PFDA	20.000	21.063	5.3	105.3
13C7-PFUnDA	20.000	21.151	5.8	105.8
13C8-FOSA	20.000	20.523	2.6	102.6
13C8-PFOA	20.000	21.208	6.0	106.0
13C8-PFOS	20.000	20.727	3.6	103.6
13C9-PFNA	20.000	21.540	7.7	107.7
4:2FTS	20.000	21.951	9.8	109.8
6:2FTS	20.000	21.945	9.7	109.7
8:2FTS	20.000	21.717	8.6	108.6
d3-MeFOSAA	20.000	20.633	3.2	103.2
M2-PFOA	20.000	20.007	0.0	100.0
EtFOSAA	20.000	20.295	1.5	101.5
FOSA	20.000	21.652	8.3	108.3
MeFOSAA	20.000	22.507	12.5	112.5
PFBA	20.000	18.745	-6.3	93.7
PFBS	20.000	18.778	-6.1	93.9
PFDA	20.000	18.907	-5.5	94.5
PFDoDA	20.000	20.422	2.1	102.1
PFDS	20.000	18.775	-6.1	93.9
PFHpA	20.000	19.533	-2.3	97.7
PFHpS	20.000	19.186	-4.1	95.9
PFHxA	20.000	20.963	4.8	104.8
PFHxS	20.000	21.116	5.6	105.6
PFNA	20.000	18.926	-5.4	94.6

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Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15721.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.730	-6.3	93.7
PFOA	20.000	19.040	-4.8	95.2
PFOS	20.000	18.928	-5.4	94.6
PFPeA	20.000	20.803	4.0	104.0
PFPeS	20.000	19.021	-4.9	95.1
PFTeDA	20.000	21.981	9.9	109.9
PFTrDA	20.000	18.822	-5.9	94.1
PFUnDA	20.000	20.577	2.9	102.9
M4-PFOS	20.000	20.042	0.2	100.2
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15732.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Data File: 2Q15732

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.022	5.1	105.1
13C2-6:2FTS	20.000	21.664	8.3	108.3
13C2-8:2FTS	20.000	21.099	5.5	105.5
13C2-PFDoDA	20.000	21.193	6.0	106.0
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.181	5.9	105.9
13C3-PFBS	20.000	20.886	4.4	104.4
13C3-PFHxS	20.000	20.848	4.2	104.2
13C4-PFBA	20.000	20.174	0.9	100.9
13C4-PFHpA	20.000	20.543	2.7	102.7
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	21.145	5.7	105.7
13C5-PFPeA	20.000	20.173	0.9	100.9
13C6-PFDA	20.000	20.754	3.8	103.8
13C7-PFUnDA	20.000	21.473	7.4	107.4
13C8-FOSA	20.000	21.267	6.3	106.3
13C8-PFOA	20.000	21.123	5.6	105.6
13C8-PFOS	20.000	21.533	7.7	107.7
13C9-PFNA	20.000	21.527	7.6	107.6
4:2FTS	20.000	22.127	10.6	110.6
6:2FTS	20.000	21.678	8.4	108.4
8:2FTS	20.000	21.914	9.6	109.6
d3-MeFOSAA	20.000	21.586	7.9	107.9
M2-PFOA	20.000	20.001	0.0	100.0
EtFOSAA	20.000	20.391	2.0	102.0
FOSA	20.000	21.448	7.2	107.2
MeFOSAA	20.000	21.671	8.4	108.4
PFBA	20.000	18.626	-6.9	93.1
PFBS	20.000	18.819	-5.9	94.1
PFDA	20.000	18.497	-7.5	92.5
PFDoDA	20.000	20.151	0.8	100.8
PFDS	20.000	19.122	-4.4	95.6
PFHpA	20.000	19.742	-1.3	98.7
PFHpS	20.000	19.447	-2.8	97.2
PFHxA	20.000	20.232	1.2	101.2
PFHxS	20.000	21.103	5.5	105.5
PFNA	20.000	18.952	-5.2	94.8

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Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15732.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.276	-8.6	91.4
PFOA	20.000	19.603	-2.0	98.0
PFOS	20.000	18.725	-6.4	93.6
PFPeA	20.000	20.848	4.2	104.2
PFPeS	20.000	18.668	-6.7	93.3
PFTeDA	20.000	22.012	10.1	110.1
PFTrDA	20.000	19.146	-4.3	95.7
PFUnDA	20.000	19.552	-2.2	97.8
M4-PFOS	20.000	20.003	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Initial Calibration Summary

Job Number: JC67675

Sample: S2Q288-ICC288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16213.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Initial Calibration ReSponse Factors - D:\MassHunter\Data\0629_PFC_ID_S2Q288\s2q288.batch.bin

Level ID : Calibration File

- 1 : D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16208.d
- 2 : D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16209.d
- 3 : D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16210.d
- 4 : D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16211.d
- 5 : D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16212.d
- 6 : D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16213.d
- 7 : D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16214.d
- 8 : D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16215.d

Compound	1	2	3	4	5	6	7	8	AvgRF	%RSD	r^2
1) 13C2-4:2FTS	3.34e+3	3.57e+3	3.86e+3	3.70e+3	3.29e+3	3.89e+3	4.27e+3	4.49e+3	3.80e+3	11.038	0.0000
2) 13C2-6:2FTS	2.37e+3	2.54e+3	2.76e+3	2.61e+3	2.29e+3	2.73e+3	2.95e+3	3.02e+3	2.66e+3	9.695	0.0000
3) 13C2-8:2FTS	2.24e+3	2.44e+3	2.65e+3	2.50e+3	2.22e+3	2.69e+3	2.98e+3	3.21e+3	2.62e+3	13.182	0.0000
4) 13C2-PFDoDA	2.98e+3	3.38e+3	3.71e+3	3.50e+3	3.10e+3	3.59e+3	3.75e+3	3.65e+3	3.46e+3	8.236	0.0000
6) 13C2-PFTeDA	1.15e+3	1.32e+3	1.43e+3	1.37e+3	1.21e+3	1.43e+3	1.47e+3	1.44e+3	1.35e+3	8.675	0.0000
7) 13C3-PFBS	5.99e+2	6.56e+2	7.11e+2	6.76e+2	5.91e+2	6.96e+2	6.99e+2	6.53e+2	6.60e+2	6.839	0.0000
8) 13C3-PFHxS	5.43e+2	6.00e+2	6.21e+2	5.94e+2	5.16e+2	6.00e+2	6.09e+2	5.54e+2	5.80e+2	6.407	0.0000
9) 13C4-PFBA	4.28e+3	4.66e+3	5.03e+3	4.74e+3	4.15e+3	4.90e+3	5.00e+3	4.76e+3	4.69e+3	6.837	0.0000
10) 13C4-PFHpA	2.09e+3	2.25e+3	2.46e+3	2.27e+3	2.08e+3	2.36e+3	2.33e+3	2.22e+3	2.26e+3	5.797	0.0000
12) 13C5-PFHxA	1.89e+3	2.05e+3	2.19e+3	2.05e+3	1.81e+3	2.05e+3	2.07e+3	1.97e+3	2.01e+3	5.872	0.0000
13) 13C5-PFPeA	1.89e+3	2.09e+3	2.22e+3	2.11e+3	1.82e+3	2.18e+3	2.15e+3	2.07e+3	2.07e+3	6.754	0.0000
14) 13C6-PFDA	1.65e+3	1.73e+3	1.90e+3	1.79e+3	1.57e+3	1.78e+3	1.79e+3	1.66e+3	1.73e+3	5.941	0.0000
15) 13C7-PFUnDA	2.31e+3	2.58e+3	2.79e+3	2.60e+3	2.29e+3	2.65e+3	2.79e+3	2.58e+3	2.57e+3	7.320	0.0000
16) 13C8-FOSA	1.40e+3	1.52e+3	1.64e+3	1.52e+3	1.35e+3	1.53e+3	1.40e+3	1.20e+3	1.45e+3	9.459	0.0000
17) 13C8-PFOA	1.38e+3	1.39e+3	1.51e+3	1.47e+3	1.26e+3	1.53e+3	1.45e+3	1.32e+3	1.42e+3	6.711	0.0000
18) 13C8-PFOS	3.12e+2	3.31e+2	3.67e+2	3.46e+2	2.79e+2	3.52e+2	3.47e+2	3.21e+2	3.32e+2	8.342	0.0000
19) 13C9-PFNA	1.06e+3	1.20e+3	1.29e+3	1.13e+3	1.02e+3	1.23e+3	1.21e+3	1.14e+3	1.16e+3	7.810	0.0000
23) d3-MeFOSAA	1.32e+3	1.43e+3	1.53e+3	1.45e+3	1.27e+3	1.46e+3	1.53e+3	1.48e+3	1.43e+3	6.487	0.0000
5) 13C2-PFOA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
24) M2-PFOA	1.0000	1.0004	1.0002	1.0003	1.0004	0.9999	1.0001	1.0001	1.0002	0.017	0.0000
11) 13C4-PFOS	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
46) M4-PFOS	1.0007	0.9988	0.9999	0.9991	1.0010	1.0003	0.9998	1.0007	1.0000	0.080	0.0000
47) M4-PFBA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
28) PFBA	0.3705	0.3189	0.3019	0.3072	0.3495	0.3139	0.3153	0.3195	0.3246	7.185	0.9998
48) M5-PFPeA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
41) PFPeA	-----	2.6327	2.1911	2.0555	2.2937	2.0643	2.0623	2.0626	2.1946	9.720	0.9998
49) M5-PFHxA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
35) PFHxA	0.7615	0.7021	0.6562	0.6148	0.6736	0.6192	0.6134	0.6043	0.6556	8.376	0.9998
50) M4-PFHpA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
33) PFHpA	1.6246	1.4611	1.2441	1.2435	1.3709	1.2052	1.1793	1.2896	1.3273	11.403	0.9981
51) M8-PFOA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
39) PFOA	1.1310	1.0675	0.8830	0.8219	0.9642	0.8604	0.8741	0.9284	0.9413	11.450	0.9990
52) M9-PFNA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
37) PFNA	0.9662	0.8019	0.7460	0.7596	0.8707	0.7486	0.8100	0.7575	0.8076	9.508	0.9987
53) M6-PFDA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
30) PFDA	0.7288	0.7190	0.5821	0.5874	0.6543	0.6433	0.5818	0.5910	0.6360	9.603	0.9994
54) M7-PFUnDA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
32) PFDS	0.1816	0.1592	0.1590	0.1632	0.1862	0.1656	0.1598	0.1657	0.1675	6.270	0.9995
45) PFUnDA	0.8361	0.7231	0.6964	0.7252	0.7932	0.7345	0.6638	0.7309	0.7379	7.311	0.9978
55) M2-PFDoDA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
31) PFDoDA	-----	0.8832	0.7635	0.6677	0.7290	0.6623	0.6274	-----	0.7222	12.874	0.9980
56) M2-PFTeDA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
43) PFTeDA	1.0305	0.8264	0.7124	0.7256	0.8252	0.7247	0.7053	0.7086	0.7824	14.346	0.9996
44) PFTrDA	1.3838	1.1874	1.1305	1.0958	1.1978	1.0734	1.0534	1.0764	1.1498	9.429	0.9997
57) M8-FOSA	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
26) FOSA	0.8458	0.7343	0.7147	0.7592	0.8582	0.7705	0.7684	0.7738	0.7781	6.418	0.9998

Initial Calibration Summary

Job Number: JC67675

Sample: S2Q288-ICC288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16213.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

58) M3-PFBS	-----ISTD-----											
29) PFBS	2.8836	2.5695	2.4058	2.3496	2.6126	2.4127	2.4385	2.5163	2.5236	6.755	0.9997	
42) PFPeS	1.6049	1.5663	1.4268	1.4217	1.6019	1.4421	1.4728	1.5100	1.5058	5.095	0.9997	
59) M3-PFHxS	-----ISTD-----											
34) PFHpS	1.5616	1.4598	1.2381	1.3207	1.4011	1.2929	1.2747	1.3509	1.3625	7.871	0.9992	
36) PFHxS	2.4283	1.9446	2.2321	2.1229	2.3688	2.1352	2.1458	2.2595	2.2047	6.929	0.9993	
60) M8-PFOS	-----ISTD-----											
38) PFNS	1.6582	1.7553	1.7752	1.5001	2.0014	1.5972	1.6075	1.6813	1.6970	8.927	0.9990	
40) PFOS	2.8130	2.3282	2.4928	2.4847	2.7688	2.2956	2.3890	2.4356	2.5010	7.680	0.9995	
61) M2-4:2FTS	-----ISTD-----											
20) 4:2FTS	0.6194	0.5570	0.5203	0.5182	0.5570	0.5163	0.4714	0.4365	0.5245	10.642	0.9998	
62) M2-6:2FTS	-----ISTD-----											
21) 6:2FTS	0.7487	0.6858	0.7266	0.6918	0.7796	0.6810	0.6293	0.5639	0.6883	9.893	0.9997	
63) M2-8:2FTS	-----ISTD-----											
22) 8:2FTS	1.0175	0.9517	0.8856	0.8497	0.9203	0.8481	0.7649	0.6933	0.8664	11.889	0.9997	
64) M3-MeFOSAA	-----ISTD-----											
25) EtFOSAA	0.3249	0.3054	0.2865	0.3307	0.3601	0.3143	0.3005	0.2797	0.3128	8.284	0.9997	
27) MeFOSAA	0.4164	0.3953	0.4033	0.3485	0.4308	0.3999	0.3730	0.3597	0.3909	7.226	0.9988	

 *(value) - Average RF below (value)

11.6.11

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Initial Calibration Verification

Job Number: JC67675

Sample: S2Q288-ICV288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16217.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0629_PFC_ID_S2Q288\s2q288.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16208.d
- 2:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16209.d
- 3:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16210.d
- 4:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16211.d
- 5:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16212.d
- 6:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16213.d
- 7:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16214.d
- 8:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16215.d

Data File: 2q16217

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	17.872	-10.6	89.4
13C2-6:2FTS	20.000	17.924	-10.4	89.6
13C2-8:2FTS	20.000	17.618	-11.9	88.1
13C2-PFDoDA	20.000	18.145	-9.3	90.7
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	18.435	-7.8	92.2
13C3-PFBS	20.000	18.136	-9.3	90.7
13C3-PFHxS	20.000	18.297	-8.5	91.5
13C4-PFBA	20.000	18.203	-9.0	91.0
13C4-PFHpA	20.000	18.917	-5.4	94.6
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	18.634	-6.8	93.2
13C5-PFPeA	20.000	18.202	-9.0	91.0
13C6-PFDA	20.000	18.618	-6.9	93.1
13C7-PFUnDA	20.000	18.481	-7.6	92.4
13C8-FOSA	20.000	18.168	-9.2	90.8
13C8-PFOA	20.000	18.026	-9.9	90.1
13C8-PFOS	20.000	17.482	-12.6	87.4
13C9-PFNA	20.000	18.789	-6.1	93.9
4:2FTS	20.000	20.835	4.2	104.2
6:2FTS	20.000	20.732	3.7	103.7
8:2FTS	20.000	19.876	-0.6	99.4
d3-MeFOSAA	20.000	17.950	-10.2	89.8
M2-PFOA	20.000	19.985	-0.1	99.9
EtFOSAA	20.000	24.933	24.7	124.7
FOSA	20.000	22.099	10.5	110.5
MeFOSAA	20.000	22.153	10.8	110.8
PFBA	20.000	21.285	6.4	106.4
PFBS	20.000	18.406	-8.0	92.0
PFDA	20.000	19.443	-2.8	97.2
PFDoDA	20.000	21.279	6.4	106.4
PFDS	20.000	19.907	-0.5	99.5
PFHpA	20.000	20.566	2.8	102.8
PFHpS	20.000	19.332	-3.3	96.7
PFHxA	20.000	19.675	-1.6	98.4
PFHxS	20.000	17.923	-10.4	89.6
PFNA	20.000	18.730	-6.3	93.7

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Initial Calibration Verification

Job Number: JC67675

Sample: S2Q288-ICV288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16217.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	20.548	2.7	102.7
PFOA	20.000	20.706	3.5	103.5
PFOS	20.000	21.763	8.8	108.8
PFPeA	20.000	21.156	5.8	105.8
PFPeS	20.000	19.921	-0.4	99.6
PFTeDA	20.000	20.124	0.6	100.6
PFTTrDA	20.000	23.202	16.0	116.0
PFUnDA	20.000	20.997	5.0	105.0
M4-PFOS	20.000	19.932	-0.3	99.7
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q288-CC288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16227.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0629_PFC_ID_S2Q288\s2q288.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16208.d
- 2:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16209.d
- 3:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16210.d
- 4:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16211.d
- 5:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16212.d
- 6:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16213.d
- 7:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16214.d
- 8:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16215.d

Data File: 2q16227

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.582	2.9	102.9
13C2-6:2FTS	20.000	19.958	-0.2	99.8
13C2-8:2FTS	20.000	20.332	1.7	101.7
13C2-PFDoDA	20.000	20.434	2.2	102.2
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	20.551	2.8	102.8
13C3-PFBS	20.000	21.048	5.2	105.2
13C3-PFHxS	20.000	20.545	2.7	102.7
13C4-PFBA	20.000	21.038	5.2	105.2
13C4-PFHpA	20.000	21.073	5.4	105.4
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	21.030	5.1	105.1
13C5-PFPeA	20.000	20.621	3.1	103.1
13C6-PFDA	20.000	20.552	2.8	102.8
13C7-PFUnDA	20.000	21.304	6.5	106.5
13C8-FOSA	20.000	20.490	2.5	102.5
13C8-PFOA	20.000	20.639	3.2	103.2
13C8-PFOS	20.000	20.589	2.9	102.9
13C9-PFNA	20.000	21.358	6.8	106.8
4:2FTS	20.000	20.275	1.4	101.4
6:2FTS	20.000	20.131	0.7	100.7
8:2FTS	20.000	20.598	3.0	103.0
d3-MeFOSAA	20.000	20.110	0.6	100.6
M2-PFOA	20.000	19.994	0.0	100.0
EtFOSAA	20.000	21.696	8.5	108.5
FOSA	20.000	19.764	-1.2	98.8
MeFOSAA	20.000	21.357	6.8	106.8
PFBA	20.000	19.535	-2.3	97.7
PFBS	20.000	19.328	-3.4	96.6
PFDA	20.000	20.436	2.2	102.2
PFDoDA	20.000	18.906	-5.5	94.5
PFDS	20.000	19.112	-4.4	95.6
PFHpA	20.000	20.304	1.5	101.5
PFHpS	20.000	19.398	-3.0	97.0
PFHxA	20.000	20.013	0.1	100.1
PFHxS	20.000	18.957	-5.2	94.8
PFNA	20.000	18.683	-6.6	93.4

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Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q288-CC288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16227.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	19.254	-3.7	96.3
PFOA	20.000	18.470	-7.6	92.4
PFOS	20.000	19.294	-3.5	96.5
PFPeA	20.000	20.449	2.2	102.2
PFPeS	20.000	19.366	-3.2	96.8
PFTeDA	20.000	20.373	1.9	101.9
PFTTrDA	20.000	20.736	3.7	103.7
PFUnDA	20.000	19.070	-4.7	95.3
M4-PFOS	20.000	20.000	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q288-CC288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16229.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0629_PFC_ID_S2Q288\s2q288.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16208.d
- 2:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16209.d
- 3:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16210.d
- 4:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16211.d
- 5:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16212.d
- 6:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16213.d
- 7:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16214.d
- 8:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16215.d

Data File: 2q16229

Type : QC

Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.505	-7.5	92.5
13C2-6:2FTS	20.000	17.982	-10.1	89.9
13C2-8:2FTS	20.000	18.050	-9.8	90.2
13C2-PFDoDA	20.000	18.943	-5.3	94.7
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	19.115	-4.4	95.6
13C3-PFBS	20.000	19.883	-0.6	99.4
13C3-PFHxS	20.000	19.759	-1.2	98.8
13C4-PFBA	20.000	20.057	0.3	100.3
13C4-PFHpA	20.000	20.935	4.7	104.7
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	20.558	2.8	102.8
13C5-PFPeA	20.000	19.544	-2.3	97.7
13C6-PFDA	20.000	19.434	-2.8	97.2
13C7-PFUnDA	20.000	20.323	1.6	101.6
13C8-FOSA	20.000	20.526	2.6	102.6
13C8-PFOA	20.000	19.920	-0.4	99.6
13C8-PFOS	20.000	19.991	0.0	100.0
13C9-PFNA	20.000	21.157	5.8	105.8
4:2FTS	1.000	1.157	15.7	115.7
6:2FTS	1.000	1.033	3.3	103.3
8:2FTS	1.000	1.089	8.9	108.9
d3-MeFOSAA	20.000	19.520	-2.4	97.6
M2-PFOA	20.000	19.993	0.0	100.0
EtFOSAA	1.000	0.980	-2.0	98.0
FOSA	1.000	0.899	-10.1	89.9
MeFOSAA	1.000	0.920	-8.0	92.0
PFBA	1.000	0.982	-1.8	98.2
PFBS	1.000	1.022	2.2	102.2
PFDA	1.000	1.061	6.1	106.1
PFDoDA	1.000	1.170	17.0	117.0
PFDS	1.000	0.994	-0.6	99.4
PFHpA	1.000	1.053	5.3	105.3
PFHpS	1.000	0.934	-6.6	93.4
PFHxA	1.000	0.996	-0.4	99.6
PFHxS	1.000	1.010	1.0	101.0
PFNA	1.000	0.969	-3.1	96.9

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Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q288-CC288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16229.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	1.000	0.999	-0.1	99.9
PFOA	1.000	0.950	-5.0	95.0
PFOS	1.000	1.147	14.7	114.7
PFPeA	1.000	1.276	27.6	127.6
PFPeS	1.000	0.981	-1.9	98.1
PFTeDA	1.000	1.209	20.9	120.9
PFTTrDA	1.000	1.155	15.5	115.5
PFUnDA	1.000	1.007	0.7	100.7
M4-PFOS	20.000	19.972	-0.1	99.9
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q288-CC288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16230.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0629_PFC_ID_S2Q288\s2q288.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16208.d
- 2:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16209.d
- 3:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16210.d
- 4:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16211.d
- 5:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16212.d
- 6:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16213.d
- 7:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16214.d
- 8:D:\MassHunter\Data\0629_PFC_ID_S2Q288\2q16215.d

Data File: 2q16230

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.261	1.3	101.3
13C2-6:2FTS	20.000	19.153	-4.2	95.8
13C2-8:2FTS	20.000	19.988	-0.1	99.9
13C2-PFDoDA	20.000	19.937	-0.3	99.7
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	20.262	1.3	101.3
13C3-PFBS	20.000	21.106	5.5	105.5
13C3-PFHxS	20.000	20.356	1.8	101.8
13C4-PFBA	20.000	21.051	5.3	105.3
13C4-PFHpA	20.000	20.766	3.8	103.8
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	20.674	3.4	103.4
13C5-PFPeA	20.000	20.525	2.6	102.6
13C6-PFDA	20.000	20.174	0.9	100.9
13C7-PFUnDA	20.000	20.850	4.3	104.3
13C8-FOSA	20.000	19.541	-2.3	97.7
13C8-PFOA	20.000	20.113	0.6	100.6
13C8-PFOS	20.000	19.922	-0.4	99.6
13C9-PFNA	20.000	20.559	2.8	102.8
4:2FTS	20.000	20.590	2.9	102.9
6:2FTS	20.000	20.782	3.9	103.9
8:2FTS	20.000	20.646	3.2	103.2
d3-MeFOSAA	20.000	19.811	-0.9	99.1
M2-PFOA	20.000	19.989	-0.1	99.9
EtFOSAA	20.000	20.417	2.1	102.1
FOSA	20.000	20.537	2.7	102.7
MeFOSAA	20.000	20.736	3.7	103.7
PFBA	20.000	19.213	-3.9	96.1
PFBS	20.000	18.828	-5.9	94.1
PFDA	20.000	19.639	-1.8	98.2
PFDoDA	20.000	18.681	-6.6	93.4
PFDS	20.000	18.833	-5.8	94.2
PFHpA	20.000	20.257	1.3	101.3
PFHpS	20.000	19.654	-1.7	98.3
PFHxA	20.000	20.969	4.8	104.8
PFHxS	20.000	19.659	-1.7	98.3
PFNA	20.000	19.424	-2.9	97.1

11.6.15 11

Continuing Calibration Summary

Job Number: JC67675

Sample: S2Q288-CC288

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16230.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	19.381	-3.1	96.9
PFOA	20.000	18.813	-5.9	94.1
PFOS	20.000	20.352	1.8	101.8
PFPeA	20.000	20.595	3.0	103.0
PFPeS	20.000	19.236	-3.8	96.2
PFTeDA	20.000	20.591	3.0	103.0
PFTTrDA	20.000	20.575	2.9	102.9
PFUnDA	20.000	20.025	0.1	100.1
M4-PFOS	20.000	20.009	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Parsons Engineering Science for ILI

OBGNYA: ILI - Region 1, Denton Avenue Landfill

1-NAS-002-003

SGS Job Number: JC68071

Sampling Date: 06/13/18

Report to:

O'Brien & Gere Engineers, Inc

scott.tucker@obg.com

ATTN: Scott Tucker

Total number of pages in report: **322**



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.

A handwritten signature in black ink, appearing to read "Brian McGuire".

Brian McGuire
General Manager

Client Service contact: Kristin Degraw 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.



August 7, 2018

Ms. Sara Weishaupt
Parsons
301 Plainfield Road, Suite 350
Syracuse, NY 13212

Re: SGS North America – Dayton, NJ Job # JC67672, JC67675, JC67951, and JC68071 - Reissues

Dear Ms. Weishaupt,

The final reports for SGS job numbers JC67672, JC67675, JC67951, and JC68071 have been edited to reflect corrections to the final results. These edits have been incorporated into the attached revised reports.

Specifically, MDL reporting has been added for inorganic portions to meet client requirements.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me if I can be of further assistance in this matter.

Sincerely,

Kristin Beebe DeGraw

Project Manager



CONTINUOUS SERVICE IMPROVEMENT!

Our goal is to continuously improve our service to you. Please share your ideas about how we can serve you better at EHS.US.CustomerCare@sgs.com. Your feedback is appreciated!



SGS North America Inc. Mid-Atlantic 2235 US Highway 130 Dayton, NJ 08810, USA t+1 (0)732 329 0200

Member of the SGS Group (SGS SA)

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Sample Summary

Parsons Engineering Science for ILI

Job No: JC68071

OBGNYA: ILI - Region 1, Denton Avenue Landfill

Project No: 1-NAS-002-003

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
JC68071-1	06/13/18	09:55 ST	06/14/18	AQ	Ground Water	1-NAS-002-003-01
JC68071-2	06/13/18	12:40 ST	06/14/18	AQ	Ground Water	1-NAS-002-003-02
JC68071-3	06/13/18	10:05 ST	06/14/18	AQ	Field Blank Water	1-NAS-002-003-03
JC68071-4	06/13/18	10:30 ST	06/14/18	AQ	Equipment Blank	1-NAS-002-003-04
JC68071-5	06/13/18	12:40 ST	06/14/18	AQ	Trip Blank Water	1-NAS-002-003-05

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Parsons Engineering Science for ILI

Job No JC68071

Site: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Report Date 7/2/2018 1:04:10 PM

On 06/14/2018, 2 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) and 1 Equipment were received at SGS North America Inc. at a maximum corrected temperature of 3.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC68071 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.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ

Batch ID: V2C7103

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC68302-17DUP, JC68302-18MS were used as the QC samples indicated.

Matrix: AQ

Batch ID: V4B3444

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC68067-1MS, JC68067-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JC68071-1 for Bromoform: Associated CCV outside of control limits high, sample was ND.
- JC68071-5 for Bromoform: Associated CCV outside of control limits high, sample was ND.

MS Semi-volatiles By Method EPA 537M BY ID

Matrix: AQ

Batch ID: F:OP70531

- The data for EPA 537M BY ID meets quality control requirements.
- JC68071-4: Analysis performed at SGS Orlando, FL.
- JC68071-3: Analysis performed at SGS Orlando, FL.

Matrix: AQ

Batch ID: F:OP70608

- The data for EPA 537M BY ID meets quality control requirements.
- JC68071-2: Analysis performed at SGS Orlando, FL.
- JC68071-1: Analysis performed at SGS Orlando, FL.
- JC68071-1 for PFOSA: Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.
- JC68071-2 for PFOSA: Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

MS Semi-volatiles By Method SW846 8270D BY SIM

Matrix: AQ

Batch ID: OP12842A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- OP12842A-BSD12 for Benzo(g,h,i)perylene: Analytical precision exceeds in-house control limits.
- JC68071-1 for Dibenzo(a,h)anthracene: Associated CCV outside of control limits high, sample was ND.
- OP12842A-BSD12 for Indeno(1,2,3-cd)pyrene: Analytical precision exceeds in-house control limits.
- OP12842A-BSD12 for Benzo(k)fluoranthene: Analytical precision exceeds in-house control limits.
- JC68071-2 for 1,4-Dioxane: Associated CCV outside of control limits high.
- OP12842A-BSD12 for Benzo(a)pyrene: Analytical precision exceeds in-house control limits.
- JC68071-2 for Dibenzo(a,h)anthracene: Associated CCV outside of control limits high, sample was ND.
- OP12842A-BSD12 for Benzo(b)fluoranthene: Analytical precision exceeds in-house control limits.
- JC68071-1 for 1,4-Dioxane: Associated CCV outside of control limits high.
- OP12842A-BSD12 for Dibenzo(a,h)anthracene: Analytical precision exceeds in-house control limits.

Metals Analysis By Method SW846 6010C

Matrix: AQ

Batch ID: MP7714

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67951-1MS, JC67951-1MSD, JC67951-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Chromium, Nickel are outside control limits for sample MP7714-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP7714-SD1 for Zinc: Serial dilution indicates possible matrix interference.

Metals Analysis By Method SW846 6020A

Matrix: AQ

Batch ID: MP7714A

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67951-2MS, JC67951-2MSD, JC67951-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Thallium are outside control limits for sample MP7714A-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 7470A

Matrix: AQ

Batch ID: MP7682

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC68089-1DUP, JC68089-1MS, JC68089-1MSD were used as the QC samples for metals.

General Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP14066

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67877-1DUP, JC67877-1MS, JC67877-1DUP were used as the QC samples for Chloride, Sulfate, Bromide, Chloride.
- RPD(s) for Duplicate for Bromide are outside control limits for sample GP14066-D1. RPD acceptable due to low duplicate and sample concentrations.

General Chemistry By Method SM2320 B-11

Matrix: AQ **Batch ID:** GN81698

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67999-1DUP were used as the QC samples for Alkalinity, Total as CaCO₃.
- JC68071-2 for Alkalinity, Total as CaCO₃: Sample was titrated to a final pH of 4.5.
- JC68071-1 for Alkalinity, Total as CaCO₃: Sample was titrated to a final pH of 4.5.

General Chemistry By Method SM2340 C-11

Matrix: AQ **Batch ID:** GN81587

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67951-2DUP, JC67951-2MS were used as the QC samples for Hardness, Total as CaCO₃.

General Chemistry By Method SM2540 C-11

Matrix: AQ **Batch ID:** GN81547

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC68073-5DUP were used as the QC samples for Solids, Total Dissolved.

General Chemistry By Method SM4500NH3 H-11LACHAT

Matrix: AQ **Batch ID:** GP13874

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67995-1DUP, JC67995-1MS, JC67995-1MSD were used as the QC samples for Nitrogen, Ammonia.

General Chemistry By Method SM5220 C-11,HACH8000

Matrix: AQ **Batch ID:** GP13794

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC67951-2DUP, JC67951-2MS were used as the QC samples for Chemical Oxygen Demand.

General Chemistry By Method SW846 9060A

Matrix: AQ

Batch ID: GP13839

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC68071-1MS, JC68071-1MSD were used as the QC samples for Total Organic Carbon.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the 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.

SGS North America Inc. 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 SGS North America Inc indicated via signature on the report cover

Monday, July 02, 2018

Page 4 of 4

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS Dayton, NJ

Job No: JC68071

Site: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Report Date: 6/28/2018 1:43:27

3 Sample(s) and 1 Field Blank(s) were collected on 06/13/2018 and were received at SGS North America Inc - Orlando on 06/16/2018 properly preserved, at 4.6 Deg. C and intact. These Samples received an SGS Orlando job number of JC68071. 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.

MS Semi-volatiles By Method EPA 537M BY ID

Matrix: AQ

Batch ID: OP70531

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) JC67755-2MS, JC67755-2MSD were used as the QC samples indicated.

Sample(s) JC68071-1, JC68071-2, OP70531-MS have surrogates outside control limits.

OP70531-MS for 13C8-FOSA: Outside control limits.

JC68071-1: Confirmation run for surrogate recoveries.

JC68071-2: Confirmation run for surrogate recoveries.

Matrix: AQ

Batch ID: OP70608

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) JC67672-2MS, JC67672-3DUP were used as the QC samples indicated.

Sample(s) JC68071-1, JC68071-2, OP70608-MS have surrogates outside control limits.

JC68071-1 for PFOSA: Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

JC68071-1 for 13C8-FOSA: Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

JC68071-2 for PFOSA: Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

JC68071-2 for 13C8-FOSA: Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

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

Narrative prepared by:

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: JC68071
Account: Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Collected: 06/13/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

JC68071-1 1-NAS-002-003-01

Benzene	0.31 J	0.50	0.17	ug/l	SW846 8260C
Chlorobenzene	7.1	1.0	0.24	ug/l	SW846 8260C
1,4-Dichlorobenzene	1.2	1.0	0.50	ug/l	SW846 8260C
Perfluorobutanoic acid ^a	14.4	8.0	2.0	ng/l	EPA 537M BY ID
Perfluoropentanoic acid ^a	30.7	4.0	1.5	ng/l	EPA 537M BY ID
Perfluorohexanoic acid ^a	23.3	4.0	1.0	ng/l	EPA 537M BY ID
Perfluoroheptanoic acid ^a	16.2	2.0	1.0	ng/l	EPA 537M BY ID
Perfluorooctanoic acid ^a	275	2.0	1.0	ng/l	EPA 537M BY ID
Perfluorononanoic acid ^a	3.73	2.0	1.0	ng/l	EPA 537M BY ID
Perfluorodecanoic acid ^a	1.46 J	4.0	1.0	ng/l	EPA 537M BY ID
Perfluoroundecanoic acid ^a	2.34 J	4.0	1.0	ng/l	EPA 537M BY ID
Perfluorobutanesulfonic acid ^a	7.09	2.0	1.0	ng/l	EPA 537M BY ID
Perfluorohexanesulfonic acid ^a	6.60	2.0	1.0	ng/l	EPA 537M BY ID
Perfluoroheptanesulfonic acid ^a	1.20 J	4.0	1.0	ng/l	EPA 537M BY ID
Perfluorooctanesulfonic acid ^a	30.5	2.0	1.5	ng/l	EPA 537M BY ID
EtFOSAA ^a	9.12 J	20	4.0	ng/l	EPA 537M BY ID
Acenaphthene	0.0800 J	0.11	0.026	ug/l	SW846 8270D BY SIM
Naphthalene	0.0969 J	0.11	0.031	ug/l	SW846 8270D BY SIM
1,4-Dioxane ^b	1.82	0.11	0.051	ug/l	SW846 8270D BY SIM
Arsenic	9.3	1.0	0.33	ug/l	SW846 6020A
Barium	168 J	200	1.3	ug/l	SW846 6010C
Boron	559	100	13	ug/l	SW846 6010C
Chromium	2.4 J	10	0.85	ug/l	SW846 6010C
Iron	31800	100	32	ug/l	SW846 6010C
Manganese	522	15	0.42	ug/l	SW846 6010C
Nickel	2.1 J	10	1.3	ug/l	SW846 6010C
Alkalinity, Total as CaCO ₃ ^c	378	5.0	1.1	mg/l	SM2320 B-11
Bromide	0.88	0.50	0.060	mg/l	EPA 300/SW846 9056A
Chemical Oxygen Demand	30.0	20	6.3	mg/l	SM5220 C-11,HACH8000
Chloride	131	20	0.70	mg/l	EPA 300/SW846 9056A
Hardness, Total as CaCO ₃	165	4.0	2.5	mg/l	SM2340 C-11
Nitrogen, Ammonia	14.5	2.0	1.4	mg/l	SM4500NH3 H-11LACHAT
Solids, Total Dissolved	533	10	1.8	mg/l	SM2540 C-11
Sulfate	2.1	2.0	0.53	mg/l	EPA 300/SW846 9056A
Total Organic Carbon	7.7	1.0	0.60	mg/l	SW846 9060A

JC68071-2 1-NAS-002-003-02

Chlorobenzene	7.4	1.0	0.24	ug/l	SW846 8260C
1,4-Dichlorobenzene	1.4	1.0	0.50	ug/l	SW846 8260C
Perfluorobutanoic acid ^a	19.4	8.0	2.0	ng/l	EPA 537M BY ID
Perfluoropentanoic acid ^a	43.1	4.0	1.5	ng/l	EPA 537M BY ID
Perfluorohexanoic acid ^a	23.9	4.0	1.0	ng/l	EPA 537M BY ID

Summary of Hits

Job Number: JC68071
Account: Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Collected: 06/13/18



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method	
		Perfluoroheptanoic acid ^a	22.1	2.0	1.0	ng/l	EPA 537M BY ID
		Perfluorooctanoic acid ^a	182	2.0	1.0	ng/l	EPA 537M BY ID
		Perfluorononanoic acid ^a	1.93 J	2.0	1.0	ng/l	EPA 537M BY ID
		Perfluoroundecanoic acid ^a	1.10 J	4.0	1.0	ng/l	EPA 537M BY ID
		Perfluorobutanesulfonic acid ^a	5.43	2.0	1.0	ng/l	EPA 537M BY ID
		Perfluorohexanesulfonic acid ^a	5.58	2.0	1.0	ng/l	EPA 537M BY ID
		Perfluorooctanesulfonic acid ^a	9.45	2.0	1.5	ng/l	EPA 537M BY ID
		6:2 Fluorotelomer sulfonate ^a	3.89 J	8.0	2.0	ng/l	EPA 537M BY ID
		Acenaphthene	0.0320 J	0.13	0.031	ug/l	SW846 8270D BY SIM
		Fluoranthene	0.0293 J	0.13	0.028	ug/l	SW846 8270D BY SIM
		Naphthalene	0.141	0.13	0.037	ug/l	SW846 8270D BY SIM
		Phenanthrene	0.0363 J	0.13	0.029	ug/l	SW846 8270D BY SIM
		Pyrene	0.0269 J	0.13	0.024	ug/l	SW846 8270D BY SIM
		1,4-Dioxane ^b	3.99	0.13	0.061	ug/l	SW846 8270D BY SIM
		Arsenic	8.7	1.0	0.33	ug/l	SW846 6020A
		Barium	101 J	200	1.3	ug/l	SW846 6010C
		Boron	342	100	13	ug/l	SW846 6010C
		Chromium	4.1 J	10	0.85	ug/l	SW846 6010C
		Iron	31200	100	32	ug/l	SW846 6010C
		Lead	3.8	3.0	2.6	ug/l	SW846 6010C
		Manganese	380	15	0.42	ug/l	SW846 6010C
		Nickel	8.1 J	10	1.3	ug/l	SW846 6010C
		Zinc	5.8 J	20	4.0	ug/l	SW846 6010C
		Alkalinity, Total as CaCO ₃ ^c	250	5.0	1.1	mg/l	SM2320 B-11
		Bromide	1.2	0.50	0.060	mg/l	EPA 300/SW846 9056A
		Chemical Oxygen Demand	32.5	20	6.3	mg/l	SM5220 C-11,HACH8000
		Chloride	79.1	20	0.70	mg/l	EPA 300/SW846 9056A
		Hardness, Total as CaCO ₃	132	4.0	2.5	mg/l	SM2340 C-11
		Nitrogen, Ammonia	31.4	4.0	2.8	mg/l	SM4500NH3 H-11LACHAT
		Solids, Total Dissolved	337	10	1.8	mg/l	SM2540 C-11
		Sulfate	5.9	2.0	0.53	mg/l	EPA 300/SW846 9056A
		Total Organic Carbon	9.6	1.0	0.60	mg/l	SW846 9060A

JC68071-3 1-NAS-002-003-03

		Perfluorohexanesulfonic acid ^a	1.23 J	1.9	0.96	ng/l	EPA 537M BY ID
		Perfluorooctanesulfonic acid ^a	12.2	1.9	1.4	ng/l	EPA 537M BY ID

JC68071-4 1-NAS-002-003-04

		Perfluorooctanesulfonic acid ^a	3.35	1.9	1.4	ng/l	EPA 537M BY ID
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JC68071-5 1-NAS-002-003-05

No hits reported in this sample.

Summary of Hits

Job Number: JC68071
Account: Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Collected: 06/13/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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- (a) Analysis performed at SGS Orlando, FL.
- (b) Associated CCV outside of control limits high.
- (c) Sample was titrated to a final pH of 4.5.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	1-NAS-002-003-01	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-1	Date Received:	06/14/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B82844.D	1	06/17/18 19:02	HT	n/a	n/a	V4B3444
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	1.9	ug/l	
71-43-2	Benzene	0.31	0.50	0.17	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform ^a	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	7.1	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	1.2	1.0	0.50	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	1.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
74-88-4	Iodomethane	ND	2.0	0.27	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/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: 1-NAS-002-003-01		Date Sampled: 06/13/18
Lab Sample ID: JC68071-1		Date Received: 06/14/18
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-95-3	Methylene bromide	ND	1.0	0.45	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.47	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.57	400	ug/l	J
	Total TIC, Volatile		0	ug/l	

(a) Associated CCV outside of control limits high, sample was ND.

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:	1-NAS-002-003-01	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-1	Date Received:	06/14/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P69280.D	1	06/29/18 07:10	CS	06/17/18 07:20	OP12842A	E3P3285
Run #2							

Run #	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.0800	0.11	0.026	ug/l	J
208-96-8	Acenaphthylene	ND	0.11	0.022	ug/l	
120-12-7	Anthracene	ND	0.11	0.021	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.053	0.035	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.11	0.046	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.037	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.035	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene ^a	ND	0.11	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.023	ug/l	
86-73-7	Fluorene	ND	0.11	0.026	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.040	ug/l	
91-20-3	Naphthalene	0.0969	0.11	0.031	ug/l	J
85-01-8	Phenanthrene	ND	0.11	0.024	ug/l	
129-00-0	Pyrene	ND	0.11	0.020	ug/l	
123-91-1	1,4-Dioxane ^b	1.82	0.11	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		29-124%
321-60-8	2-Fluorobiphenyl	68%		23-122%
1718-51-0	Terphenyl-d14	81%		22-130%

(a) Associated CCV outside of control limits high, sample was ND.

(b) Associated CCV outside of control limits high.

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:	1-NAS-002-003-01	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-1	Date Received:	06/14/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 537M BY ID EPA 537 MOD		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2Q16103.D	1	06/27/18 20:22	AFL	06/22/18 08:30	F:OP70608	F:S2Q286
Run #2 ^b	2Q15744.D	1	06/21/18 00:03	AFL	06/18/18 08:30	F:OP70531	F:S2Q278

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	260 ml	1.0 ml

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	14.4	8.0	2.0	ng/l	
2706-90-3	Perfluoropentanoic acid	30.7	4.0	1.5	ng/l	
307-24-4	Perfluorohexanoic acid	23.3	4.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	16.2	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	275	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	3.73	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	1.46	4.0	1.0	ng/l	J
2058-94-8	Perfluoroundecanoic acid	2.34	4.0	1.0	ng/l	J
307-55-1	Perfluorododecanoic acid	ND	4.0	1.5	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	4.0	1.0	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	4.0	1.0	ng/l	
375-73-5	Perfluorobutanesulfonic acid	7.09	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	6.60	2.0	1.0	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.20	4.0	1.0	ng/l	J
1763-23-1	Perfluorooctanesulfonic acid	30.5	2.0	1.5	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	4.0	1.0	ng/l	
754-91-6	PFOSA ^c	ND	4.0	1.0	ng/l	
2355-31-9	MeFOSAA	ND	20	4.0	ng/l	
2991-50-6	EtFOSAA	9.12	20	4.0	ng/l	J
27619-97-2	6:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	62%	52%	30-140%
	13C5-PFPeA	61%	53%	40-140%
	13C5-PFHxA	62%	57%	50-150%
	13C4-PFHpA	63%	62%	50-150%
	13C8-PFOA	66%	62%	50-150%
	13C9-PFNA	76%	70%	50-150%
	13C6-PFDA	83%	61%	50-150%
	13C7-PFUnDA	85%	33%	50-150%

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: 1-NAS-002-003-01		Date Sampled: 06/13/18
Lab Sample ID: JC68071-1		Date Received: 06/14/18
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: EPA 537M BY ID EPA 537 MOD		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

PFAS List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFDoDA	84%	20%	50-150%
	13C2-PFTeDA	85%	8%	40-150%
	13C3-PFBS	67%	56%	50-150%
	13C3-PFHxS	64%	53%	50-150%
	13C8-PFOS	74%	45%	50-150%
	13C8-FOSA	9% ^d	20%	30-140%
	d3-MeFOSAA	83%	38%	50-150%
	13C2-6:2FTS	69%	67%	50-150%
	13C2-8:2FTS	87%	85%	50-150%

- (a) Analysis performed at SGS Orlando, FL.
- (b) Confirmation run for surrogate recoveries. Analysis performed at SGS Orlando, FL.
- (c) Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.
- (d) Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

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: 1-NAS-002-003-01 Lab Sample ID: JC68071-1 Matrix: AQ - Ground Water Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill	Date Sampled: 06/13/18 Date Received: 06/14/18 Percent Solids: n/a
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Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.3	1.0	0.33	ug/l	2	06/20/18	06/21/18 ZC	SW846 6020A ³	SW846 3010A ⁶
Barium	168 J	200	1.3	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Beryllium	ND	1.0	0.40	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Boron	559	100	13	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Chromium	2.4 J	10	0.85	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Copper	ND	10	3.2	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Iron	31800	100	32	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Lead	ND	3.0	2.6	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Manganese	522	15	0.42	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Mercury	ND	0.20	0.13	ug/l	1	06/16/18	06/16/18 JA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	2.1 J	10	1.3	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Selenium	ND	10	6.6	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Thallium	ND	1.0	0.047	ug/l	2	06/20/18	06/21/18 ZC	SW846 6020A ³	SW846 3010A ⁶
Zinc	ND	20	4.0	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵

- (1) Instrument QC Batch: MA44661
- (2) Instrument QC Batch: MA44684
- (3) Instrument QC Batch: MA44694
- (4) Prep QC Batch: MP7682
- (5) Prep QC Batch: MP7714
- (6) Prep QC Batch: MP7714A

RL = Reporting Limit
 MDL = Method Detection Limit

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

4.1
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Report of Analysis

Client Sample ID: 1-NAS-002-003-01 Lab Sample ID: JC68071-1 Matrix: AQ - Ground Water Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill	Date Sampled: 06/13/18 Date Received: 06/14/18 Percent Solids: n/a
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General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO ₃ ^a	378	5.0	1.1	mg/l	1	06/21/18 09:51	CD	SM2320 B-11
Bromide	0.88	0.50	0.060	mg/l	1	06/28/18 19:58	NV	EPA 300/SW846 9056A
Chemical Oxygen Demand	30.0	20	6.3	mg/l	1	06/15/18 15:00	RP	SM5220 C-11, HACH8000
Chloride	131	20	0.70	mg/l	10	07/01/18 04:08	NV	EPA 300/SW846 9056A
Hardness, Total as CaCO ₃	165	4.0	2.5	mg/l	1	06/19/18 12:59	ST	SM2340 C-11
Nitrogen, Ammonia	14.5	2.0	1.4	mg/l	10	06/19/18 14:26	BM	SM4500NH3 H-11 LACHAT
Solids, Total Dissolved	533	10	1.8	mg/l	1	06/18/18 07:43	RC	SM2540 C-11
Sulfate	2.1	2.0	0.53	mg/l	1	06/28/18 19:58	NV	EPA 300/SW846 9056A
Total Organic Carbon	7.7	1.0	0.60	mg/l	1	06/18/18 12:18	CD	SW846 9060A

(a) Sample was titrated to a final pH of 4.5.

RL = Reporting Limit
 MDL = Method Detection Limit

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

4.1
4

Report of Analysis

Client Sample ID:	1-NAS-002-003-02	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-2	Date Received:	06/14/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C159956.D	1	06/20/18 11:24	HT	n/a	n/a	V2C7103
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	1.9	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	7.4	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	1.4	1.0	0.50	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	1.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
74-88-4	Iodomethane	ND	2.0	0.27	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/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:	1-NAS-002-003-02	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-2	Date Received:	06/14/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-95-3	Methylene bromide	ND	1.0	0.45	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.47	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	113%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/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:	1-NAS-002-003-02	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-2	Date Received:	06/14/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P69281.D	1	06/29/18 07:32	CS	06/17/18 07:20	OP12842A	E3P3285
Run #2							

Run #	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.0320	0.13	0.031	ug/l	J
208-96-8	Acenaphthylene	ND	0.13	0.026	ug/l	
120-12-7	Anthracene	ND	0.13	0.024	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.063	0.029	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.063	0.042	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.13	0.054	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.13	0.045	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.13	0.041	ug/l	
218-01-9	Chrysene	ND	0.13	0.033	ug/l	
53-70-3	Dibenzo(a,h)anthracene ^a	ND	0.13	0.045	ug/l	
206-44-0	Fluoranthene	0.0293	0.13	0.028	ug/l	J
86-73-7	Fluorene	ND	0.13	0.031	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.13	0.048	ug/l	
91-20-3	Naphthalene	0.141	0.13	0.037	ug/l	
85-01-8	Phenanthrene	0.0363	0.13	0.029	ug/l	J
129-00-0	Pyrene	0.0269	0.13	0.024	ug/l	J
123-91-1	1,4-Dioxane ^b	3.99	0.13	0.061	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		29-124%
321-60-8	2-Fluorobiphenyl	69%		23-122%
1718-51-0	Terphenyl-d14	83%		22-130%

(a) Associated CCV outside of control limits high, sample was ND.

(b) Associated CCV outside of control limits high.

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:	1-NAS-002-003-02	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-2	Date Received:	06/14/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 537M BY ID EPA 537 MOD		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2Q16104.D	1	06/27/18 20:40	AFL	06/22/18 08:30	F:OP70608	F:S2Q286
Run #2 ^b	2Q15745.D	1	06/21/18 00:23	AFL	06/18/18 08:30	F:OP70531	F:S2Q278

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	19.4	8.0	2.0	ng/l	
2706-90-3	Perfluoropentanoic acid	43.1	4.0	1.5	ng/l	
307-24-4	Perfluorohexanoic acid	23.9	4.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	22.1	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	182	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	1.93	2.0	1.0	ng/l	J
335-76-2	Perfluorodecanoic acid	ND	4.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.10	4.0	1.0	ng/l	J
307-55-1	Perfluorododecanoic acid	ND	4.0	1.5	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	4.0	1.0	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	4.0	1.0	ng/l	
375-73-5	Perfluorobutanesulfonic acid	5.43	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	5.58	2.0	1.0	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	4.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	9.45	2.0	1.5	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	4.0	1.0	ng/l	
754-91-6	PFOSA ^c	ND	4.0	1.0	ng/l	
2355-31-9	MeFOSAA	ND	20	4.0	ng/l	
2991-50-6	EtFOSAA	ND	20	4.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	3.89	8.0	2.0	ng/l	J
39108-34-4	8:2 Fluorotelomer sulfonate	ND	8.0	2.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	64%	56%	30-140%
	13C5-PFPeA	63%	56%	40-140%
	13C5-PFHxA	63%	60%	50-150%
	13C4-PFHpA	62%	64%	50-150%
	13C8-PFOA	71%	68%	50-150%
	13C9-PFNA	88%	76%	50-150%
	13C6-PFDA	91%	82%	50-150%
	13C7-PFUnDA	89%	53%	50-150%

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: 1-NAS-002-003-02		Date Sampled: 06/13/18
Lab Sample ID: JC68071-2		Date Received: 06/14/18
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: EPA 537M BY ID EPA 537 MOD		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

PFAS List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFDoDA	84%	37%	50-150%
	13C2-PFTeDA	89%	21%	40-150%
	13C3-PFBS	69%	58%	50-150%
	13C3-PFHxS	66%	57%	50-150%
	13C8-PFOS	84%	64%	50-150%
	13C8-FOSA	19% ^d	29%	30-140%
	d3-MeFOSAA	84%	59%	50-150%
	13C2-6:2FTS	74%	72%	50-150%
	13C2-8:2FTS	96%	112%	50-150%

- (a) Analysis performed at SGS Orlando, FL.
- (b) Confirmation run for surrogate recoveries. Analysis performed at SGS Orlando, FL.
- (c) Associated ID Standard outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.
- (d) Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

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

4.2
4

Report of Analysis

Client Sample ID: 1-NAS-002-003-02 Lab Sample ID: JC68071-2 Matrix: AQ - Ground Water Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill	Date Sampled: 06/13/18 Date Received: 06/14/18 Percent Solids: n/a
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Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.7	1.0	0.33	ug/l	2	06/20/18	06/21/18 ZC	SW846 6020A ³	SW846 3010A ⁶
Barium	101 J	200	1.3	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Beryllium	ND	1.0	0.40	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Boron	342	100	13	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Chromium	4.1 J	10	0.85	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Copper	ND	10	3.2	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Iron	31200	100	32	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Lead	3.8	3.0	2.6	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Manganese	380	15	0.42	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Mercury	ND	0.20	0.13	ug/l	1	06/16/18	06/16/18 JA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	8.1 J	10	1.3	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Selenium	ND	10	6.6	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵
Thallium	ND	1.0	0.047	ug/l	2	06/20/18	06/21/18 ZC	SW846 6020A ³	SW846 3010A ⁶
Zinc	5.8 J	20	4.0	ug/l	1	06/19/18	06/20/18 ND	SW846 6010C ²	SW846 3010A ⁵

- (1) Instrument QC Batch: MA44661
- (2) Instrument QC Batch: MA44684
- (3) Instrument QC Batch: MA44694
- (4) Prep QC Batch: MP7682
- (5) Prep QC Batch: MP7714
- (6) Prep QC Batch: MP7714A

RL = Reporting Limit
 MDL = Method Detection Limit

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

4.2
4

Report of Analysis

Client Sample ID: 1-NAS-002-003-02 Lab Sample ID: JC68071-2 Matrix: AQ - Ground Water Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill	Date Sampled: 06/13/18 Date Received: 06/14/18 Percent Solids: n/a
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General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO ₃ ^a	250	5.0	1.1	mg/l	1	06/21/18 09:51 CD	SM2320	B-11
Bromide	1.2	0.50	0.060	mg/l	1	06/28/18 20:26 NV	EPA 300/SW846	9056A
Chemical Oxygen Demand	32.5	20	6.3	mg/l	1	06/15/18 15:00 RP	SM5220	C-11, HACH8000
Chloride	79.1	20	0.70	mg/l	10	07/01/18 04:36 NV	EPA 300/SW846	9056A
Hardness, Total as CaCO ₃	132	4.0	2.5	mg/l	1	06/19/18 12:59 ST	SM2340	C-11
Nitrogen, Ammonia	31.4	4.0	2.8	mg/l	20	06/19/18 14:29 BM	SM4500NH3	H-11 LACHAT
Solids, Total Dissolved	337	10	1.8	mg/l	1	06/18/18 07:43 RC	SM2540	C-11
Sulfate	5.9	2.0	0.53	mg/l	1	06/28/18 20:26 NV	EPA 300/SW846	9056A
Total Organic Carbon	9.6	1.0	0.60	mg/l	1	06/18/18 12:56 CD	SW846	9060A

(a) Sample was titrated to a final pH of 4.5.

RL = Reporting Limit
 MDL = Method Detection Limit

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

4.2
4

Report of Analysis

Client Sample ID:	1-NAS-002-003-03	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-3	Date Received:	06/14/18
Matrix:	AQ - Field Blank Water	Percent Solids:	n/a
Method:	EPA 537M BY ID EPA 537 MOD		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2Q15746.D	1	06/21/18 00:43	AFL	06/18/18 08:30	F:OP70531	F:S2Q278
Run #2							

	Initial Volume	Final Volume
Run #1	260 ml	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	7.7	1.9	ng/l	
2706-90-3	Perfluoropentanoic acid	ND	3.8	1.4	ng/l	
307-24-4	Perfluorohexanoic acid	ND	3.8	0.96	ng/l	
375-85-9	Perfluoroheptanoic acid	ND	1.9	0.96	ng/l	
335-67-1	Perfluorooctanoic acid	ND	1.9	0.96	ng/l	
375-95-1	Perfluorononanoic acid	ND	1.9	0.96	ng/l	
335-76-2	Perfluorodecanoic acid	ND	3.8	0.96	ng/l	
2058-94-8	Perfluoroundecanoic acid	ND	3.8	0.96	ng/l	
307-55-1	Perfluorododecanoic acid	ND	3.8	1.4	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	3.8	0.96	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	3.8	0.96	ng/l	
375-73-5	Perfluorobutanesulfonic acid	ND	1.9	0.96	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.23	1.9	0.96	ng/l	J
375-92-8	Perfluoroheptanesulfonic acid	ND	3.8	0.96	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	12.2	1.9	1.4	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	3.8	0.96	ng/l	
754-91-6	PFOSA	ND	3.8	0.96	ng/l	
2355-31-9	MeFOSAA	ND	19	3.8	ng/l	
2991-50-6	EtFOSAA	ND	19	3.8	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	7.7	1.9	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	7.7	1.9	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	88%		30-140%
	13C5-PFPeA	87%		40-140%
	13C5-PFHxA	91%		50-150%
	13C4-PFHpA	96%		50-150%
	13C8-PFOA	105%		50-150%
	13C9-PFNA	93%		50-150%
	13C6-PFDA	87%		50-150%
	13C7-PFUnDA	78%		50-150%

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: 1-NAS-002-003-03		Date Sampled: 06/13/18
Lab Sample ID: JC68071-3		Date Received: 06/14/18
Matrix: AQ - Field Blank Water		Percent Solids: n/a
Method: EPA 537M BY ID EPA 537 MOD		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

PFAS List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFDoDA	73%		50-150%
	13C2-PFTeDA	74%		40-150%
	13C3-PFBS	92%		50-150%
	13C3-PFHxS	94%		50-150%
	13C8-PFOS	85%		50-150%
	13C8-FOSA	89%		30-140%
	d3-MeFOSAA	87%		50-150%
	13C2-6:2FTS	95%		50-150%
	13C2-8:2FTS	82%		50-150%

(a) Analysis performed at SGS Orlando, FL.

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

4.3
4

Report of Analysis

Client Sample ID:	1-NAS-002-003-04	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-4	Date Received:	06/14/18
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	EPA 537M BY ID EPA 537 MOD		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2Q15747.D	1	06/21/18 01:04	AFL	06/18/18 08:30	F:OP70531	F:S2Q278
Run #2							

	Initial Volume	Final Volume
Run #1	260 ml	1.0 ml
Run #2		

PFAS List

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	7.7	1.9	ng/l	
2706-90-3	Perfluoropentanoic acid	ND	3.8	1.4	ng/l	
307-24-4	Perfluorohexanoic acid	ND	3.8	0.96	ng/l	
375-85-9	Perfluoroheptanoic acid	ND	1.9	0.96	ng/l	
335-67-1	Perfluorooctanoic acid	ND	1.9	0.96	ng/l	
375-95-1	Perfluorononanoic acid	ND	1.9	0.96	ng/l	
335-76-2	Perfluorodecanoic acid	ND	3.8	0.96	ng/l	
2058-94-8	Perfluoroundecanoic acid	ND	3.8	0.96	ng/l	
307-55-1	Perfluorododecanoic acid	ND	3.8	1.4	ng/l	
72629-94-8	Perfluorotridecanoic acid	ND	3.8	0.96	ng/l	
376-06-7	Perfluorotetradecanoic acid	ND	3.8	0.96	ng/l	
375-73-5	Perfluorobutanesulfonic acid	ND	1.9	0.96	ng/l	
355-46-4	Perfluorohexanesulfonic acid	ND	1.9	0.96	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	3.8	0.96	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	3.35	1.9	1.4	ng/l	
335-77-3	Perfluorodecanesulfonic acid	ND	3.8	0.96	ng/l	
754-91-6	PFOSA	ND	3.8	0.96	ng/l	
2355-31-9	MeFOSAA	ND	19	3.8	ng/l	
2991-50-6	EtFOSAA	ND	19	3.8	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	7.7	1.9	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	7.7	1.9	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	88%		30-140%
	13C5-PFPeA	87%		40-140%
	13C5-PFHxA	92%		50-150%
	13C4-PFHpA	95%		50-150%
	13C8-PFOA	100%		50-150%
	13C9-PFNA	93%		50-150%
	13C6-PFDA	86%		50-150%
	13C7-PFUnDA	79%		50-150%

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: 1-NAS-002-003-04		Date Sampled: 06/13/18
Lab Sample ID: JC68071-4		Date Received: 06/14/18
Matrix: AQ - Equipment Blank		Percent Solids: n/a
Method: EPA 537M BY ID EPA 537 MOD		
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill		

PFAS List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFDoDA	76%		50-150%
	13C2-PFTeDA	78%		40-150%
	13C3-PFBS	92%		50-150%
	13C3-PFHxS	95%		50-150%
	13C8-PFOS	86%		50-150%
	13C8-FOSA	93%		30-140%
	d3-MeFOSAA	88%		50-150%
	13C2-6:2FTS	94%		50-150%
	13C2-8:2FTS	83%		50-150%

(a) Analysis performed at SGS Orlando, FL.

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

4.4
4

Report of Analysis

Client Sample ID:	1-NAS-002-003-05	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-5	Date Received:	06/14/18
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B82839.D	1	06/17/18 16:41	HT	n/a	n/a	V4B3444
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	1.9	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform ^a	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	1.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
74-88-4	Iodomethane	ND	2.0	0.27	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/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:	1-NAS-002-003-05	Date Sampled:	06/13/18
Lab Sample ID:	JC68071-5	Date Received:	06/14/18
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	OBGNYA: ILI - Region 1, Denton Avenue Landfill		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-95-3	Methylene bromide	ND	1.0	0.45	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.19	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.47	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.54	6.3	ug/l	J
	Total TIC, Volatile		0	ug/l	

(a) Associated CCV outside of control limits high, sample was ND.

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

GW, FB, EB, WB

KB-06818-106

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CHAIN-OF-CUSTODY / Analytical Request Document

JC68071

Section A Laboratory Information				Section B Client Information							COC #:		1-NAS-002-003									
Lab Name: SGS - Accutest				Company: Parsons/OBG							Project Name:		ILI - Region 1									
Attention: Tammy Esposito McCloskey				Attention: Scott Tucker							Project Site:		Denton Ave									
Address: Route 2235 Route 130; Dayton, NJ 08810				Address: 333 West Washington Street, PO Box 4873 Syracuse, NY 13221							Project Number:		450619									
Phone: 732-329-0200				Phone: 315-956-6345							Email:		Scott.Tucker@obg.com									
Email:																						
Section C Deliverable Requirements				Section D Additional Information							Preservative codes (for water only):											
Report To: Scott.Tucker@obg.com				Purchase Order No:							0 1 0 2 3 1 0 0 3											
Copy To: Lorraine.Weber@parsons.com; Laura.Drachenberg@parsons.com Maryanne.Kosciewicz@parsons.com; Heather.Fettig@parsons.com				TAT - 10 Day							Modified Baseline VOCs - 8260 TC - 9080A COD - 410.4 Ammonia 350.1 (NH3)											
Deliverables: Level 2, CAT B Report, NYSDEC EQUIS EDD																						
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID MUST BE UNIQUE	Sample Date	Sample Time	Sample Purpose	Sample Matrix	Sample Type	# of Cont.	M3MSD	Composite (Y/N)	#Bottles	0	1	2	3	1	0	0	3		
1	1-NAS-002-MW-2	57.46	57.46	1-NAS-002-003-01	6/13/18	3:55	-	WG	N	17			X	X	X	X	X	X	X	X	X	
2	1-NAS-002-MW-3	59.11	59.11	1-NAS-002-003-02		1240	-	WG	N	13			X	X	X	X	X	X	X	X	X	
3	1-NAS-002-FIELDQC	-	-	1-NAS-002-003-03		1005	-	WQ	FB	2			X									
4	1-NAS-002-FIELDQC	-	-	1-NAS-002-003-04		1030	-	WQ	EB	2			X									
5	1-NAS-002-FIELDQC	-	-	1-NAS-002-003-05		1300	-	WQ	TB	2			X									
6																						
7																						
8																						
9																						
10																						
Special Instructions:				INITIAL ASSESSMENT <i>SR TA</i>							E88 AK3 A37 U756 C54 G3874 SUB											
Special Instructions:				LABEL VERIFICATION																		
Samplers Name: <i>Sara Hahn</i>		Company: <i>OBG</i>		Relinquished By: <i>[Signature]</i>		Company: <i>OBG</i>		Cooler Temp.:		Custody Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>												
Shipment Method: <i>Fed Ex</i>		Date/Time: <i>6/13/18</i>		Date/Time: <i>6/13/18</i>		Date/Time: <i>6/13/18 1400330</i>		Rec'd on Ice: Yes <input type="checkbox"/> No <input type="checkbox"/>		Samples Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>												
Shipment Tracking No: <i>435763468030</i>		Accepted By: <i>[Signature]</i>		Company: <i>SGS</i>		Company: <i>SGS</i>		Cooler Temp.:		Custody Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>												
Date/Time: <i>6/14/18</i>		Date/Time: <i>6/14/18</i>		Date/Time: <i>6/14/18</i>		Date/Time: <i>925</i>		Rec'd on Ice: Yes <input type="checkbox"/> No <input type="checkbox"/>		Samples Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>												

5.1
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2.4, 3.8

I:\Parsons-Eng.8653\65982.Inactive-Landfi\N-D\COC Blank\COC for ILI_Region 4_6.xlsx



SGS Sample Receipt Summary

Job Number: JC68071

Client: PARSONS

Project: OBGNYA: ILI - REGION 1, DENTON AVENUE L

Date / Time Received: 6/14/2018 9:25:00 AM

Delivery Method: FedEx

Airbill #s: 435763468030

Cooler Temps (Raw Measured) °C: Cooler 1: (2.6); Cooler 2: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (2.6); Cooler 2: (3.8);

<u>Cooler Security</u>	<u>Y or N</u>		<u>Y or N</u>	
1. Custody Seals Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y or N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Cooler temp verification:	<u>IR Gun</u>
3. Cooler media:	<u>Ice (Bag)</u>
4. No. Coolers:	<u>2</u>

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:			<u>Broken / Leaking</u>

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Test Strip Lot #s:	pH 1-12: <u>216017</u>	pH 12+: <u>208717</u>	Other: (Specify) _____
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Comments -2 The TOC bottle was rec'd broken. We will designate one of 3 VOC vials for TOC. We will not screen sample.

SM089-03
Rev. Date 12/7/17

JC68071: Chain of Custody

Page 2 of 3

5.1
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Responded to by: CSR: N/A

Response Date: Response Date: 6/14/2018

Response:

Response: Proceed with analysis

JC68071: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Parsons Engineering Science for ILI

Job No: JC68071

OBGNYA: ILI - Region 1, Denton Avenue Landfill
 Project No: 1-NAS-002-003

5.2
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Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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JC68071-1 Collected: 13-JUN-18 09:55 By: ST Received: 14-JUN-18 By: AS
 1-NAS-002-003-01

JC68071-1	SM5220 C-11,HACH8006	16-JUN-18 15:00	RP	15-JUN-18	RP	COD
JC68071-1	SW846 7470A	16-JUN-18 11:01	JA	16-JUN-18	JA	HG
JC68071-1	SW846 8260C	17-JUN-18 19:02	HT			V8260SL+
JC68071-1	SM2540 C-11	18-JUN-18 07:43	RC			TDS
JC68071-1	SW846 9060A	18-JUN-18 12:18	CD	18-JUN-18	CD	TOCSW846
JC68071-1	SM2340 C-11	19-JUN-18 12:59	ST			HRD
JC68071-1	SM4500NH3 H-11LACHIA	19-JUN-18 14:26	BM	19-JUN-18	BM	AMN
JC68071-1	SW846 6010C	20-JUN-18 15:11	ND	19-JUN-18	RM	B,BA,BE,CR,CU,FE,MN,NI,PB,SE,ZN
JC68071-1	EPA 537M BY ID	21-JUN-18 00:03	AFL	18-JUN-18		LCID537NY21
JC68071-1	SM2320 B-11	21-JUN-18 09:51	CD			ALK
JC68071-1	SW846 6020A	21-JUN-18 15:19	ZC	20-JUN-18	RM	ASMS,TLMS
JC68071-1	EPA 537M BY ID	27-JUN-18 20:22	AFL	22-JUN-18		LCID537NY21
JC68071-1	EPA 300/SW846 9056A28	28-JUN-18 19:58	NV	28-JUN-18	KS	BRO,SO4
JC68071-1	SW846 8270D BY SIM	29-JUN-18 07:10	CS	17-JUN-18	MP	B8270SIMPAAH
JC68071-1	EPA 300/SW846 9056A01	30-JUN-18 04:08	NV	30-JUN-18	NV	CHL

JC68071-2 Collected: 13-JUN-18 12:40 By: ST Received: 14-JUN-18 By: AS
 1-NAS-002-003-02

JC68071-2	SM5220 C-11,HACH8006	16-JUN-18 15:00	RP	15-JUN-18	RP	COD
JC68071-2	SW846 7470A	16-JUN-18 11:02	JA	16-JUN-18	JA	HG
JC68071-2	SM2540 C-11	18-JUN-18 07:43	RC			TDS
JC68071-2	SW846 9060A	18-JUN-18 12:56	CD	18-JUN-18	CD	TOCSW846
JC68071-2	SM2340 C-11	19-JUN-18 12:59	ST			HRD
JC68071-2	SM4500NH3 H-11LACHIA	19-JUN-18 14:29	BM	19-JUN-18	BM	AMN
JC68071-2	SW846 8260C	20-JUN-18 11:24	HT			V8260SL+
JC68071-2	SW846 6010C	20-JUN-18 15:15	ND	19-JUN-18	RM	B,BA,BE,CR,CU,FE,MN,NI,PB,SE,ZN
JC68071-2	EPA 537M BY ID	21-JUN-18 00:23	AFL	18-JUN-18		LCID537NY21
JC68071-2	SM2320 B-11	21-JUN-18 09:51	CD			ALK
JC68071-2	SW846 6020A	21-JUN-18 15:24	ZC	20-JUN-18	RM	ASMS,TLMS
JC68071-2	EPA 537M BY ID	27-JUN-18 20:40	AFL	22-JUN-18		LCID537NY21
JC68071-2	EPA 300/SW846 9056A28	28-JUN-18 20:26	NV	28-JUN-18	KS	BRO,SO4
JC68071-2	SW846 8270D BY SIM	29-JUN-18 07:32	CS	17-JUN-18	MP	B8270SIMPAAH
JC68071-2	EPA 300/SW846 9056A01	30-JUN-18 04:36	NV	30-JUN-18	NV	CHL

Internal Sample Tracking Chronicle

Parsons Engineering Science for ILI

Job No: JC68071

OBGNYA: ILI - Region 1, Denton Avenue Landfill

Project No: 1-NAS-002-003

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC68071-3 1-NAS-002-003-03	Collected: 13-JUN-18 10:05	By: ST	Received: 14-JUN-18	By: AS		
JC68071-3	EPA 537M BY ID	21-JUN-18 00:43	AFL	18-JUN-18		LCID537NY21
JC68071-4 1-NAS-002-003-04	Collected: 13-JUN-18 10:30	By: ST	Received: 14-JUN-18	By: AS		
JC68071-4	EPA 537M BY ID	21-JUN-18 01:04	AFL	18-JUN-18		LCID537NY21
JC68071-5 1-NAS-002-003-05	Collected: 13-JUN-18 12:40	By: ST	Received: 14-JUN-18	By: AS		
JC68071-5	SW846 8260C	17-JUN-18 16:41	HT			V8260SL+

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SGS Internal Chain of Custody

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/14/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC68071-1.1	Secured Storage	Dave Hunkele	06/16/18 12:46	Retrieve from Storage
JC68071-1.1	Dave Hunkele	Secured Staging Area	06/16/18 12:46	Return to Storage
JC68071-1.1	Secured Staging Area	Alexander Arotin	06/17/18 05:09	Retrieve from Storage
JC68071-1.1	Alexander Arotin		06/18/18 12:48	Depleted
JC68071-1.1.1	Alexander Arotin	Organics Prep	06/17/18 05:09	Extract from JC68071-1.1
JC68071-1.1.1	Organics Prep	Lindsey Lee	06/18/18 07:59	Extract from JC68071-1.1
JC68071-1.1.1	Lindsey Lee	Extract Storage	06/18/18 07:59	Return to Storage
JC68071-1.1.1	Extract Storage	John Boudreau	06/28/18 16:50	Retrieve from Storage
JC68071-1.1.1	John Boudreau	GCMS3P	06/28/18 16:50	Load on Instrument
JC68071-1.1.1	GCMS3P	John Boudreau	07/02/18 15:02	Unload from Instrument
JC68071-1.1.1	John Boudreau	Extract Freezer	07/02/18 15:02	Return to Storage
JC68071-1.1.1	Extract Freezer		07/30/18 09:00	Disposed
JC68071-1.2	Secured Storage	Todd Shoemaker	06/18/18 11:50	Retrieve from Storage
JC68071-1.2	Todd Shoemaker	Secured Staging Area	06/18/18 11:50	Return to Storage
JC68071-1.2	Secured Staging Area	Alexander Arotin	06/18/18 12:22	Retrieve from Storage
JC68071-1.2	Alexander Arotin		06/18/18 12:48	Depleted
JC68071-1.2.1	Alexander Arotin	Organics Prep	06/18/18 12:23	Extract from JC68071-1.2
JC68071-1.2.1	Organics Prep	Amanda Furka	06/18/18 22:24	Extract from JC68071-1.2
JC68071-1.2.1	Amanda Furka	Extract Storage	06/18/18 22:24	Return to Storage
JC68071-1.2.1	Extract Storage	Angela Rastelli	06/19/18 11:02	Retrieve from Storage
JC68071-1.2.1	Angela Rastelli	GCMS3P	06/19/18 11:02	Load on Instrument
JC68071-1.2.1	GCMS3P	John Boudreau	06/20/18 11:19	Unload from Instrument
JC68071-1.2.1	John Boudreau	Extract Freezer	06/20/18 11:19	Return to Storage
JC68071-1.2.1	Extract Freezer		07/30/18 09:00	Disposed
JC68071-1.3	Secured Storage	Matthew Robbins	06/15/18 19:21	Retrieve from Storage
JC68071-1.3	Matthew Robbins	Secured Staging Area	06/15/18 19:21	Return to Storage
JC68071-1.3	Secured Staging Area	Jessica Adametz	06/16/18 06:57	Retrieve from Storage
JC68071-1.3	Jessica Adametz	Secured Storage	06/16/18 08:30	Return to Storage
JC68071-1.3	Secured Storage	Dave Hunkele	06/19/18 06:46	Retrieve from Storage
JC68071-1.3	Dave Hunkele	Secured Staging Area	06/19/18 06:47	Return to Storage
JC68071-1.3	Secured Staging Area	Radhika Mistry	06/19/18 09:11	Retrieve from Storage
JC68071-1.3	Radhika Mistry	Secured Storage	06/19/18 09:24	Return to Storage
JC68071-1.3	Secured Storage	Todd Shoemaker	06/19/18 10:52	Retrieve from Storage
JC68071-1.3	Todd Shoemaker	Secured Staging Area	06/19/18 10:52	Return to Storage
JC68071-1.3	Secured Staging Area	Sarvadaman Tripathi	06/19/18 13:18	Retrieve from Storage
JC68071-1.3	Sarvadaman Tripathi	Secured Storage	06/19/18 13:18	Return to Storage
JC68071-1.3	Tim Hudson		08/03/18 14:57	Disposed
JC68071-1.3.1	Radhika Mistry	Metals Digestion	06/19/18 09:23	Digestate from JC68071-1.3
JC68071-1.3.1	Metals Digestion	Radhika Mistry	06/19/18 09:23	Digestate from JC68071-1.3

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SGS Internal Chain of Custody

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/14/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC68071-1.3.1	Radhika Mistry	Metals Digestate Storage	06/19/18 09:23	Return to Storage
JC68071-1.3.1	Metals Digestate Storage		08/27/18 09:00	Disposed
JC68071-1.4	Secured Storage	Dave Hunkele	06/15/18 11:32	Retrieve from Storage
JC68071-1.4	Dave Hunkele	Secured Staging Area	06/15/18 11:32	Return to Storage
JC68071-1.4	Secured Staging Area	Rinku Patel	06/15/18 11:41	Retrieve from Storage
JC68071-1.4	Rinku Patel	Secured Storage	06/15/18 17:03	Return to Storage
JC68071-1.4	Tim Hudson		08/03/18 14:57	Disposed
JC68071-1.5	Secured Storage	Todd Shoemaker	06/20/18 14:37	Retrieve from Storage
JC68071-1.5	Todd Shoemaker	Secured Staging Area	06/20/18 14:38	Return to Storage
JC68071-1.5	Secured Staging Area	Courtney Dringus	06/21/18 07:10	Retrieve from Storage
JC68071-1.5	Courtney Dringus	Secured Storage	06/21/18 11:24	Return to Storage
JC68071-1.5	Tim Hudson		08/03/18 14:57	Disposed
JC68071-1.6	Secured Storage	Sahara Feliciano	06/17/18 12:48	Retrieve from Storage
JC68071-1.6	Sahara Feliciano	Secured Staging Area	06/17/18 12:48	Return to Storage
JC68071-1.6	Secured Staging Area	Ruchitaben Chauhan	06/18/18 11:00	Retrieve from Storage
JC68071-1.6	Ruchitaben Chauhan	Secured Storage	06/18/18 17:01	Return to Storage
JC68071-1.6	Secured Storage	Matthew Robbins	06/26/18 22:44	Retrieve from Storage
JC68071-1.6	Secured Storage	Todd Shoemaker	06/28/18 08:13	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC68071-1.6	Todd Shoemaker	Secured Staging Area	06/28/18 08:14	Return to Storage
JC68071-1.6	Secured Staging Area	Karthika Sathayamoorthy	06/28/18 08:32	Retrieve from Storage
JC68071-1.6	Karthika Sathayamoorthy	Secured Storage	06/28/18 17:00	Return to Storage
JC68071-1.6	Secured Storage	Sahara Feliciano	06/28/18 18:07	Retrieve from Storage
JC68071-1.6	Sahara Feliciano	Secured Staging Area	06/28/18 18:07	Return to Storage
JC68071-1.6	Secured Staging Area	Natasha Verma	06/29/18 08:46	Retrieve from Storage
JC68071-1.6	Natasha Verma	Secured Storage	06/29/18 14:14	Return to Storage
JC68071-1.6	Tim Hudson		08/03/18 14:57	Disposed
JC68071-1.7	Secured Storage	Robert Lofrano	06/15/18 13:30	Retrieve from Storage
JC68071-1.7	Robert Lofrano		06/15/18 14:38	Subcontract
JC68071-1.8	Secured Storage	Robert Lofrano	06/15/18 13:30	Retrieve from Storage
JC68071-1.8	Robert Lofrano		06/15/18 14:38	Subcontract
JC68071-1.9	Secured Storage	Jennifer Voitovitch	06/18/18 15:49	Retrieve from Storage
JC68071-1.9	Jennifer Voitovitch	Secured Staging Area	06/18/18 15:49	Return to Storage
JC68071-1.9	Secured Staging Area	Beatrice Marcelino	06/19/18 10:46	Retrieve from Storage
JC68071-1.9	Beatrice Marcelino	Secured Storage	06/19/18 16:13	Return to Storage
JC68071-1.9	Tim Hudson		08/03/18 14:57	Disposed
JC68071-1.10	Secured Storage	Sahara Feliciano	06/17/18 09:38	Retrieve from Storage

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SGS Internal Chain of Custody

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/14/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC68071-1.10	Sahara Feliciano	Secured Staging Area	06/17/18 09:38	Return to Storage
JC68071-1.10	Secured Staging Area	Courtney Dringus	06/18/18 07:18	Retrieve from Storage
JC68071-1.10	Courtney Dringus	Secured Storage	06/18/18 14:19	Return to Storage
JC68071-1.10	Tim Hudson		08/03/18 14:57	Disposed
JC68071-1.12	Secured Storage	Maricela Delgaolillo	06/17/18 11:46	Retrieve from Storage
JC68071-1.12	Maricela Delgaolillo	GCMS4B	06/17/18 11:56	Load on Instrument
JC68071-1.12	GCMS4B	Hueanh Tran	06/18/18 09:44	Unload from Instrument
JC68071-1.12	Hueanh Tran	Secured Storage	06/18/18 09:44	Return to Storage
JC68071-1.12	Tim Hudson		08/03/18 14:57	Disposed
JC68071-2.1	Secured Storage	Dave Hunkele	06/16/18 12:46	Retrieve from Storage
JC68071-2.1	Dave Hunkele	Secured Staging Area	06/16/18 12:46	Return to Storage
JC68071-2.1	Secured Staging Area	Alexander Arotin	06/17/18 05:09	Retrieve from Storage
JC68071-2.1	Alexander Arotin		06/18/18 12:48	Depleted
JC68071-2.1.1	Alexander Arotin	Organics Prep	06/17/18 05:09	Extract from JC68071-2.1
JC68071-2.1.1	Organics Prep	Lindsey Lee	06/18/18 07:59	Extract from JC68071-2.1
JC68071-2.1.1	Lindsey Lee	Extract Storage	06/18/18 07:59	Return to Storage
JC68071-2.1.1	Extract Storage	John Boudreau	06/28/18 16:50	Retrieve from Storage
JC68071-2.1.1	John Boudreau	GCMS3P	06/28/18 16:50	Load on Instrument
JC68071-2.1.1	GCMS3P	John Boudreau	07/02/18 15:02	Unload from Instrument
JC68071-2.1.1	John Boudreau	Extract Freezer	07/02/18 15:02	Return to Storage
JC68071-2.1.1	Extract Freezer		07/30/18 09:00	Disposed
JC68071-2.2	Secured Storage	Todd Shoemaker	06/18/18 11:50	Retrieve from Storage
JC68071-2.2	Todd Shoemaker	Secured Staging Area	06/18/18 11:50	Return to Storage
JC68071-2.2	Secured Staging Area	Alexander Arotin	06/18/18 12:22	Retrieve from Storage
JC68071-2.2	Alexander Arotin		06/18/18 12:48	Depleted
JC68071-2.2.1	Alexander Arotin	Organics Prep	06/18/18 12:23	Extract from JC68071-2.2
JC68071-2.2.1	Organics Prep	Amanda Furka	06/18/18 22:24	Extract from JC68071-2.2
JC68071-2.2.1	Amanda Furka	Extract Storage	06/18/18 22:24	Return to Storage
JC68071-2.2.1	Extract Storage	Angela Rastelli	06/19/18 11:02	Retrieve from Storage
JC68071-2.2.1	Angela Rastelli	GCMS3P	06/19/18 11:02	Load on Instrument
JC68071-2.2.1	GCMS3P	John Boudreau	06/20/18 13:49	Unload from Instrument
JC68071-2.2.1	John Boudreau	Extract Freezer	06/20/18 13:49	Return to Storage
JC68071-2.2.1	Extract Freezer		07/30/18 09:00	Disposed
JC68071-2.3	Secured Storage	Matthew Robbins	06/15/18 19:21	Retrieve from Storage
JC68071-2.3	Matthew Robbins	Secured Staging Area	06/15/18 19:21	Return to Storage
JC68071-2.3	Secured Staging Area	Jessica Adametz	06/16/18 06:57	Retrieve from Storage
JC68071-2.3	Jessica Adametz	Secured Storage	06/16/18 08:30	Return to Storage
JC68071-2.3	Secured Storage	Dave Hunkele	06/19/18 06:46	Retrieve from Storage

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SGS Internal Chain of Custody

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/14/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC68071-2.3	Dave Hunkele	Secured Staging Area	06/19/18 06:47	Return to Storage
JC68071-2.3	Secured Staging Area	Radhika Mistry	06/19/18 09:11	Retrieve from Storage
JC68071-2.3	Radhika Mistry	Secured Storage	06/19/18 09:24	Return to Storage
JC68071-2.3	Secured Storage	Todd Shoemaker	06/19/18 10:52	Retrieve from Storage
JC68071-2.3	Todd Shoemaker	Secured Staging Area	06/19/18 10:52	Return to Storage
JC68071-2.3	Secured Staging Area	Sarvadaman Tripathi	06/19/18 13:18	Retrieve from Storage
JC68071-2.3	Sarvadaman Tripathi	Secured Storage	06/19/18 13:18	Return to Storage
JC68071-2.3	Tim Hudson		08/03/18 14:57	Disposed
JC68071-2.3.1	Radhika Mistry	Metals Digestion	06/19/18 09:23	Digestate from JC68071-2.3
JC68071-2.3.1	Metals Digestion	Radhika Mistry	06/19/18 09:23	Digestate from JC68071-2.3
JC68071-2.3.1	Radhika Mistry	Metals Digestate Storage	06/19/18 09:23	Return to Storage
JC68071-2.3.1	Metals Digestate Storage		08/27/18 09:00	Disposed
JC68071-2.4	Secured Storage	Dave Hunkele	06/15/18 11:32	Retrieve from Storage
JC68071-2.4	Dave Hunkele	Secured Staging Area	06/15/18 11:32	Return to Storage
JC68071-2.4	Secured Staging Area	Rinku Patel	06/15/18 11:41	Retrieve from Storage
JC68071-2.4	Rinku Patel	Secured Storage	06/15/18 17:03	Return to Storage
JC68071-2.4	Tim Hudson		08/03/18 14:57	Disposed
JC68071-2.5	Secured Storage	Sahara Feliciano	06/17/18 12:48	Retrieve from Storage
JC68071-2.5	Sahara Feliciano	Secured Staging Area	06/17/18 12:48	Return to Storage
JC68071-2.5	Secured Staging Area	Ruchitaben Chauhan	06/18/18 11:00	Retrieve from Storage
JC68071-2.5	Ruchitaben Chauhan	Secured Storage	06/18/18 17:01	Return to Storage
JC68071-2.5	Secured Storage	Matthew Robbins	06/26/18 22:44	Retrieve from Storage
JC68071-2.5	Secured Storage	Todd Shoemaker	06/28/18 08:13	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC68071-2.5	Todd Shoemaker	Secured Staging Area	06/28/18 08:14	Return to Storage
JC68071-2.5	Secured Staging Area	Karthika Sathayamoorthy	06/28/18 08:32	Retrieve from Storage
JC68071-2.5	Karthika Sathayamoorthy	Secured Storage	06/28/18 17:00	Return to Storage
JC68071-2.5	Secured Storage	Dave Hunkele	06/29/18 09:46	Retrieve from Storage
JC68071-2.5	Dave Hunkele	Secured Staging Area	06/29/18 09:46	Return to Storage
JC68071-2.5	Secured Staging Area	Natasha Verma	06/29/18 10:01	Retrieve from Storage
JC68071-2.5	Natasha Verma	Secured Storage	06/29/18 14:14	Return to Storage
JC68071-2.5	Tim Hudson		08/03/18 14:57	Disposed
JC68071-2.6	Secured Storage	Todd Shoemaker	06/20/18 14:37	Retrieve from Storage
JC68071-2.6	Todd Shoemaker	Secured Staging Area	06/20/18 14:38	Return to Storage
JC68071-2.6	Secured Staging Area	Courtney Dringus	06/21/18 07:10	Retrieve from Storage
JC68071-2.6	Courtney Dringus	Secured Storage	06/21/18 11:24	Return to Storage
JC68071-2.6	Secured Storage	Dave Hunkele	06/29/18 09:46	Retrieve from Storage
JC68071-2.6	Dave Hunkele	Secured Staging Area	06/29/18 09:46	Return to Storage
JC68071-2.6	Secured Staging Area	Natasha Verma	06/29/18 10:01	Retrieve from Storage
JC68071-2.6	Natasha Verma	Secured Storage	06/29/18 14:14	Return to Storage

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SGS Internal Chain of Custody

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/14/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC68071-2.6	Tim Hudson		08/03/18 14:57	Disposed
JC68071-2.7	Secured Storage	Robert Lofrano	06/15/18 13:30	Retrieve from Storage
JC68071-2.7	Robert Lofrano		06/15/18 14:38	Subcontract
JC68071-2.8	Secured Storage	Robert Lofrano	06/15/18 13:30	Retrieve from Storage
JC68071-2.8	Robert Lofrano		06/15/18 14:38	Subcontract
JC68071-2.9	Secured Storage	Jennifer Voitovitch	06/18/18 15:49	Retrieve from Storage
JC68071-2.9	Jennifer Voitovitch	Secured Staging Area	06/18/18 15:49	Return to Storage
JC68071-2.9	Secured Staging Area	Beatrice Marcelino	06/19/18 10:46	Retrieve from Storage
JC68071-2.9	Beatrice Marcelino	Secured Storage	06/19/18 16:13	Return to Storage
JC68071-2.9	Tim Hudson		08/03/18 14:57	Disposed
JC68071-2.10	Secured Storage	Sahara Feliciano	06/17/18 09:38	Retrieve from Storage
JC68071-2.10	Sahara Feliciano	Secured Staging Area	06/17/18 09:38	Return to Storage
JC68071-2.10	Secured Staging Area	Courtney Dringus	06/18/18 07:18	Retrieve from Storage
JC68071-2.10	Courtney Dringus	Secured Storage	06/18/18 14:19	Return to Storage
JC68071-2.10	Tim Hudson		08/03/18 14:57	Disposed
JC68071-2.11	Secured Storage	Maricela Delgaolillo	06/17/18 14:35	Retrieve from Storage
JC68071-2.11	Maricela Delgaolillo	Secured Storage	06/17/18 14:35	Return to Storage
JC68071-2.11	Tim Hudson		08/03/18 14:57	Disposed
JC68071-2.12	Secured Storage	Hueanh Tran	06/18/18 09:47	Retrieve from Storage
JC68071-2.12	Hueanh Tran	GCMS4B	06/18/18 09:47	Load on Instrument
JC68071-2.12	GCMS4B	Hueanh Tran	06/18/18 10:35	Unload from Instrument
JC68071-2.12	Hueanh Tran	Secured Storage	06/18/18 10:35	Return to Storage
JC68071-2.12	Secured Storage	Toan Pham	06/19/18 21:43	Retrieve from Storage
JC68071-2.12	Toan Pham	GCMS3B	06/19/18 21:43	Load on Instrument
JC68071-2.12	GCMS3B	Jessica Potts	06/20/18 07:33	Unload from Instrument
JC68071-2.12	Jessica Potts	Secured Storage	06/20/18 07:33	Return to Storage
JC68071-2.12	Secured Storage	Hueanh Tran	06/20/18 11:07	Retrieve from Storage
JC68071-2.12	Hueanh Tran	GCMS2C	06/20/18 11:07	Load on Instrument
JC68071-2.12	GCMS2C	Hueanh Tran	06/21/18 08:04	Unload from Instrument
JC68071-2.12	Hueanh Tran	Secured Storage	06/21/18 08:04	Return to Storage
JC68071-2.12	Tim Hudson		08/03/18 14:57	Disposed
JC68071-3.1	Secured Storage	Robert Lofrano	06/15/18 13:30	Retrieve from Storage
JC68071-3.1	Robert Lofrano		06/15/18 14:38	Subcontract
JC68071-3.2	Secured Storage	Robert Lofrano	06/15/18 13:30	Retrieve from Storage
JC68071-3.2	Robert Lofrano		06/15/18 14:38	Subcontract

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SGS Internal Chain of Custody

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill
Received: 06/14/18

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC68071-4.1	Secured Storage	Robert Lofrano	06/15/18 13:30	Retrieve from Storage
JC68071-4.1	Robert Lofrano		06/15/18 14:38	Subcontract
JC68071-4.2	Secured Storage	Robert Lofrano	06/15/18 13:30	Retrieve from Storage
JC68071-4.2	Robert Lofrano		06/15/18 14:38	Subcontract
JC68071-5.1	Secured Storage	Maricela Delgaolillo	06/17/18 11:46	Retrieve from Storage
JC68071-5.1	Maricela Delgaolillo	GCMS4B	06/17/18 11:56	Load on Instrument
JC68071-5.1	GCMS4B	Hueanh Tran	06/18/18 09:44	Unload from Instrument
JC68071-5.1	Hueanh Tran	Secured Storage	06/18/18 09:44	Return to Storage
JC68071-5.1	Tim Hudson		08/03/18 14:57	Disposed

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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: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3444-MB	4B82828.D	1	06/17/18	HT	n/a	n/a	V4B3444

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-1, JC68071-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	1.9	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	1.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
74-88-4	Iodomethane	ND	2.0	0.27	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.45	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.19	ug/l	

Method Blank Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3444-MB	4B82828.D	1	06/17/18	HT	n/a	n/a	V4B3444

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-1, JC68071-5

CAS No.	Compound	Result	RL	MDL	Units	Q
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.47	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	103% 80-120%
17060-07-0	1,2-Dichloroethane-D4	104% 81-124%
2037-26-5	Toluene-D8	98% 80-120%
460-00-4	4-Bromofluorobenzene	105% 80-120%

CAS No.	Tentatively Identified Compounds	R. T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2C7103-MB	2C159955.D	1	06/20/18	HT	n/a	n/a	V2C7103

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	1.9	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.38	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.21	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.50	ug/l	
110-57-6	trans-1,4-Dichloro-2-Butene	ND	5.0	1.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
74-88-4	Iodomethane	ND	2.0	0.27	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.45	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.19	ug/l	

Method Blank Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2C7103-MB	2C159955.D	1	06/20/18	HT	n/a	n/a	V2C7103

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-2

CAS No.	Compound	Result	RL	MDL	Units	Q
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.47	ug/l	
108-05-4	Vinyl Acetate	ND	10	3.2	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	104% 80-120%
17060-07-0	1,2-Dichloroethane-D4	111% 81-124%
2037-26-5	Toluene-D8	97% 80-120%
460-00-4	4-Bromofluorobenzene	104% 80-120%

CAS No.	Tentatively Identified Compounds	R. T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3444-BS	4B82826.D	1	06/17/18	HT	n/a	n/a	V4B3444

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-1, JC68071-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	216	108	42-150
107-13-1	Acrylonitrile	50	54.0	108	70-135
71-43-2	Benzene	50	49.2	98	80-120
74-97-5	Bromochloromethane	50	49.7	99	84-121
75-27-4	Bromodichloromethane	50	51.9	104	83-120
75-25-2	Bromoform	50	61.8	124	76-129
74-83-9	Bromomethane	50	45.8	92	57-138
78-93-3	2-Butanone (MEK)	200	197	99	64-137
75-15-0	Carbon disulfide	50	49.9	100	64-137
56-23-5	Carbon tetrachloride	50	57.1	114	75-135
108-90-7	Chlorobenzene	50	46.9	94	84-117
75-00-3	Chloroethane	50	45.5	91	63-132
67-66-3	Chloroform	50	48.0	96	80-119
74-87-3	Chloromethane	50	51.9	104	46-136
96-12-8	1,2-Dibromo-3-chloropropane	50	52.1	104	72-127
124-48-1	Dibromochloromethane	50	55.4	111	80-123
106-93-4	1,2-Dibromoethane	50	49.2	98	84-117
95-50-1	1,2-Dichlorobenzene	50	44.5	89	84-119
106-46-7	1,4-Dichlorobenzene	50	44.5	89	82-117
110-57-6	trans-1,4-Dichloro-2-Butene	50	51.4	103	32-148
75-34-3	1,1-Dichloroethane	50	50.5	101	79-120
107-06-2	1,2-Dichloroethane	50	48.9	98	78-126
75-35-4	1,1-Dichloroethene	50	53.1	106	69-126
156-59-2	cis-1,2-Dichloroethene	50	48.9	98	80-120
156-60-5	trans-1,2-Dichloroethene	50	52.6	105	76-120
78-87-5	1,2-Dichloropropane	50	49.8	100	82-121
10061-01-5	cis-1,3-Dichloropropene	50	50.0	100	83-120
10061-02-6	trans-1,3-Dichloropropene	50	48.7	97	82-121
100-41-4	Ethylbenzene	50	48.4	97	80-120
591-78-6	2-Hexanone	200	209	105	65-132
74-88-4	Iodomethane	50	52.6	105	72-128
108-10-1	4-Methyl-2-pentanone(MIBK)	200	220	110	71-131
74-95-3	Methylene bromide	50	49.3	99	85-120
75-09-2	Methylene chloride	50	53.1	106	77-120
100-42-5	Styrene	50	49.6	99	82-122
630-20-6	1,1,1,2-Tetrachloroethane	50	53.7	107	82-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3444-BS	4B82826.D	1	06/17/18	HT	n/a	n/a	V4B3444

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-1, JC68071-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-34-5	1,1,2,2-Tetrachloroethane	50	48.6	97	76-119
127-18-4	Tetrachloroethene	50	46.0	92	70-131
108-88-3	Toluene	50	46.3	93	80-120
71-55-6	1,1,1-Trichloroethane	50	53.7	107	81-128
79-00-5	1,1,2-Trichloroethane	50	48.3	97	83-118
79-01-6	Trichloroethene	50	48.3	97	80-120
75-69-4	Trichlorofluoromethane	50	54.3	109	64-136
96-18-4	1,2,3-Trichloropropane	50	49.2	98	79-120
108-05-4	Vinyl Acetate	50	49.0	98	76-132
75-01-4	Vinyl chloride	50	54.2	108	51-135
	m,p-Xylene	100	97.8	98	80-120
95-47-6	o-Xylene	50	48.9	98	80-120
1330-20-7	Xylene (total)	150	147	98	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	101%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2C7103-BS	2C159953.D	1	06/20/18	HT	n/a	n/a	V2C7103

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	189	95	42-150
107-13-1	Acrylonitrile	50	48.5	97	70-135
71-43-2	Benzene	50	47.4	95	80-120
74-97-5	Bromochloromethane	50	51.5	103	84-121
75-27-4	Bromodichloromethane	50	50.1	100	83-120
75-25-2	Bromoform	50	56.5	113	76-129
74-83-9	Bromomethane	50	44.8	90	57-138
78-93-3	2-Butanone (MEK)	200	199	100	64-137
75-15-0	Carbon disulfide	50	48.9	98	64-137
56-23-5	Carbon tetrachloride	50	56.3	113	75-135
108-90-7	Chlorobenzene	50	49.1	98	84-117
75-00-3	Chloroethane	50	43.7	87	63-132
67-66-3	Chloroform	50	47.1	94	80-119
74-87-3	Chloromethane	50	49.3	99	46-136
96-12-8	1,2-Dibromo-3-chloropropane	50	53.7	107	72-127
124-48-1	Dibromochloromethane	50	55.3	111	80-123
106-93-4	1,2-Dibromoethane	50	52.5	105	84-117
95-50-1	1,2-Dichlorobenzene	50	50.9	102	84-119
106-46-7	1,4-Dichlorobenzene	50	50.7	101	82-117
110-57-6	trans-1,4-Dichloro-2-Butene	50	46.5	93	32-148
75-34-3	1,1-Dichloroethane	50	48.6	97	79-120
107-06-2	1,2-Dichloroethane	50	49.0	98	78-126
75-35-4	1,1-Dichloroethene	50	47.1	94	69-126
156-59-2	cis-1,2-Dichloroethene	50	46.5	93	80-120
156-60-5	trans-1,2-Dichloroethene	50	46.0	92	76-120
78-87-5	1,2-Dichloropropane	50	48.6	97	82-121
10061-01-5	cis-1,3-Dichloropropene	50	49.3	99	83-120
10061-02-6	trans-1,3-Dichloropropene	50	49.2	98	82-121
100-41-4	Ethylbenzene	50	48.1	96	80-120
591-78-6	2-Hexanone	200	188	94	65-132
74-88-4	Iodomethane	50	47.4	95	72-128
108-10-1	4-Methyl-2-pentanone(MIBK)	200	198	99	71-131
74-95-3	Methylene bromide	50	49.2	98	85-120
75-09-2	Methylene chloride	50	44.0	88	77-120
100-42-5	Styrene	50	46.6	93	82-122
630-20-6	1,1,1,2-Tetrachloroethane	50	51.4	103	82-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2C7103-BS	2C159953.D	1	06/20/18	HT	n/a	n/a	V2C7103

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-34-5	1,1,2,2-Tetrachloroethane	50	51.9	104	76-119
127-18-4	Tetrachloroethene	50	51.1	102	70-131
108-88-3	Toluene	50	48.1	96	80-120
71-55-6	1,1,1-Trichloroethane	50	45.6	91	81-128
79-00-5	1,1,2-Trichloroethane	50	47.2	94	83-118
79-01-6	Trichloroethene	50	47.5	95	80-120
75-69-4	Trichlorofluoromethane	50	50.1	100	64-136
96-18-4	1,2,3-Trichloropropane	50	54.7	109	79-120
108-05-4	Vinyl Acetate	50	53.7	107	76-132
75-01-4	Vinyl chloride	50	51.6	103	51-135
	m,p-Xylene	100	98.8	99	80-120
95-47-6	o-Xylene	50	51.0	102	80-120
1330-20-7	Xylene (total)	150	150	100	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	106%	80-120%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC68302-18MS	2C159965.D	1	06/20/18	HT	n/a	n/a	V2C7103
JC68302-18	2C159960.D	1	06/20/18	HT	n/a	n/a	V2C7103

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-2

CAS No.	Compound	JC68302-18 ug/l	Spike Q	MS ug/l	MS %	Limits
67-64-1	Acetone	ND	200	162	81	34-149
107-13-1	Acrylonitrile	ND	50	41.6	83	62-138
71-43-2	Benzene	ND	50	46.1	92	54-136
74-97-5	Bromochloromethane	ND	50	47.9	96	79-124
75-27-4	Bromodichloromethane	ND	50	47.4	95	79-124
75-25-2	Bromoform	ND	50	53.1	106	71-130
74-83-9	Bromomethane	ND	50	41.6	83	53-142
78-93-3	2-Butanone (MEK)	ND	200	173	87	54-142
75-15-0	Carbon disulfide	ND	50	47.4	95	59-145
56-23-5	Carbon tetrachloride	ND	50	55.7	111	70-143
108-90-7	Chlorobenzene	ND	50	47.2	94	78-123
75-00-3	Chloroethane	ND	50	40.4	81	57-141
67-66-3	Chloroform	ND	50	44.9	90	76-123
74-87-3	Chloromethane	ND	50	44.5	89	43-141
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	48.6	97	66-130
124-48-1	Dibromochloromethane	ND	50	51.8	104	76-125
106-93-4	1,2-Dibromoethane	ND	50	48.3	97	78-119
95-50-1	1,2-Dichlorobenzene	ND	50	47.6	95	77-123
106-46-7	1,4-Dichlorobenzene	ND	50	47.4	95	76-122
110-57-6	trans-1,4-Dichloro-2-Butene	ND	50	34.0	68	17-148
75-34-3	1,1-Dichloroethane	ND	50	45.7	91	73-126
107-06-2	1,2-Dichloroethane	ND	50	47.3	95	72-131
75-35-4	1,1-Dichloroethene	ND	50	45.5	91	63-136
156-59-2	cis-1,2-Dichloroethene	ND	50	44.1	88	60-136
156-60-5	trans-1,2-Dichloroethene	ND	50	44.6	89	70-126
78-87-5	1,2-Dichloropropane	ND	50	46.8	94	78-124
10061-01-5	cis-1,3-Dichloropropene	ND	50	46.1	92	79-123
10061-02-6	trans-1,3-Dichloropropene	ND	50	46.2	92	77-123
100-41-4	Ethylbenzene	ND	50	46.7	93	51-140
591-78-6	2-Hexanone	ND	200	171	86	56-139
74-88-4	Iodomethane	ND	50	43.7	87	67-132
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	200	181	91	66-136
74-95-3	Methylene bromide	ND	50	46.1	92	81-121
75-09-2	Methylene chloride	ND	50	40.6	81	73-125
100-42-5	Styrene	ND	50	44.9	90	75-129
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	49.5	99	77-124

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC68302-18MS	2C159965.D	1	06/20/18	HT	n/a	n/a	V2C7103
JC68302-18	2C159960.D	1	06/20/18	HT	n/a	n/a	V2C7103

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-2

CAS No.	Compound	JC68302-18		MS ug/l	MS %	Limits
		ug/l	Spike Q ug/l			
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	47.2	94	71-122
127-18-4	Tetrachloroethene	ND	50	51.0	102	61-139
108-88-3	Toluene	ND	50	46.8	94	60-135
71-55-6	1,1,1-Trichloroethane	ND	50	45.8	92	74-138
79-00-5	1,1,2-Trichloroethane	ND	50	44.2	88	78-121
79-01-6	Trichloroethene	ND	50	47.0	94	62-141
75-69-4	Trichlorofluoromethane	ND	50	52.0	104	57-149
96-18-4	1,2,3-Trichloropropane	ND	50	50.7	101	74-122
108-05-4	Vinyl Acetate	ND	50	46.1	92	63-135
75-01-4	Vinyl chloride	ND	50	48.5	97	43-146
	m,p-Xylene	ND	100	95.1	95	50-144
95-47-6	o-Xylene	ND	50	47.9	96	63-134
1330-20-7	Xylene (total)	ND	150	143	95	56-139

CAS No.	Surrogate Recoveries	MS	JC68302-18	Limits
1868-53-7	Dibromofluoromethane	104%	108%	80-120%
17060-07-0	1,2-Dichloroethane-D4	104%	115%	81-124%
2037-26-5	Toluene-D8	100%	97%	80-120%
460-00-4	4-Bromofluorobenzene	104%	103%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC68067-1MS	4B82836.D	5	06/17/18	HT	n/a	n/a	V4B3444
JC68067-1MSD	4B82837.D	5	06/17/18	HT	n/a	n/a	V4B3444
JC68067-1	4B82835.D	5	06/17/18	HT	n/a	n/a	V4B3444

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-1, JC68071-5

CAS No.	Compound	JC68067-1 ug/l	Spike Q	ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		1000	1040	104	1000	1040	104	0	34-149/17
107-13-1	Acrylonitrile	ND		250	269	108	250	266	106	1	62-138/13
71-43-2	Benzene	ND		250	240	96	250	237	95	1	54-136/10
74-97-5	Bromochloromethane	ND		250	251	100	250	250	100	0	79-124/11
75-27-4	Bromodichloromethane	ND		250	262	105	250	258	103	2	79-124/11
75-25-2	Bromoform	ND		250	301	120	250	299	120	1	71-130/11
74-83-9	Bromomethane	ND		250	239	96	250	234	94	2	53-142/14
78-93-3	2-Butanone (MEK)	ND		1000	1030	103	1000	1060	106	3	54-142/15
75-15-0	Carbon disulfide	ND		250	214	86	250	212	85	1	59-145/17
56-23-5	Carbon tetrachloride	3.3	J	250	275	109	250	270	107	2	70-143/12
108-90-7	Chlorobenzene	ND		250	237	95	250	238	95	0	78-123/10
75-00-3	Chloroethane	ND		250	256	102	250	244	98	5	57-141/14
67-66-3	Chloroform	2.8	J	250	249	98	250	243	96	2	76-123/11
74-87-3	Chloromethane	ND		250	257	103	250	244	98	5	43-141/16
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	266	106	250	270	108	1	66-130/13
124-48-1	Dibromochloromethane	ND		250	276	110	250	275	110	0	76-125/11
106-93-4	1,2-Dibromoethane	ND		250	255	102	250	257	103	1	78-119/11
95-50-1	1,2-Dichlorobenzene	ND		250	228	91	250	232	93	2	77-123/11
106-46-7	1,4-Dichlorobenzene	ND		250	233	93	250	235	94	1	76-122/11
110-57-6	trans-1,4-Dichloro-2-Butene	ND		250	274	110	250	281	112	3	17-148/28
75-34-3	1,1-Dichloroethane	2.9	J	250	254	100	250	250	99	2	73-126/11
107-06-2	1,2-Dichloroethane	ND		250	256	102	250	252	101	2	72-131/11
75-35-4	1,1-Dichloroethene	16.3		250	266	100	250	259	97	3	63-136/14
156-59-2	cis-1,2-Dichloroethene	32.4		250	273	96	250	271	95	1	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		250	255	102	250	252	101	1	70-126/11
78-87-5	1,2-Dichloropropane	ND		250	251	100	250	246	98	2	78-124/10
10061-01-5	cis-1,3-Dichloropropene	ND		250	256	102	250	258	103	1	79-123/11
10061-02-6	trans-1,3-Dichloropropene	ND		250	255	102	250	256	102	0	77-123/11
100-41-4	Ethylbenzene	ND		250	243	97	250	239	96	2	51-140/20
591-78-6	2-Hexanone	ND		1000	1100	110	1000	1110	111	1	56-139/14
74-88-4	Iodomethane	ND		250	246	98	250	241	96	2	67-132/14
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		1000	1120	112	1000	1110	111	1	66-136/13
74-95-3	Methylene bromide	ND		250	258	103	250	256	102	1	81-121/11
75-09-2	Methylene chloride	ND		250	255	102	250	253	101	1	73-125/13
100-42-5	Styrene	ND		250	252	101	250	248	99	2	75-129/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	260	104	250	254	102	2	77-124/11

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC68067-1MS	4B82836.D	5	06/17/18	HT	n/a	n/a	V4B3444
JC68067-1MSD	4B82837.D	5	06/17/18	HT	n/a	n/a	V4B3444
JC68067-1	4B82835.D	5	06/17/18	HT	n/a	n/a	V4B3444

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-1, JC68071-5

CAS No.	Compound	JC68067-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	252	101	250	256	102	2	71-122/11
127-18-4	Tetrachloroethene	ND	250	229	92	250	226	90	1	61-139/11
108-88-3	Toluene	ND	250	231	92	250	230	92	0	60-135/10
71-55-6	1,1,1-Trichloroethane	5.8	250	265	104	250	261	102	2	74-138/12
79-00-5	1,1,2-Trichloroethane	ND	250	251	100	250	250	100	0	78-121/11
79-01-6	Trichloroethene	350	250	557	83	250	550	80	1	62-141/10
75-69-4	Trichlorofluoromethane	ND	250	259	104	250	250	100	4	57-149/14
96-18-4	1,2,3-Trichloropropane	ND	250	256	102	250	258	103	1	74-122/11
108-05-4	Vinyl Acetate	ND	250	249	100	250	249	100	0	63-135/16
75-01-4	Vinyl chloride	ND	250	262	105	250	251	100	4	43-146/15
	m,p-Xylene	ND	500	487	97	500	482	96	1	50-144/20
95-47-6	o-Xylene	ND	250	243	97	250	238	95	2	63-134/10
1330-20-7	Xylene (total)	ND	750	730	97	750	720	96	1	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC68067-1	Limits
1868-53-7	Dibromofluoromethane	104%	102%	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	104%	104%	109%	81-124%
2037-26-5	Toluene-D8	99%	98%	98%	80-120%
460-00-4	4-Bromofluorobenzene	102%	104%	104%	80-120%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC68302-17DUP	2C159964.D	1	06/20/18	HT	n/a	n/a	V2C7103
JC68302-17	2C159959.D	1	06/20/18	HT	n/a	n/a	V2C7103

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-2

CAS No.	Compound	JC68302-17 DUP		Q	RPD	Limits
		ug/l	Q ug/l			
67-64-1	Acetone	ND	ND	nc		20
107-13-1	Acrylonitrile	ND	ND	nc		20
71-43-2	Benzene	ND	ND	nc		20
74-97-5	Bromochloromethane	ND	ND	nc		20
75-27-4	Bromodichloromethane	ND	ND	nc		20
75-25-2	Bromoform	ND	ND	nc		20
74-83-9	Bromomethane	ND	ND	nc		20
78-93-3	2-Butanone (MEK)	ND	ND	nc		20
75-15-0	Carbon disulfide	ND	ND	nc		20
56-23-5	Carbon tetrachloride	ND	ND	nc		20
108-90-7	Chlorobenzene	ND	ND	nc		20
75-00-3	Chloroethane	ND	ND	nc		20
67-66-3	Chloroform	ND	ND	nc		20
74-87-3	Chloromethane	ND	ND	nc		20
96-12-8	1,2-Dibromo-3-chloropropane	ND	ND	nc		20
124-48-1	Dibromochloromethane	ND	ND	nc		20
106-93-4	1,2-Dibromoethane	ND	ND	nc		20
95-50-1	1,2-Dichlorobenzene	ND	ND	nc		20
106-46-7	1,4-Dichlorobenzene	ND	ND	nc		20
110-57-6	trans-1,4-Dichloro-2-Butene	ND	ND	nc		20
75-34-3	1,1-Dichloroethane	ND	ND	nc		20
107-06-2	1,2-Dichloroethane	ND	ND	nc		20
75-35-4	1,1-Dichloroethene	ND	ND	nc		20
156-59-2	cis-1,2-Dichloroethene	ND	ND	nc		20
156-60-5	trans-1,2-Dichloroethene	ND	ND	nc		20
78-87-5	1,2-Dichloropropane	ND	ND	nc		20
10061-01-5	cis-1,3-Dichloropropene	ND	ND	nc		20
10061-02-6	trans-1,3-Dichloropropene	ND	ND	nc		20
100-41-4	Ethylbenzene	ND	ND	nc		20
591-78-6	2-Hexanone	ND	ND	nc		20
74-88-4	Iodomethane	ND	ND	nc		20
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	ND	nc		20
74-95-3	Methylene bromide	ND	ND	nc		20
75-09-2	Methylene chloride	ND	ND	nc		20
100-42-5	Styrene	ND	ND	nc		20
630-20-6	1,1,1,2-Tetrachloroethane	ND	ND	nc		20

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC68302-17DUP	2C159964.D	1	06/20/18	HT	n/a	n/a	V2C7103
JC68302-17	2C159959.D	1	06/20/18	HT	n/a	n/a	V2C7103

The QC reported here applies to the following samples:

Method: SW846 8260C

JC68071-2

CAS No.	Compound	JC68302-17 DUP		Q	RPD	Limits
		ug/l	Q ug/l			
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND		nc	20
127-18-4	Tetrachloroethene	ND	ND		nc	20
108-88-3	Toluene	ND	ND		nc	20
71-55-6	1,1,1-Trichloroethane	ND	ND		nc	20
79-00-5	1,1,2-Trichloroethane	ND	ND		nc	20
79-01-6	Trichloroethene	ND	ND		nc	20
75-69-4	Trichlorofluoromethane	ND	ND		nc	20
96-18-4	1,2,3-Trichloropropane	ND	ND		nc	20
108-05-4	Vinyl Acetate	ND	ND		nc	20
75-01-4	Vinyl chloride	ND	ND		nc	20
	m,p-Xylene	ND	ND		nc	20
95-47-6	o-Xylene	ND	ND		nc	20
1330-20-7	Xylene (total)	ND	ND		nc	20

CAS No.	Surrogate Recoveries	DUP	JC68302-17	Limits
1868-53-7	Dibromofluoromethane	109%	106%	80-120%
17060-07-0	1,2-Dichloroethane-D4	116%	113%	81-124%
2037-26-5	Toluene-D8	99%	97%	80-120%
460-00-4	4-Bromofluorobenzene	105%	105%	80-120%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-BFB	Injection Date: 04/16/18
Lab File ID: 2C158318.D	Injection Time: 16:16
Instrument ID: GCMS2C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	14691	17.8	Pass
75	30.0 - 60.0% of mass 95	37965	46.0	Pass
95	Base peak, 100% relative abundance	82565	100.0	Pass
96	5.0 - 9.0% of mass 95	5414	6.56	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	85733	103.8	Pass
175	5.0 - 9.0% of mass 174	6848	8.29 (7.99) ^a	Pass
176	95.0 - 101.0% of mass 174	83202	100.8 (97.0) ^a	Pass
177	5.0 - 9.0% of mass 176	5410	6.55 (6.50) ^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
V2C7025-IC7025	2C158319.D	04/16/18	16:59	00:43	Initial cal 0.5
V2C7025-IC7025	2C158320.D	04/16/18	17:28	01:12	Initial cal 1
V2C7025-IC7025	2C158321.D	04/16/18	17:57	01:41	Initial cal 2
V2C7025-IC7025	2C158322.D	04/16/18	18:26	02:10	Initial cal 5
V2C7025-IC7025	2C158323.D	04/16/18	18:55	02:39	Initial cal 10
V2C7025-IC7025	2C158324.D	04/16/18	19:24	03:08	Initial cal 20
V2C7025-ICC7025	2C158325.D	04/16/18	19:52	03:36	Initial cal 50
V2C7025-IC7025	2C158326.D	04/16/18	20:21	04:05	Initial cal 100
V2C7025-IC7025	2C158327.D	04/16/18	20:50	04:34	Initial cal 200
V2C7025-ICV7025	2C158330.D	04/16/18	22:16	06:00	Initial cal verification 50
V2C7025-ICV7025	2C158331.D	04/16/18	22:45	06:29	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-BFB2	Injection Date: 04/17/18
Lab File ID: 2C158334.D	Injection Time: 15:57
Instrument ID: GCMS2C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16413	17.8	Pass
75	30.0 - 60.0% of mass 95	41570	45.1	Pass
95	Base peak, 100% relative abundance	92157	100.0	Pass
96	5.0 - 9.0% of mass 95	6076	6.59	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	95880	104.0	Pass
175	5.0 - 9.0% of mass 174	7709	8.37 (8.04) ^a	Pass
176	95.0 - 101.0% of mass 174	93357	101.3 (97.4) ^a	Pass
177	5.0 - 9.0% of mass 176	6373	6.92 (6.83) ^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
V2C7025-ICV7025	2C158335.D	04/17/18	16:26	00:29	Initial cal verification 50

6.6.2
6

Instrument Performance Check (BFB)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7103-BFB	Injection Date: 06/20/18
Lab File ID: 2C159952.D	Injection Time: 09:08
Instrument ID: GCMS2C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	14354	18.6	Pass
75	30.0 - 60.0% of mass 95	37491	48.5	Pass
95	Base peak, 100% relative abundance	77235	100.0	Pass
96	5.0 - 9.0% of mass 95	5299	6.86	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	80243	103.9	Pass
175	5.0 - 9.0% of mass 174	6358	8.23 (7.92) ^a	Pass
176	95.0 - 101.0% of mass 174	79376	102.8 (98.9) ^a	Pass
177	5.0 - 9.0% of mass 176	5152	6.67 (6.49) ^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
V2C7103-CC7025	2C159952.D	06/20/18	09:08	00:00	Continuing cal 20
V2C7103-BS	2C159953.D	06/20/18	09:50	00:42	Blank Spike
V2C7103-MB	2C159955.D	06/20/18	10:47	01:39	Method Blank
JC68071-2	2C159956.D	06/20/18	11:24	02:16	1-NAS-002-003-02
ZZZZZZ	2C159957.D	06/20/18	11:53	02:45	(unrelated sample)
ZZZZZZ	2C159958.D	06/20/18	12:22	03:14	(unrelated sample)
JC68302-17	2C159959.D	06/20/18	12:51	03:43	(used for QC only; not part of job JC68071)
JC68302-18	2C159960.D	06/20/18	13:20	04:12	(used for QC only; not part of job JC68071)
ZZZZZZ	2C159961.D	06/20/18	13:49	04:41	(unrelated sample)
ZZZZZZ	2C159962.D	06/20/18	14:18	05:10	(unrelated sample)
ZZZZZZ	2C159963.D	06/20/18	14:47	05:39	(unrelated sample)
JC68302-17DUP	2C159964.D	06/20/18	15:15	06:07	Duplicate
JC68302-18MS	2C159965.D	06/20/18	15:44	06:36	Matrix Spike
ZZZZZZ	2C159968.D	06/20/18	16:42	07:34	(unrelated sample)
ZZZZZZ	2C159969.D	06/20/18	17:11	08:03	(unrelated sample)
ZZZZZZ	2C159971.D	06/20/18	18:09	09:01	(unrelated sample)

6.6.3
6

Instrument Performance Check (BFB)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-BFB	Injection Date: 06/07/18
Lab File ID: 4B82568.D	Injection Time: 19:12
Instrument ID: GCMS4B	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	15775	19.6	Pass
75	30.0 - 60.0% of mass 95	38290	47.7	Pass
95	Base peak, 100% relative abundance	80320	100.0	Pass
96	5.0 - 9.0% of mass 95	5356	6.67	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	72850	90.7	Pass
175	5.0 - 9.0% of mass 174	5932	7.39 (8.14) ^a	Pass
176	95.0 - 101.0% of mass 174	71112	88.5 (97.6) ^a	Pass
177	5.0 - 9.0% of mass 176	4942	6.15 (6.95) ^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
V4B3432-IC3432	4B82569.D	06/07/18	19:59	00:47	Initial cal 0.5
V4B3432-IC3432	4B82570.D	06/07/18	20:27	01:15	Initial cal 1
V4B3432-IC3432	4B82571.D	06/07/18	20:55	01:43	Initial cal 2
V4B3432-IC3432	4B82572.D	06/07/18	21:23	02:11	Initial cal 5
V4B3432-IC3432	4B82573.D	06/07/18	21:51	02:39	Initial cal 10
V4B3432-IC3432	4B82574.D	06/07/18	22:19	03:07	Initial cal 20
V4B3432-ICC3432	4B82575.D	06/07/18	22:47	03:35	Initial cal 50
V4B3432-IC3432	4B82576.D	06/07/18	23:15	04:03	Initial cal 100
V4B3432-IC3432	4B82577.D	06/07/18	23:43	04:31	Initial cal 200
V4B3432-ICV3432	4B82580.D	06/08/18	01:07	05:55	Initial cal verification 50
V4B3432-ICV3432	4B82581.D	06/08/18	01:36	06:24	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3444-BFB	Injection Date: 06/17/18
Lab File ID: 4B82825.D	Injection Time: 08:49
Instrument ID: GCMS4B	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	15837	19.7	Pass
75	30.0 - 60.0% of mass 95	38069	47.4	Pass
95	Base peak, 100% relative abundance	80341	100.0	Pass
96	5.0 - 9.0% of mass 95	5389	6.71	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 150.0% of mass 95	74669	92.9	Pass
175	5.0 - 9.0% of mass 174	6011	7.48 (8.05) ^a	Pass
176	95.0 - 101.0% of mass 174	73571	91.6 (98.5) ^a	Pass
177	5.0 - 9.0% of mass 176	4864	6.05 (6.61) ^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
V4B3444-CC3432	4B82825.D	06/17/18	08:49	00:00	Continuing cal 20
V4B3444-BS	4B82826.D	06/17/18	10:16	01:27	Blank Spike
V4B3444-MB	4B82828.D	06/17/18	11:12	02:23	Method Blank
ZZZZZZ	4B82829.D	06/17/18	11:58	03:09	(unrelated sample)
ZZZZZZ	4B82830.D	06/17/18	12:26	03:37	(unrelated sample)
ZZZZZZ	4B82831.D	06/17/18	12:55	04:06	(unrelated sample)
ZZZZZZ	4B82832.D	06/17/18	13:23	04:34	(unrelated sample)
ZZZZZZ	4B82833.D	06/17/18	13:51	05:02	(unrelated sample)
ZZZZZZ	4B82834.D	06/17/18	14:19	05:30	(unrelated sample)
JC68067-1	4B82835.D	06/17/18	14:48	05:59	(used for QC only; not part of job JC68071)
JC68067-1MS	4B82836.D	06/17/18	15:16	06:27	Matrix Spike
JC68067-1MSD	4B82837.D	06/17/18	15:44	06:55	Matrix Spike Duplicate
JC68071-5	4B82839.D	06/17/18	16:41	07:52	1-NAS-002-003-05
ZZZZZZ	4B82840.D	06/17/18	17:09	08:20	(unrelated sample)
ZZZZZZ	4B82841.D	06/17/18	17:37	08:48	(unrelated sample)
ZZZZZZ	4B82842.D	06/17/18	18:05	09:16	(unrelated sample)
ZZZZZZ	4B82843.D	06/17/18	18:34	09:45	(unrelated sample)
JC68071-1	4B82844.D	06/17/18	19:02	10:13	1-NAS-002-003-01

Internal Standard Area Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Check Std:	V2C7103-CC7025	Injection Date:	06/20/18
Lab File ID:	2C159952.D	Injection Time:	09:08
Instrument ID:	GCMS2C	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	235044	8.30	241290	10.77	301431	11.71	257205	14.69	163629	16.86
Upper Limit ^a	470088	8.80	482580	11.27	602862	12.21	514410	15.19	327258	17.36
Lower Limit ^b	117522	7.80	120645	10.27	150716	11.21	128603	14.19	81815	16.36

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V2C7103-BS	264489	8.31	244411	10.78	318551	11.71	275038	14.69	164403	16.86
V2C7103-MB	237173	8.30	238119	10.77	299203	11.71	265047	14.69	161875	16.86
JC68071-2	261257	8.30	236155	10.78	299794	11.71	257855	14.69	154271	16.86
ZZZZZZ	214638	8.30	240760	10.77	299561	11.71	261839	14.69	159341	16.86
ZZZZZZ	236755	8.31	240169	10.77	298887	11.71	259186	14.69	156830	16.86
JC68302-17	227772	8.30	236068	10.77	296020	11.71	260119	14.69	154674	16.86
JC68302-18	219452	8.31	232057	10.77	290153	11.71	254639	14.69	156207	16.86
ZZZZZZ	219283	8.31	229446	10.77	288139	11.71	248658	14.69	151635	16.86
ZZZZZZ	229229	8.31	228014	10.77	287880	11.71	248991	14.68	149224	16.86
ZZZZZZ	221803	8.31	230584	10.77	287184	11.71	248561	14.69	149978	16.86
JC68302-17DUP	207773	8.31	224286	10.77	284355	11.71	245963	14.69	148389	16.86
JC68302-18MS	210642	8.30	239027	10.78	302569	11.71	259417	14.69	160550	16.86
ZZZZZZ	219047	8.30	237184	10.77	293347	11.71	254526	14.69	153518	16.86
ZZZZZZ	210003	8.31	232402	10.77	286704	11.71	252681	14.69	149098	16.86
ZZZZZZ	210897	8.30	225532	10.77	283331	11.71	246151	14.69	148887	16.86

- IS 1** = Tert Butyl Alcohol-D9
- IS 2** = Pentafluorobenzene
- IS 3** = 1,4-Difluorobenzene
- IS 4** = Chlorobenzene-D5
- IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.7.1

6

Internal Standard Area Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Check Std: V4B3444-CC3432	Injection Date: 06/17/18
Lab File ID: 4B82825.D	Injection Time: 08:49
Instrument ID: GCMS4B	Method: SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	119735	6.79	194728	8.77	272152	9.65	267898	12.83	178062	15.40
Upper Limit ^a	239470	7.29	389456	9.27	544304	10.15	535796	13.33	356124	15.90
Lower Limit ^b	59868	6.29	97364	8.27	136076	9.15	133949	12.33	89031	14.90

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V4B3444-BS	123092	6.80	185918	8.77	250352	9.65	248202	12.83	158951	15.40
V4B3444-MB	117785	6.79	197665	8.77	275018	9.65	268054	12.83	166231	15.40
ZZZZZZ	109136	6.79	183521	8.77	251512	9.65	249490	12.83	156796	15.40
ZZZZZZ	112265	6.79	189828	8.77	261807	9.65	257687	12.83	162541	15.40
ZZZZZZ	108813	6.79	193038	8.77	269085	9.65	262321	12.83	167296	15.40
ZZZZZZ	111597	6.79	189889	8.77	262823	9.65	258771	12.83	164744	15.40
ZZZZZZ	114109	6.79	187430	8.77	258690	9.65	257354	12.83	161490	15.40
ZZZZZZ	112293	6.80	182699	8.77	253667	9.65	250227	12.83	156693	15.40
JC68067-1	113946	6.79	179003	8.77	247167	9.65	242935	12.83	154559	15.40
JC68067-1MS	108151	6.80	184948	8.77	258906	9.65	254752	12.83	162669	15.40
JC68067-1MSD	110610	6.79	186295	8.77	262549	9.65	259341	12.83	161041	15.40
JC68071-5	121302	6.79	177564	8.77	247988	9.65	243398	12.83	154842	15.40
ZZZZZZ	119331	6.79	179900	8.77	253126	9.65	246086	12.83	152376	15.40
ZZZZZZ	118128	6.79	173083	8.77	244854	9.65	237579	12.83	152134	15.40
ZZZZZZ	118002	6.79	172288	8.77	246207	9.65	235737	12.83	147174	15.40
ZZZZZZ	119300	6.79	168679	8.77	238855	9.65	232858	12.83	146786	15.40
JC68071-1	105825	6.79	167493	8.77	238951	9.65	236451	12.83	147634	15.40

- IS 1** = Tert Butyl Alcohol-D9
- IS 2** = Pentafluorobenzene
- IS 3** = 1,4-Difluorobenzene
- IS 4** = Chlorobenzene-D5
- IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.7.2
6

Surrogate Recovery Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC68071-1	4B82844.D	107	111	98	105
JC68071-2	2C159956.D	106	113	99	104
JC68071-5	4B82839.D	104	109	98	105
JC68067-1MS	4B82836.D	104	104	99	102
JC68067-1MSD	4B82837.D	102	104	98	104
JC68302-17DUP	2C159964.D	109	116	99	105
JC68302-18MS	2C159965.D	104	104	100	104
V2C7103-BS	2C159953.D	103	102	99	106
V2C7103-MB	2C159955.D	104	111	97	104
V4B3444-BS	4B82826.D	100	101	99	101
V4B3444-MB	4B82828.D	103	104	98	105

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

Response Factor Report Instrument #1

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
Last Update : Mon Apr 23 10:59:15 2018
Response via : Initial Calibration

Calibration Files

1 =2C158320.D 2 =2C158321.D 100 =2C158326.D 50 =2C158325.D
20 =2C158324.D 200 =2C158327.D 5 =2C158322.D 10 =2C158323.D
0.5 =2C158319.D =

Compound	1	2	100	50	20	200	5	10	0.5	Avg	%RSD
1) I Tert Butyl Alcohol-d9 -----ISTD-----											
2) ethanol										0.000#	-1.00
3) tertiary butyl alcohol											
1.235 1.255 1.291 1.227 1.227 1.261 1.183 1.205										1.235	2.72
4) 1,4-dioxane											
0.079 0.095 0.090 0.088 0.092 0.090 0.088 0.092										0.089	5.18
5) I pentafluorobenzene -----ISTD-----											
6) chlorodifluoromethane											
0.776 0.841 0.919 0.811 0.983 0.969										0.883	9.78
7) dichlorodifluoromethane											
0.865 0.655 0.724 0.763 0.753 0.885 0.808										0.779	10.33
8) chloromethane											
1.460 1.283 1.043 1.059 1.123 1.149 1.273 1.241										1.204	11.52
9) vinyl chloride											
0.978 0.993 0.959 0.983 1.040 1.062 1.049 1.098 1.143										1.034	5.93
10) 1,3-butadiene											
										0.000#	-1.00
11) bromomethane											
0.816 0.721 0.569 0.609 0.656 0.604 0.689 0.702										0.671	11.80
12) chloroethane											
0.662 0.577 0.472 0.503 0.527 0.508 0.547 0.553										0.544	10.70
13) trichlorofluoromethane											
0.931 0.921 0.930 0.969 1.011 1.035 1.002 1.037 1.038										0.986	4.97
14) vinyl bromide											
0.664 0.613 0.588 0.608 0.635 0.648 0.637 0.650 0.787										0.648	8.86
15) ethyl ether											
0.281 0.271 0.292 0.295 0.289 0.295 0.288 0.292 0.299										0.289	2.95
16) 2-chloropropane											
1.080 1.068 0.962 1.021 1.057 1.034 1.099 1.084 1.445										1.095	12.59
17) acrolein											
0.174 0.187 0.194 0.184 0.188 0.194										0.187	3.95
18) freon 113											
0.408 0.414 0.424 0.456 0.486 0.473 0.459 0.480 0.381										0.442	8.35
19) 1,1-dichloroethene											
0.693 0.610 0.525 0.560 0.604 0.569 0.619 0.620										0.600	8.38
20) acetone											
0.082 0.078 0.074 0.075 0.081 0.077 0.076 0.081										0.078	3.75
21) iodomethane											
0.950 0.931 0.936 0.971 1.003 1.024 0.989 1.019 1.188										1.001	7.79
22) acetonitrile											
0.127 0.126 0.139 0.136 0.123 0.151										0.134	7.75
23) carbon disulfide											

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

24)	methylen chloride	1.774	1.707	1.647	1.743	1.840	1.822	1.806	1.854	1.774	4.02
25)	methyl acetate	0.739	0.668	0.629	0.637	0.676	0.683	0.652	0.680	0.938	13.53
26)	methyl tert butyl ether	0.649	0.695	0.633	0.636	0.631	0.629	0.618	0.641	0.821	9.66
27)	trans-1,2-dichloroethene	1.820	1.759	1.748	1.697	1.789	1.693	1.778	1.799	2.253	9.35
28)	hexane	0.601	0.585	0.502	0.518	0.535	0.527	0.558	0.549	0.697	10.48
29)	di-isopropyl ether	0.420	0.366	0.312	0.325	0.334	0.325	0.369	0.339	0.349	10.06
30)	1,1-dichloroethane	2.197	2.018	1.835	1.891	2.008	1.905	2.018	2.048	2.713	12.71
31)	chloroprene	1.012	0.949	0.906	0.920	0.944	0.923	0.938	0.960	1.120	6.86
32)	acrylonitrile	0.826	0.807	0.741	0.758	0.748	0.747	0.780	0.793	1.049	11.89
33)	vinyl acetate	0.328	0.312	0.322	0.318	0.328	0.336	0.316	0.335	0.393	7.25
34)	ethyl tert-butyl ether	0.070	0.081	0.099	0.095	0.095	0.097	0.094	0.099	0.091	11.35
35)	2-butanone	1.878	1.785	1.820	1.808	1.868	1.940	1.843	1.864	2.197	6.57
36)	ethyl acetate	0.089	0.091	0.093	0.093	0.090	0.091	0.090	0.087	0.089	2.09
37)	2,2-dichloropropane	0.116	0.116	0.120	0.107	0.139	0.133			0.122	9.78
38)	cis-1,2-dichloroethene	0.801	0.745	0.630	0.662	0.733	0.684	0.771	0.768	0.724	8.24
39)	propionitrile	0.657	0.613	0.539	0.553	0.558	0.546	0.570	0.591	0.774	12.51
40)	bromochloromethane	0.159	0.153	0.138	0.143	0.147	0.137	0.147	0.149	0.164	6.09
41)	tetrahydrofuran	0.317	0.270	0.293	0.292	0.290	0.299	0.279	0.303	0.329	6.04
42)	chloroform	0.386	0.286	0.295	0.306	0.287	0.317	0.331		0.315	11.09
43)	t-butyl formate	1.054	0.915	0.857	0.865	0.871	0.869	0.910	0.892	1.289	14.97
44)	dibromofluoromethane (s)	0.585	0.565	0.548	0.545	0.582	0.559	0.580	0.604	0.571	3.51
45)	methacrylonitrile	0.431	0.428	0.427	0.427	0.424	0.441	0.420	0.435	0.461	2.86
46)	1,1,1-trichloroethane	0.297	0.289	0.281	0.277	0.274	0.279	0.263	0.279	0.230	6.97
47)	Cyclohexane	0.918	0.851	0.820	0.835	0.860	0.913	0.866	0.896	1.171	11.71
48)	1,1-dichloropropene	0.795	0.726	0.675	0.736	0.805	0.771	0.782	0.772	0.810	5.72
49)	carbon tetrachloride	0.703	0.676	0.597	0.618	0.620	0.589	0.665	0.648	0.773	8.90
50)	isobutyl alcohol	0.685	0.686	0.648	0.666	0.686	0.718	0.707	0.707	0.688	3.37
		0.034	0.034	0.037	0.035	0.034	0.043			0.036	10.37
51)	I 1,4-difluorobenzene	-----ISTD-----									
52)	1,2-dichloroethane-d4 (s)	0.376	0.374	0.336	0.352	0.361	0.333	0.368	0.361	0.401	5.78
53)	n-butyl alcohol										

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

	0.031	0.029	0.025	0.026	0.029	0.026	0.027	0.028		0.028	7.68
54)	tert-amyl alcohol										
	0.051	0.035	0.036	0.044	0.036	0.041	0.042			0.041	13.59
55)	iso-octane										
	1.721	1.622	1.415	1.542	1.677	1.628	1.669	1.666		1.618	6.00
56)	benzene										
	1.544	1.513	1.370	1.406	1.435	1.363	1.455	1.464	1.785	1.482	8.68
57)	tert-amyl methyl ether										
	0.308	0.282	0.276	0.285	0.299	0.294	0.297	0.297		0.292	3.57
58)	heptane										
	0.335	0.287	0.295	0.307	0.302	0.332	0.300			0.308	5.97
59)	isopropyl acetate										
	0.071	0.091	0.093	0.094	0.095	0.093	0.092	0.096		0.091	8.77
60)	1,2-dichloroethane										
	0.606	0.553	0.469	0.477	0.504	0.453	0.515	0.503		0.510	9.71
61)	ethyl acrylate										
	0.590	0.557	0.563	0.557	0.552	0.553	0.556			0.561	2.36
62)	trichloroethene										
	0.396	0.376	0.338	0.348	0.354	0.335	0.366	0.365	0.453	0.370	9.84
63)	2-nitropropane										
	0.191	0.168	0.165	0.163	0.173	0.205	0.158			0.175	9.82
64)	2-chloroethyl vinyl ether										
	0.251	0.238	0.239	0.247	0.248	0.236	0.240	0.244	0.247	0.243	2.16
65)	methyl methacrylate										
	0.108	0.102	0.116	0.113	0.112	0.118	0.108	0.113		0.111	4.41
66)	1,2-dichloropropane										
	0.399	0.387	0.351	0.364	0.376	0.346	0.378	0.377	0.376	0.373	4.44
67)	dibromomethane										
	0.273	0.241	0.243	0.241	0.251	0.245	0.252	0.254	0.288	0.254	6.27
68)	methylcyclohexane										
	0.765	0.727	0.640	0.689	0.748	0.730	0.735	0.737		0.721	5.44
69)	bromodichloromethane										
	0.512	0.501	0.491	0.491	0.484	0.501	0.473	0.477	0.626	0.506	9.18
70)	epichlorohydrin										
	0.073	0.067	0.062	0.063	0.064	0.065	0.061	0.064		0.065	5.68
71)	cis-1,3-dichloropropene										
	0.602	0.557	0.584	0.583	0.570	0.592	0.575	0.567	0.597	0.581	2.56
72)	4-methyl-2-pentanone										
	0.231	0.215	0.201	0.212	0.222	0.206	0.219	0.222		0.216	4.45
73)	3-methyl-1-butanol										
	0.049	0.036	0.040	0.045	0.037	0.046	0.046			0.043	11.37
74)	I chlorobenzene-d5 -----ISTD-----										
75)	toluene-d8 (s)										
	1.267	1.259	1.296	1.244	1.254	1.267	1.247	1.261	1.250	1.261	1.25
76)	toluene										
	0.991	0.969	0.955	0.927	0.923	0.913	0.939	0.943	1.039	0.955	4.14
77)	ethyl methacrylate										
	0.666	0.600	0.573	0.551	0.559	0.547	0.568	0.573	0.728	0.596	10.28
78)	trans-1,3-dichloropropene										
	0.619	0.615	0.608	0.589	0.582	0.565	0.594	0.593	0.606	0.597	2.89
79)	1,1,2-trichloroethane										
	0.342	0.332	0.333	0.317	0.319	0.318	0.318	0.336	0.435	0.339	11.02
80)	2-hexanone										
	0.259	0.254	0.220	0.219	0.236	0.210	0.242	0.242	0.266	0.238	8.11
81)	tetrachloroethene										
	0.378	0.380	0.378	0.373	0.368	0.362	0.379	0.386	0.400	0.378	2.89
82)	1,3-dichloropropane										
	0.615	0.598	0.566	0.556	0.575	0.539	0.573	0.581	0.601	0.578	4.08
83)	butyl acetate										

6.9.1
6

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

	0.415	0.350	0.322	0.318	0.343	0.319	0.359	0.361	0.404	0.355	9.99
84)	dibromochloromethane										
	0.416	0.402	0.482	0.446	0.433	0.482	0.407	0.417	0.456	0.438	6.96
85)	1,2-dibromoethane										
	0.440	0.441	0.459	0.439	0.440	0.460	0.431	0.434	0.421	0.440	2.82
86)	n-butyl ether										
	1.992	1.846	1.724	1.714	1.803	1.711	1.845	1.864	2.313	1.868	10.15
87)	chlorobenzene										
	1.097	0.999	1.045	1.026	1.022	1.051	1.047	1.029	1.103	1.047	3.27
88)	1,1,1,2-tetrachloroethane										
	0.438	0.427	0.437	0.426	0.445	0.435	0.449	0.455	0.507	0.446	5.52
89)	ethylbenzene										
	1.814	1.713	1.645	1.651	1.716	1.639	1.733	1.733	2.105	1.750	8.25
90)	m,p-xylene										
	0.676	0.674	0.659	0.650	0.663	0.676	0.683	0.676	0.791	0.683	6.14
91)	o-xylene										
	0.714	0.681	0.716	0.703	0.732	0.738	0.717	0.725	0.804	0.725	4.68
92)	styrene										
	1.221	1.178	1.117	1.118	1.150	1.159	1.195	1.180	1.301	1.180	4.80
93)	butyl acrylate										
	1.083	0.994	0.898	0.887	0.963	0.908	0.989	0.997		0.965	6.82
94)	bromoform										
	0.340	0.342	0.393	0.368	0.358	0.422	0.343	0.350	0.354	0.363	7.59
95)	isopropylbenzene										
	2.033	1.926	1.892	1.909	1.994	1.940	1.983	2.029	2.372	2.009	7.23
96)	cis-1,4-dichloro-2-butene										
	0.209	0.231	0.234	0.232	0.239	0.248	0.225	0.241	0.225	0.231	4.93
97) I	1,4-dichlorobenzene-d -----ISTD-----										
98)	4-bromofluorobenzene (s)										
	0.719	0.728	0.756	0.749	0.717	0.761	0.725	0.719	0.689	0.729	3.12
99)	bromobenzene										
	0.883	0.863	0.822	0.832	0.811	0.791	0.855	0.830	0.857	0.838	3.44
100)	1,1,2,2-tetrachloroethane										
	1.098	1.101	1.080	1.078	1.069	1.010	1.068	1.058	1.251	1.090	6.05
101)	trans-1,4-dichloro-2-butene										
	0.123	0.131	0.126	0.123	0.125	0.126	0.120			0.125	2.82
102)	1,2,3-trichloropropane										
	0.269	0.267	0.263	0.261	0.261	0.247	0.273	0.269	0.278	0.265	3.37
103)	n-propylbenzene										
	3.535	3.348	3.090	3.178	3.188	2.955	3.311	3.307	3.830	3.305	7.78
104)	2-chlorotoluene										
	0.781	0.782	0.746	0.750	0.732	0.719	0.754	0.741	0.739	0.749	2.78
105)	4-chlorotoluene										
	2.131	2.065	1.955	1.959	1.940	1.904	1.976	1.958	2.309	2.022	6.34
106)	1,3,5-trimethylbenzene										
	2.730	2.684	2.465	2.543	2.562	2.354	2.597	2.614	2.878	2.603	5.84
107)	tert-butylbenzene										
	2.184	2.235	2.374	2.327	2.239	2.212	2.210	2.231	2.347	2.262	3.02
108)	1,2,4-trimethylbenzene										
	2.836	2.621	2.502	2.565	2.593	2.399	2.690	2.647	2.993	2.650	6.67
109)	sec-butylbenzene										
	3.431	3.423	3.428	3.499	3.472	3.296	3.502	3.484	3.791	3.481	3.80
110)	1,3-dichlorobenzene										
	1.644	1.674	1.582	1.611	1.640	1.529	1.674	1.694	1.814	1.651	4.83
111)	p-isopropyltoluene										
	2.957	2.994	2.970	3.028	3.027	2.868	3.020	3.095	3.303	3.029	3.97
112)	1,4-dichlorobenzene										
	1.702	1.644	1.613	1.625	1.613	1.560	1.613	1.604	1.783	1.639	3.99
113)	1,2-dichlorobenzene										

6.9.1
6

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICC7025
Lab FileID: 2C158325.D

114)	n-butylbenzene	1.813	1.762	1.737	1.759	1.785	1.624	1.784	1.789	1.958	1.779	4.86
115)	1,2-dibromo-3-chloropropane	1.558	1.509	1.500	1.543	1.545	1.470	1.563	1.550	1.807	1.560	6.24
116)	1,3,5-trichlorobenzene	0.249	0.266	0.292	0.276	0.269	0.274	0.271	0.284	0.250	0.270	5.24
117)	Nitrobenzene	1.772	1.758	1.809	1.823	1.880	1.605	1.818	1.858	2.028	1.817	6.18
118)	1,2,4-trichlorobenzene	0.046	0.056	0.052	0.052	0.061	0.049	0.043			0.051	12.30
119)	2-ethylhexyl acrylate	1.409	1.450	1.606	1.578	1.615	1.390	1.503	1.549	1.786	1.543	7.96
120)	hexachlorobutadiene	1.211	1.337	1.175	1.145	1.255	1.128	1.073			1.189	7.37
121)	naphthalene	0.883	0.901	0.865	0.888	0.921	0.782	0.913	0.915		0.883	5.10
122)	1,2,3-trichlorobenzene	3.130	3.221	3.834	3.755	3.870	3.235	3.588	3.752	3.953	3.593	8.79
123)	hexachloroethane	1.279	1.384	1.495	1.448	1.488	1.318	1.396	1.459	1.522	1.421	5.83
124)	2-methylnaphthalene	0.524	0.521	0.657	0.629	0.569	0.632	0.549	0.558	0.573	0.579	8.49
125)	Ethylenimine	2.219	2.037	1.878	1.945			1.661			1.948	10.55
126)	Bis(chloromethyl)ether										0.000#	-1.00
											0.000#	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

M2C7025.M

Mon Apr 23 11:00:19 2018

RPT1

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158330.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v2c7025\2C158330.D Vial: 19
 Acq On : 16 Apr 2018 10:16 pm Operator: HueanhT
 Sample : icv7025-50 Inst : Instrument #1
 Misc : MS25516,V2C7025,w,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
 Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
 Last Update : Mon Apr 23 10:59:15 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	100	0.00	8.33
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.235	1.282	-3.8	105	-0.02	8.45
4	1,4-dioxane	0.089	0.073	18.0	83	0.00	12.35
5 I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	10.78
6	chlorodifluoromethane	0.883	0.566	35.9#	70	0.01	4.45
7	dichlorodifluoromethane	0.779	0.693	11.0	99	0.00	4.42
8	chloromethane	1.204	1.119	7.1	109	0.01	4.87
9	vinyl chloride	1.034	0.978	5.4	103	0.00	5.14
10	1,3-butadiene			-----NA-----			
11	bromomethane	0.671	0.642	4.3	109	0.02	5.86
12	chloroethane	0.544	0.520	4.4	107	0.01	6.05
13	trichlorofluoromethane	0.986	0.942	4.5	100	0.01	6.60
14	vinyl bromide	0.648	0.713	-10.0	121	0.02	6.46
15	ethyl ether	0.289	0.286	1.0	100	0.00	7.04
16	2-chloropropane	1.095	1.034	5.6	105	0.00	7.30
17	acrolein	0.187	0.255	-36.4#	141	0.00	7.31
18	freon 113	0.442	0.507	-14.7	115	0.01	7.55
19	1,1-dichloroethene	0.600	0.500	16.7	92	0.00	7.54
20	acetone	0.078	0.075	3.8	103	0.00	7.53
21	iodomethane	1.001	1.074	-7.3	114	0.00	7.83
22	acetonitrile	0.134	0.079	41.0#	64	0.00	8.04
23	carbon disulfide	1.774	1.661	6.4	98	0.01	7.99
24	methylene chloride	0.700	0.639	8.7	104	0.01	8.36
25	methyl acetate	0.661	0.593	10.3	96	0.00	8.06
26	methyl tert butyl ether	1.815	3.655	-0.7	111	0.00	8.75
27	trans-1,2-dichloroethene	0.564	0.501	11.2	100	0.00	8.77
28	hexane	0.349	0.292	16.3	93	0.01	9.17
29	di-isopropyl ether	2.070	2.017	2.6	110	0.00	9.41
30	1,1-dichloroethane	0.964	0.933	3.2	105	0.00	9.41
31	chloroprene	0.806	0.788	2.2	107	0.00	9.52
32	acrylonitrile	0.332	0.356	-7.2	115	0.00	8.68
33	vinyl acetate	0.091	0.110	-20.9	120	0.00	9.36
34	ethyl tert-butyl ether	1.889	1.950	-3.2	111	0.00	9.92
35	2-butanone	0.090	0.093	-3.3	103	0.00	10.13
36	ethyl acetate	0.122	0.120	1.6	107	0.00	10.15
37	2,2-dichloropropane	0.724	0.677	6.5	106	0.00	10.23
38	cis-1,2-dichloroethene	0.600	0.582	3.0	109	0.00	10.19
39	propionitrile	0.149	0.140	6.0	101	0.00	10.22
40	bromochloromethane	0.297	0.310	-4.4	110	0.00	10.51
41	tetrahydrofuran	0.315	0.294	6.7	103	0.00	10.53

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158330.D

42		chloroform	0.947	0.919	3.0	110	0.00	10.60
43		t-butyl formate	0.571	0.400	29.9	76	0.00	10.65
44	S	dibromofluoromethane (s)	0.433	0.432	0.2	105	0.00	10.80
45		methacrylonitrile	0.274	0.291	-6.2	108	0.00	10.42
46		1,1,1-trichloroethane	0.903	0.842	6.8	104	0.00	10.88
47		Cyclohexane	0.764	1.076	-40.8#	151	0.00	10.99
48		1,1-dichloropropene	0.654	0.632	3.4	106	0.00	11.05
49		carbon tetrachloride	0.688	0.679	1.3	105	0.00	11.08
50		isobutyl alcohol	0.036	0.039	-8.3	121	0.00	11.03
51	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	11.72
52	S	1,2-dichloroethane-d4 (s)	0.362	0.345	4.7	102	0.00	11.24
53		n-butyl alcohol	0.028	0.024	14.3	94	0.00	11.77
54		tert-amyl alcohol	0.041	0.036	12.2	103	0.00	11.20
55		iso-octane	1.618	1.456	10.0	98	0.00	11.40
56		benzene	1.482	1.461	1.4	108	0.00	11.30
57		tert-amyl methyl ether	0.292	0.300	-2.7	109	0.00	11.39
58		heptane	0.308	0.307	0.3	108	0.00	11.55
59		isopropyl acetate	0.091	0.099	-8.8	110	0.00	11.22
60		1,2-dichloroethane	0.510	0.502	1.6	109	0.00	11.33
61		ethyl acrylate	0.561	0.604	-7.7	112	0.00	12.00
62		trichloroethene	0.370	0.373	-0.8	111	0.00	12.01
63		2-nitropropane	0.175	0.180	-2.9	113	0.00	12.74
64		2-chloroethyl vinyl ether	0.243	0.273	-12.3	115	0.00	12.78
65		methyl methacrylate	0.111	0.121	-9.0	111	0.00	12.26
66		1,2-dichloropropane	0.373	0.370	0.8	106	0.00	12.29
67		dibromomethane	0.254	0.263	-3.5	113	0.00	12.40
68		methylcyclohexane	0.721	0.633	12.2	95	0.00	12.30
69		bromodichloromethane	0.506	0.516	-2.0	109	0.00	12.55
70		epichlorohydrin	0.065	0.063	3.1	105	0.00	12.86
71		cis-1,3-dichloropropene	0.581	0.625	-7.6	111	0.00	12.98
72		4-methyl-2-pentanone	0.216	0.221	-2.3	108	0.00	13.08
73		3-methyl-1-butanol	0.043	0.039	9.3	101	0.00	13.08
74	I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	14.69
75	S	toluene-d8 (s)	1.261	1.232	2.3	101	0.00	13.27
76		toluene	0.955	0.993	-4.0	110	0.00	13.34
77		ethyl methacrylate	0.596	0.597	-0.2	111	0.00	13.50
78		trans-1,3-dichloropropene	0.597	0.610	-2.2	106	0.00	13.51
79		1,1,2-trichloroethane	0.339	0.349	-2.9	112	0.00	13.72
80		2-hexanone	0.238	0.236	0.8	110	0.00	13.88
81		tetrachloroethene	0.378	0.404	-6.9	111	0.00	13.86
82		1,3-dichloropropane	0.578	0.616	-6.6	113	0.00	13.90
83		butyl acetate	0.355	0.365	-2.8	117	0.00	13.95
84		dibromochloromethane	0.438	0.512	-16.9	117	0.00	14.13
85		1,2-dibromoethane	0.440	0.492	-11.8	114	0.00	14.27
86		n-butyl ether	1.868	1.846	1.2	110	0.00	14.67
87		chlorobenzene	1.047	1.126	-7.5	112	0.00	14.72
88		1,1,1,2-tetrachloroethane	0.446	0.471	-5.6	113	0.00	14.78
89		ethylbenzene	1.750	1.824	-4.2	113	0.00	14.77
90		m,p-xylene	0.683	0.719	-5.3	113	0.00	14.88
91		o-xylene	0.725	0.781	-7.7	114	0.00	15.26
92		styrene	1.180	1.246	-5.6	114	0.00	15.27
93		butyl acrylate	0.965	1.003	-3.9	116	0.00	15.09
94		bromoform	0.363	0.431	-18.7	120	0.00	15.49
95		isopropylbenzene	2.009	2.092	-4.1	112	0.00	15.59
96		cis-1,4-dichloro-2-butene	0.231	0.242	-4.8	107	0.00	15.62
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	16.86
98	S	4-bromofluorobenzene (s)	0.729	0.748	-2.6	102	0.00	15.77

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158330.D

99	bromobenzene	0.838	0.930	-11.0	115	0.00	15.95
100	1,1,2,2-tetrachloroethane	1.090	1.175	-7.8	112	0.00	15.84
101	trans-1,4-dichloro-2-bute	0.125	0.148	-18.4	121	0.00	15.87
102	1,2,3-trichloropropane	0.265	0.282	-6.4	111	0.00	15.93
103	n-propylbenzene	3.305	3.505	-6.1	113	0.00	15.97
104	2-chlorotoluene	0.749	0.812	-8.4	111	0.00	16.10
105	4-chlorotoluene	2.022	2.214	-9.5	116	0.00	16.20
106	1,3,5-trimethylbenzene	2.603	2.720	-4.5	110	0.00	16.12
107	tert-butylbenzene	2.262	2.550	-12.7	112	0.00	16.43
108	1,2,4-trimethylbenzene	2.650	2.854	-7.7	114	0.00	16.48
109	sec-butylbenzene	3.481	3.826	-9.9	112	0.00	16.64
110	1,3-dichlorobenzene	1.651	1.774	-7.5	113	0.00	16.80
111	p-isopropyltoluene	3.029	3.325	-9.8	113	0.00	16.76
112	1,4-dichlorobenzene	1.639	1.785	-8.9	113	0.00	16.89
113	1,2-dichlorobenzene	1.779	1.928	-8.4	112	0.00	17.25
114	n-butylbenzene	1.560	1.680	-7.7	112	0.00	17.15
115	1,2-dibromo-3-chloropropa	0.270	0.299	-10.7	111	0.00	18.01
116	1,3,5-trichlorobenzene	1.817	2.018	-11.1	113	0.00	18.20
117	Nitrobenzene	0.051	0.049	3.9	97	0.00	18.21
118	1,2,4-trichlorobenzene	1.543	1.798	-16.5	117	0.00	18.85
119	2-ethylhexyl acrylate	1.189	1.392	-17.1	121	0.00	18.86
120	hexachlorobutadiene	0.883	0.940	-6.5	109	0.00	18.97
121	naphthalene	3.593	4.283	-19.2	117	0.00	19.16
122	1,2,3-trichlorobenzene	1.421	1.639	-15.3	116	0.00	19.38
123	hexachloroethane	0.579	0.704	-21.6	115	0.00	17.54
124	2-methylnaphthalene	1.948	2.105	-8.1	106	0.00	20.31
125	Ethylenimine			-----NA-----			
126	Bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range
 2C158325.D M2C7025.M

SPCC's out = 0 CCC's out = 0
 Mon Apr 23 11:00:34 2018 RPT1

6.9.2
 6

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158331.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v2c7025\2C158331.D Vial: 20
 Acq On : 16 Apr 2018 10:45 pm Operator: HueanhT
 Sample : icv7025-50 Inst : Instrument #1
 Misc : MS25516,V2C7025,w,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
 Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
 Last Update : Tue Apr 17 15:50:34 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	115	0.01	8.34
2	ethanol			-----NA-----			
3	tertiary butyl alcohol			-----NA-----			
4	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	10.77
6	chlorodifluoromethane			-----NA-----			
7	dichlorodifluoromethane			-----NA-----			
8	chloromethane			-----NA-----			
9	vinyl chloride			-----NA-----			
10	1,3-butadiene			-----NA-----			
11	bromomethane			-----NA-----			
12	chloroethane			-----NA-----			
13	trichlorofluoromethane			-----NA-----			
14	vinyl bromide			-----NA-----			
15	ethyl ether			-----NA-----			
16	2-chloropropane			-----NA-----			
17	acrolein			-----NA-----			
18	freon 113			-----NA-----			
19	1,1-dichloroethene			-----NA-----			
20	acetone			-----NA-----			
21	iodomethane			-----NA-----			
22	acetonitrile	0.134	0.154	-14.9	122	0.02	8.06
23	carbon disulfide			-----NA-----			
24	methylene chloride			-----NA-----			
25	methyl acetate			-----NA-----			
26	methyl tert butyl ether			-----NA-----			
27	trans-1,2-dichloroethene			-----NA-----			
28	hexane			-----NA-----			
29	di-isopropyl ether			-----NA-----			
30	1,1-dichloroethane			-----NA-----			
31	chloroprene			-----NA-----			
32	acrylonitrile			-----NA-----			
33	vinyl acetate			-----NA-----			
34	ethyl tert-butyl ether			-----NA-----			
35	2-butanone			-----NA-----			
36	ethyl acetate			-----NA-----			
37	2,2-dichloropropane			-----NA-----			
38	cis-1,2-dichloroethene			-----NA-----			
39	propionitrile			-----NA-----			
40	bromochloromethane			-----NA-----			
41	tetrahydrofuran			-----NA-----			

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158331.D

42	chloroform								-----NA-----
43	t-butyl formate								-----NA-----
44 S	dibromofluoromethane (s)	0.433	0.427	1.4	100	0.00	10.80		
45	methacrylonitrile								-----NA-----
46	1,1,1-trichloroethane								-----NA-----
47	Cyclohexane								-----NA-----
48	1,1-dichloropropene								-----NA-----
49	carbon tetrachloride								-----NA-----
		----- True	Calc.	% Drift					-----
50	isobutyl alcohol								-----NA-----
		----- AvgRF	CCRF	% Dev					-----
51 I	1,4-difluorobenzene	1.000	1.000	0.0	98	0.00	11.71		
52 S	1,2-dichloroethane-d4 (s)	0.362	0.373	-3.0	104	0.00	11.23		
53	n-butyl alcohol								-----NA-----
54	tert-amyl alcohol								-----NA-----
55	iso-octane								-----NA-----
56	benzene								-----NA-----
57	tert-amyl methyl ether								-----NA-----
58	heptane								-----NA-----
59	isopropyl acetate								-----NA-----
60	1,2-dichloroethane								-----NA-----
61	ethyl acrylate								-----NA-----
62	trichloroethene								-----NA-----
63	2-nitropropane								-----NA-----
64	2-chloroethyl vinyl ether								-----NA-----
65	methyl methacrylate								-----NA-----
66	1,2-dichloropropane								-----NA-----
67	dibromomethane								-----NA-----
68	methylcyclohexane								-----NA-----
69	bromodichloromethane								-----NA-----
70	epichlorohydrin								-----NA-----
71	cis-1,3-dichloropropene								-----NA-----
72	4-methyl-2-pentanone								-----NA-----
73	3-methyl-1-butanol								-----NA-----
74 I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	14.69		
75 S	toluene-d8 (s)	1.261	1.235	2.1	100	0.00	13.27		
76	toluene								-----NA-----
77	ethyl methacrylate								-----NA-----
78	trans-1,3-dichloropropene								-----NA-----
79	1,1,2-trichloroethane								-----NA-----
80	2-hexanone								-----NA-----
81	tetrachloroethene	0.378	0.364	3.7	98	0.00	13.86		
82	1,3-dichloropropane								-----NA-----
83	butyl acetate								-----NA-----
84	dibromochloromethane								-----NA-----
85	1,2-dibromoethane								-----NA-----
86	n-butyl ether								-----NA-----
87	chlorobenzene								-----NA-----
88	1,1,1,2-tetrachloroethane								-----NA-----
89	ethylbenzene								-----NA-----
90	m,p-xylene								-----NA-----
91	o-xylene								-----NA-----
92	styrene								-----NA-----
93	butyl acrylate								-----NA-----
94	bromoform								-----NA-----
95	isopropylbenzene								-----NA-----

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158331.D

96	cis-1,4-dichloro-2-butene								-----NA-----
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	108	0.00		16.86	
98 S	4-bromofluorobenzene (s)	0.729	0.708	2.9	102	0.00		15.77	
99	bromobenzene								-----NA-----
100	1,1,2,2-tetrachloroethane								-----NA-----
101	trans-1,4-dichloro-2-bute								-----NA-----
102	1,2,3-trichloropropane								-----NA-----
103	n-propylbenzene								-----NA-----
104	2-chlorotoluene								-----NA-----
105	4-chlorotoluene								-----NA-----
106	1,3,5-trimethylbenzene								-----NA-----
107	tert-butylbenzene								-----NA-----
108	1,2,4-trimethylbenzene								-----NA-----
109	sec-butylbenzene								-----NA-----
110	1,3-dichlorobenzene								-----NA-----
111	p-isopropyltoluene								-----NA-----
112	1,4-dichlorobenzene								-----NA-----
113	1,2-dichlorobenzene								-----NA-----
114	n-butylbenzene								-----NA-----
115	1,2-dibromo-3-chloropropa								-----NA-----
116	1,3,5-trichlorobenzene								-----NA-----
117	Nitrobenzene								-----NA-----
118	1,2,4-trichlorobenzene								-----NA-----
119	2-ethylhexyl acrylate								-----NA-----
120	hexachlorobutadiene								-----NA-----
121	naphthalene								-----NA-----
122	1,2,3-trichlorobenzene								-----NA-----
123	hexachloroethane								-----NA-----
124	2-methylnaphthalene								-----NA-----

(#) = Out of Range
 2C158325.D M2C7025.M

SPCC's out = 0 CCC's out = 0
 Tue Apr 17 16:02:35 2018 RPT1

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158335.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v2c7025\2C158335.D Vial: 24
 Acq On : 17 Apr 2018 4:26 pm Operator: HueanhT
 Sample : icv7025-50 Inst : Instrument #1
 Misc : MS25516,V2C7025,w,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
 Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
 Last Update : Tue Apr 17 15:50:34 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	122	0.00	8.34
2	ethanol			-----NA-----			
3	tertiary butyl alcohol			-----NA-----			
4	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	105	0.00	10.77
6	chlorodifluoromethane	0.883	0.926	-4.9	115	0.00	4.45
7	dichlorodifluoromethane			-----NA-----			
8	chloromethane			-----NA-----			
9	vinyl chloride			-----NA-----			
10	1,3-butadiene			-----NA-----			
11	bromomethane			-----NA-----			
12	chloroethane			-----NA-----			
13	trichlorofluoromethane			-----NA-----			
14	vinyl bromide			-----NA-----			
15	ethyl ether			-----NA-----			
16	2-chloropropane			-----NA-----			
17	acrolein	0.187	0.207	-10.7	116	0.02	7.32
18	freon 113			-----NA-----			
19	1,1-dichloroethene			-----NA-----			
20	acetone			-----NA-----			
21	iodomethane			-----NA-----			
22	acetonitrile			-----NA-----			
23	carbon disulfide			-----NA-----			
24	methylene chloride			-----NA-----			
25	methyl acetate			-----NA-----			
26	methyl tert butyl ether			-----NA-----			
27	trans-1,2-dichloroethene			-----NA-----			
28	hexane			-----NA-----			
29	di-isopropyl ether			-----NA-----			
30	1,1-dichloroethane			-----NA-----			
31	chloroprene			-----NA-----			
32	acrylonitrile			-----NA-----			
33	vinyl acetate			-----NA-----			
34	ethyl tert-butyl ether			-----NA-----			
35	2-butanone			-----NA-----			
36	ethyl acetate			-----NA-----			
37	2,2-dichloropropane			-----NA-----			
38	cis-1,2-dichloroethene			-----NA-----			
39	propionitrile			-----NA-----			
40	bromochloromethane			-----NA-----			
41	tetrahydrofuran			-----NA-----			

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158335.D

42	chloroform							-----NA-----
43	t-butyl formate							-----NA-----
44 S	dibromofluoromethane (s)	0.433	0.429	0.9	105	0.00	10.80	
45	methacrylonitrile							-----NA-----
46	1,1,1-trichloroethane							-----NA-----
47	Cyclohexane	0.764	0.877	-14.8	125	0.00	10.99	
48	1,1-dichloropropene							-----NA-----
49	carbon tetrachloride							-----NA-----
		----- True	Calc.	% Drift				-----
50	isobutyl alcohol							-----NA-----
		----- AvgRF	CCRF	% Dev				-----
51 I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	11.71	
52 S	1,2-dichloroethane-d4 (s)	0.362	0.377	-4.1	108	0.00	11.23	
53	n-butyl alcohol							-----NA-----
54	tert-amyl alcohol							-----NA-----
55	iso-octane							-----NA-----
56	benzene							-----NA-----
57	tert-amyl methyl ether							-----NA-----
58	heptane							-----NA-----
59	isopropyl acetate							-----NA-----
60	1,2-dichloroethane							-----NA-----
61	ethyl acrylate							-----NA-----
62	trichloroethene							-----NA-----
63	2-nitropropane							-----NA-----
64	2-chloroethyl vinyl ether							-----NA-----
65	methyl methacrylate							-----NA-----
66	1,2-dichloropropane							-----NA-----
67	dibromomethane							-----NA-----
68	methylcyclohexane							-----NA-----
69	bromodichloromethane							-----NA-----
70	epichlorohydrin							-----NA-----
71	cis-1,3-dichloropropene							-----NA-----
72	4-methyl-2-pentanone							-----NA-----
73	3-methyl-1-butanol							-----NA-----
74 I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	14.69	
75 S	toluene-d8 (s)	1.261	1.247	1.1	100	0.00	13.27	
76	toluene							-----NA-----
77	ethyl methacrylate							-----NA-----
78	trans-1,3-dichloropropene							-----NA-----
79	1,1,2-trichloroethane							-----NA-----
80	2-hexanone							-----NA-----
81	tetrachloroethene							-----NA-----
82	1,3-dichloropropane							-----NA-----
83	butyl acetate							-----NA-----
84	dibromochloromethane							-----NA-----
85	1,2-dibromoethane							-----NA-----
86	n-butyl ether							-----NA-----
87	chlorobenzene							-----NA-----
88	1,1,1,2-tetrachloroethane							-----NA-----
89	ethylbenzene							-----NA-----
90	m,p-xylene							-----NA-----
91	o-xylene							-----NA-----
92	styrene							-----NA-----
93	butyl acrylate							-----NA-----
94	bromoform							-----NA-----
95	isopropylbenzene							-----NA-----

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7025-ICV7025
Lab FileID: 2C158335.D

96	cis-1,4-dichloro-2-butene								-----NA-----
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00		16.86	
98 S	4-bromofluorobenzene (s)	0.729	0.716	1.8	101	0.00		15.77	
99	bromobenzene								-----NA-----
100	1,1,2,2-tetrachloroethane								-----NA-----
101	trans-1,4-dichloro-2-bute								-----NA-----
102	1,2,3-trichloropropane								-----NA-----
103	n-propylbenzene								-----NA-----
104	2-chlorotoluene								-----NA-----
105	4-chlorotoluene								-----NA-----
106	1,3,5-trimethylbenzene								-----NA-----
107	tert-butylbenzene								-----NA-----
108	1,2,4-trimethylbenzene								-----NA-----
109	sec-butylbenzene								-----NA-----
110	1,3-dichlorobenzene								-----NA-----
111	p-isopropyltoluene								-----NA-----
112	1,4-dichlorobenzene								-----NA-----
113	1,2-dichlorobenzene								-----NA-----
114	n-butylbenzene								-----NA-----
115	1,2-dibromo-3-chloropropa								-----NA-----
116	1,3,5-trichlorobenzene								-----NA-----
117	Nitrobenzene								-----NA-----
118	1,2,4-trichlorobenzene								-----NA-----
119	2-ethylhexyl acrylate								-----NA-----
120	hexachlorobutadiene								-----NA-----
121	naphthalene								-----NA-----
122	1,2,3-trichlorobenzene								-----NA-----
123	hexachloroethane								-----NA-----
124	2-methylnaphthalene								-----NA-----

(#) = Out of Range
 2C158325.D M2C7025.M

SPCC's out = 0 CCC's out = 0
 Tue Apr 17 16:51:51 2018 RPT1

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7103-CC7025
Lab FileID: 2C159952.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\eu...18\v2c7103\2c159952.d Vial: 3
 Acq On : 20 Jun 2018 9:08 am Operator: HueanhT
 Sample : cc7025-20 Inst : Instrument #1
 Misc : MS27186,V2C7103,w,,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2C7025.M (RTE Integrator)
 Title : SW846 8260C, Column ZB624 60mX0.25mmX1.4um
 Last Update : Mon Apr 23 10:59:15 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 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	Tert Butyl Alcohol-d9	1.000	1.000	0.0	83	-0.03	8.30
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.235	1.193	3.4	81	-0.04	8.43
4	1,4-dioxane	0.089	0.102	-14.6	93	-0.01	12.34
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	10.77
6	chlorodifluoromethane	0.883	0.783	11.3	89	0.01	4.45
7	dichlorodifluoromethane	0.779	1.110	-42.5#	152	0.00	4.42
8	chloromethane	1.204	1.115	7.4	104	-0.05	4.81
9	vinyl chloride	1.034	1.015	1.8	102	-0.02	5.12
10	1,3-butadiene			-----NA-----			
11	bromomethane	0.671	0.573	14.6	91	-0.02	5.82
12	chloroethane	0.544	0.452	16.9	89	-0.01	6.03
13	trichlorofluoromethane	0.986	0.967	1.9	100	0.02	6.61
14	vinyl bromide	0.648	0.541	16.5	89	0.00	6.45
15	ethyl ether	0.289	0.294	-1.7	106	0.00	7.04
16	2-chloropropane	1.095	0.967	11.7	96	0.00	7.30
17	acrolein	0.187	0.142	24.1#	76	0.02	7.32
18	freon 113	0.442	0.548	-24.0#	118	0.02	7.55
19	1,1-dichloroethene	0.600	0.584	2.7	101	0.00	7.54
20	acetone	0.078	0.073	6.4	95	0.01	7.55
21	iodomethane	1.001	0.931	7.0	97	0.00	7.82
22	acetonitrile	0.134	0.122	9.0	92	0.00	8.04
23	carbon disulfide	1.774	1.752	1.2	99	0.00	7.98
24	methylene chloride	0.700	0.612	12.6	95	0.00	8.34
25	methyl acetate	0.661	0.608	8.0	101	0.01	8.07
26	methyl tert butyl ether	1.815	1.709	5.8	100	0.00	8.75
27	trans-1,2-dichloroethene	0.564	0.523	7.3	102	0.01	8.78
28	hexane	0.349	0.353	-1.1	110	0.01	9.17
29	di-isopropyl ether	2.070	1.810	12.6	94	0.00	9.42
30	1,1-dichloroethane	0.964	0.933	3.2	103	0.00	9.41
31	chloroprene	0.806	0.718	10.9	100	0.00	9.52
32	acrylonitrile	0.332	0.318	4.2	101	0.01	8.68
33	vinyl acetate	0.091	0.085	6.6	94	0.00	9.35
34	ethyl tert-butyl ether	1.889	1.661	12.1	93	0.00	9.92
35	2-butanone	0.090	0.084	6.7	97	0.00	10.13
36	ethyl acetate	0.122	0.101	17.2	88	0.00	10.14
37	2,2-dichloropropane	0.724	0.838	-15.7	119	0.00	10.23
38	cis-1,2-dichloroethene	0.600	0.556	7.3	104	0.00	10.20
39	propionitrile	0.149	0.145	2.7	103	0.00	10.21
40	bromochloromethane	0.297	0.298	-0.3	108	0.00	10.51
41	tetrahydrofuran	0.315	0.280	11.1	95	0.00	10.53

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7103-CC7025
Lab FileID: 2C159952.D

42		chloroform	0.947	0.881	7.0	106	0.00	10.60
43		t-butyl formate	0.571	0.462	19.1	83	0.00	10.65
44	S	dibromofluoromethane (s)	0.433	0.447	-3.2	110	0.00	10.80
45		methacrylonitrile	0.274	0.247	9.9	94	0.00	10.42
46		1,1,1-trichloroethane	0.903	0.797	11.7	97	0.00	10.87
47		Cyclohexane	0.764	0.762	0.3	99	0.00	10.99
48		1,1-dichloropropene	0.654	0.598	8.6	101	0.00	11.04
49		carbon tetrachloride	0.688	0.771	-12.1	117	0.00	11.07
50		isobutyl alcohol	0.036	0.044	-22.2#	125	-0.04	10.99
51	I	1,4-difluorobenzene	1.000	1.000	0.0	99	0.00	11.71
52	S	1,2-dichloroethane-d4 (s)	0.362	0.392	-8.3	108	0.00	11.23
53		n-butyl alcohol	0.028	0.026	7.1	90	0.00	11.77
54		tert-amyl alcohol	0.041	0.040	2.4	89	0.00	11.19
55		iso-octane	1.618	1.727	-6.7	102	0.00	11.40
56		benzene	1.482	1.421	4.1	98	0.00	11.30
57		tert-amyl methyl ether	0.292	0.288	1.4	96	0.00	11.39
58		heptane	0.308	0.278	9.7	90	0.00	11.55
59		isopropyl acetate	0.091	0.097	-6.6	102	0.00	11.21
60		1,2-dichloroethane	0.510	0.499	2.2	98	0.00	11.33
61		ethyl acrylate	0.561	0.498	11.2	89	0.00	12.00
62		trichloroethene	0.370	0.349	5.7	98	0.00	12.01
63		2-nitropropane	0.175	0.164	6.3	100	0.00	12.74
64		2-chloroethyl vinyl ether	0.243	0.180	25.9#	72	0.00	12.77
65		methyl methacrylate	0.111	0.100	9.9	89	0.00	12.26
66		1,2-dichloropropane	0.373	0.362	2.9	95	0.00	12.29
67		dibromomethane	0.254	0.250	1.6	99	0.00	12.40
68		methylcyclohexane	0.721	0.742	-2.9	98	0.00	12.30
69		bromodichloromethane	0.506	0.496	2.0	102	0.00	12.54
70		epichlorohydrin	0.065	0.060	7.7	93	0.00	12.85
71		cis-1,3-dichloropropene	0.581	0.530	8.8	92	0.00	12.98
72		4-methyl-2-pentanone	0.216	0.218	-0.9	97	0.00	13.08
73		3-methyl-1-butanol	0.043	0.043	0.0	95	0.00	13.08
74	I	chlorobenzene-d5	1.000	1.000	0.0	98	0.00	14.69
75	S	toluene-d8 (s)	1.261	1.258	0.2	99	0.00	13.27
76		toluene	0.955	0.883	7.5	94	0.00	13.34
77		ethyl methacrylate	0.596	0.497	16.6	87	0.00	13.50
78		trans-1,3-dichloropropene	0.597	0.568	4.9	96	0.00	13.51
79		1,1,2-trichloroethane	0.339	0.313	7.7	97	0.00	13.72
80		2-hexanone	0.238	0.230	3.4	96	0.00	13.88
81		tetrachloroethene	0.378	0.379	-0.3	101	0.00	13.86
82		1,3-dichloropropane	0.578	0.553	4.3	95	0.00	13.89
83		butyl acetate	0.355	0.317	10.7	91	0.00	13.94
84		dibromochloromethane	0.438	0.456	-4.1	103	0.00	14.12
85		1,2-dibromoethane	0.440	0.432	1.8	97	0.00	14.27
86		n-butyl ether	1.868	1.502	19.6	82	0.00	14.67
87		chlorobenzene	1.047	0.998	4.7	96	0.00	14.72
88		1,1,1,2-tetrachloroethane	0.446	0.467	-4.7	103	0.00	14.78
89		ethylbenzene	1.750	1.641	6.2	94	0.00	14.77
90		m,p-xylene	0.683	0.650	4.8	96	0.00	14.88
91		o-xylene	0.725	0.695	4.1	93	0.00	15.26
92		styrene	1.180	1.072	9.2	92	0.00	15.27
93		butyl acrylate	0.965	0.802	16.9	82	0.00	15.09
94		bromoform	0.363	0.386	-6.3	106	0.00	15.49
95		isopropylbenzene	2.009	1.826	9.1	90	0.00	15.58
96		cis-1,4-dichloro-2-butene	0.231	0.163	29.4#	67	0.00	15.62
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	93	0.00	16.86
98	S	4-bromofluorobenzene (s)	0.729	0.733	-0.5	95	0.00	15.77

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V2C7103-CC7025
Lab FileID: 2C159952.D

99	bromobenzene	0.838	0.843	-0.6	97	0.00	15.94
100	1,1,2,2-tetrachloroethane	1.090	1.075	1.4	93	0.00	15.84
101	trans-1,4-dichloro-2-bute	0.125	0.102	18.4	77	0.00	15.87
102	1,2,3-trichloropropane	0.265	0.281	-6.0	100	0.00	15.92
103	n-propylbenzene	3.305	3.217	2.7	94	0.00	15.97
104	2-chlorotoluene	0.749	0.721	3.7	92	0.00	16.09
105	4-chlorotoluene	2.022	1.914	5.3	92	0.00	16.20
106	1,3,5-trimethylbenzene	2.603	2.463	5.4	89	0.00	16.11
107	tert-butylbenzene	2.262	2.060	8.9	86	0.00	16.43
108	1,2,4-trimethylbenzene	2.650	2.488	6.1	89	0.00	16.48
109	sec-butylbenzene	3.481	3.222	7.4	86	0.00	16.63
110	1,3-dichlorobenzene	1.651	1.617	2.1	92	0.00	16.80
111	p-isopropyltoluene	3.029	2.808	7.3	86	0.00	16.75
112	1,4-dichlorobenzene	1.639	1.565	4.5	90	0.00	16.89
113	1,2-dichlorobenzene	1.779	1.740	2.2	91	0.00	17.25
114	n-butylbenzene	1.560	1.378	11.7	83	0.00	17.15
115	1,2-dibromo-3-chloropropa	0.270	0.278	-3.0	96	0.00	18.00
116	1,3,5-trichlorobenzene	1.817	1.728	4.9	85	0.00	18.19
117	Nitrobenzene	0.051	0.052	-2.0	93	-0.01	18.20
118	1,2,4-trichlorobenzene	1.543	1.428	7.5	82	0.00	18.85
119	2-ethylhexyl acrylate	1.189	0.407	65.8#	33#	0.00	18.85
120	hexachlorobutadiene	0.883	0.797	9.7	80	0.00	18.97
121	naphthalene	3.593	3.120	13.2	75	0.00	19.15
122	1,2,3-trichlorobenzene	1.421	1.359	4.4	85	0.00	19.38
123	hexachloroethane	0.579	0.584	-0.9	95	0.00	17.54
124	2-methylnaphthalene	1.948	0.872	55.2#	43#	0.00	20.31
125	Ethylenimine			-----NA-----			
126	Bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range
 2C158324.D M2C7025.M

SPCC's out = 0 CCC's out = 0
 Thu Jun 21 00:07:03 2018

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICC3432
Lab FileID: 4B82575.D

Response Factor Report MS4B

Method : C:\MSDCHEM\1\METHODS\M4B3432.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Fri Jun 08 11:32:59 2018
 Response via : Initial Calibration

Calibration Files

1 =4B82570.D 5 =4B82572.D 100 =4B82576.D 50 =4B82575.D
 20 =4B82574.D 200 =4B82577.D 10 =4B82573.D 0.5 =4B82569.D
 2 =4B82571.D =

Compound	1	5	100	50	20	200	10	0.5	2	Avg	%RSD
1) I tert butyl alcohol-d9 -----ISTD-----											
2) ethanol										0.000	-1.00
3) tertiary butyl alcohol											
	1.370	1.349	1.363	1.416	1.353	1.405			1.455	1.387	2.84
4) 1,4-dioxane											
	0.122	0.124	0.119	0.124	0.130	0.123			0.114	0.122	4.14
5) I pentafluorobenzene -----ISTD-----											
6) chlorodifluoromethane											
	1.461	1.386	1.260	1.315	1.387	1.277	1.412	1.395	1.438	1.370	5.14
7) dichlorodifluoromethane											
	1.260	1.352	1.402	1.371	1.408	1.300	1.417	0.948	1.390	1.316	11.22
8) chloromethane											
	1.578	1.612	1.535	1.486	1.541	1.402	1.586	1.740	1.675	1.573	6.32
9) vinyl chloride											
	1.262	1.394	1.410	1.359	1.399	1.299	1.410	1.248	1.429	1.357	5.10
10) 1,3-butadiene											
	1.204	1.188	1.170	1.160	1.191	1.103	1.169	1.200	1.154	1.171	2.65
11) bromomethane											
	1.011	0.912	0.781	0.777	0.840		0.850		0.998	0.881	10.85
12) chloroethane											
	0.751	0.673	0.638	0.636	0.676	0.523	0.681	0.800	0.768	0.683	12.19
13) trichlorofluoromethane											
	1.133	1.212	1.208	1.175	1.222	1.086	1.225	0.855	1.294	1.157	11.04
14) vinyl bromide											
	0.715	0.745	0.751	0.724	0.737	0.663	0.741	0.607	0.785	0.719	7.38
15) ethyl ether											
	0.281	0.293	0.290	0.298	0.303	0.288	0.301		0.314	0.296	3.46
16) 2-chloropropane											
	1.302	1.198	1.251	1.291	1.184	1.301			1.497	1.289	8.02
17) acrolein											
	0.133	0.124	0.129	0.130	0.120	0.138				0.129	4.94
18) freon 113											
	0.550	0.574	0.560	0.578	0.597	0.568	0.616	0.430	0.600	0.564	9.64
19) 1,1-dichloroethene											
	1.137	1.180	1.116	1.160	1.203	1.104	1.197	1.071	1.197	1.152	4.10
20) acetone											
	0.044	0.046	0.048	0.048	0.045	0.050			0.051	0.048	5.03
21) acetonitrile											
	0.105	0.091	0.095	0.099	0.086	0.104				0.097	7.56
22) iodomethane											
	1.065	1.076	1.036	1.054	1.089	1.040	1.092	0.953	1.079	1.054	4.06
23) carbon disulfide											

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Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICC3432
Lab FileID: 4B82575.D

24)	methylen chloride	2.139	2.092	2.112	2.145	2.191	2.119	2.165	2.087	2.181	2.137	1.74
25)	methyl acetate	0.745	0.744	0.702	0.714	0.735	0.699	0.744	0.737	0.763	0.732	2.98
26)	methyl tert butyl ether	0.491	0.423	0.444	0.430	0.413	0.462				0.444	6.50
27)	trans-1,2-dichloroethene	1.899	1.963	1.805	1.863	1.932	1.763	1.939	1.858	1.912	1.882	3.49
28)	hexane	0.955	0.980	0.935	0.960	0.993	0.929	0.998	0.880	1.035	0.963	4.73
29)	di-isopropyl ether	0.525	0.493	0.465	0.498	0.505	0.467	0.507	0.487	0.523	0.497	4.28
30)	2-butanone	2.575	2.488	2.370	2.424	2.547	2.354	2.528	2.472	2.602	2.484	3.54
31)	1,1-dichloroethane	0.044	0.052	0.055	0.056	0.055	0.054	0.053		0.051	0.053	7.47
32)	chloroprene	1.270	1.210	1.153	1.179	1.224	1.154	1.219	1.048	1.252	1.190	5.62
33)	acrylonitrile	0.990	0.979	0.944	0.981	1.013	0.940	1.016	0.913	1.034	0.979	4.08
34)	vinyl acetate	0.176	0.220	0.214	0.223	0.221	0.210	0.220		0.197	0.210	7.70
35)	ethyl tert-butyl ether	0.067	0.081	0.081	0.082	0.082	0.077				0.078	7.42
36)	ethyl acetate	2.123	2.197	2.080	2.134	2.225	2.053	2.194	1.982	2.204	2.132	3.83
37)	2,2-dichloropropane	0.087	0.087	0.092	0.096	0.085	0.094				0.090	4.87
38)	cis-1,2-dichloroethene	1.101	1.049	0.957	1.000	1.056	0.950	1.062	1.038	1.076	1.032	5.09
39)	propionitrile	0.730	0.690	0.668	0.684	0.709	0.672	0.696	0.646	0.709	0.689	3.67
40)	methyl acrylate	0.093	0.093	0.092	0.095	0.096	0.090	0.095	0.080	0.097	0.093	5.46
41)	methacrylonitrile	0.065	0.077	0.079	0.073	0.076	0.069				0.073	7.08
42)	bromochloromethane	0.219	0.204	0.207	0.214	0.211	0.204	0.217		0.211	0.211	2.64
43)	tetrahydrofuran	0.324	0.310	0.310	0.314	0.320	0.313	0.323	0.254	0.344	0.312	7.81
44)	chloroform	0.063	0.072	0.073	0.074	0.071	0.068				0.070	5.83
45)	tert-butyl formate	1.162	1.117	1.063	1.087	1.113	1.069	1.125	1.148	1.144	1.114	3.14
46)	dibromofluoromethane (s)	0.437	0.443	0.487	0.484	0.479	0.485	0.454		0.442	0.464	4.72
47)	1,1,1-trichloroethane	0.474	0.477	0.469	0.471	0.474	0.468	0.474	0.472	0.473	0.472	0.60
48)	cyclohexane	1.087	1.094	1.061	1.078	1.123	1.064	1.128	0.982	1.144	1.085	4.43
49)	isobutyl alcohol	1.210	1.107	1.051	1.094	1.132	1.068	1.136	1.076	1.318	1.133	7.43
50)	1,1-dichloropropene										0.000	-1.00
51)	carbon tetrachloride	0.849	0.854	0.827	0.847	0.863	0.837	0.862	0.737	0.855	0.837	4.66
52)	tert-amyl alcohol	0.869	0.873	0.878	0.883	0.903	0.906	0.906	0.782	0.886	0.876	4.36
53)	isopropyl acetate	0.037	0.038	0.032	0.033	0.034	0.030	0.038		0.037	0.035	8.78

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Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICC3432
Lab FileID: 4B82575.D

	0.098	0.105	0.105	0.109	0.105	0.100		0.103	3.72		
54) I 1,4-difluorobenzene	-----ISTD-----										
55) 1,2-dichloroethane-d4 (s)	0.363	0.369	0.348	0.351	0.360	0.341	0.367	0.366	0.364	0.359	2.74
56) n-butyl alcohol	0.011	0.009	0.010	0.010	0.009	0.011				0.010	8.99
57) 2,2,4-trimethylpentane	1.969	1.906	2.074	2.140	2.086	2.132	2.080	1.903	1.997	2.032	4.49
58) benzene	1.744	1.748	1.718	1.739	1.790	1.739	1.767	1.695	1.820	1.751	2.13
59) tert-amyl methyl ether	1.402	1.395	1.346	1.373	1.446	1.316	1.415	1.336	1.481	1.390	3.85
60) heptane	0.360	0.346	0.343	0.360	0.371	0.342	0.375	0.364	0.374	0.359	3.66
61) 1,2-dichloroethane	0.548	0.535	0.515	0.527	0.550	0.512	0.549	0.458	0.573	0.530	6.23
62) ethyl acrylate	0.450	0.421	0.431	0.434	0.441	0.424	0.430		0.435	0.433	2.10
63) trichloroethene	0.403	0.425	0.414	0.421	0.431	0.420	0.426	0.348	0.427	0.413	6.20
64) 2-chloroethyl vinyl ether	0.221	0.225	0.235	0.236	0.239	0.238	0.232	0.193	0.229	0.228	6.26
65) methyl methacrylate	0.079	0.089	0.088	0.088	0.088	0.085		0.076		0.085	6.06
66) methylcyclohexane	0.969	0.957	0.932	0.948	1.003	0.950	1.004	0.881	0.975	0.958	3.94
67) 1,2-dichloropropane	0.466	0.459	0.451	0.456	0.470	0.454	0.457	0.416	0.462	0.454	3.49
68) dibromomethane	0.243	0.238	0.244	0.246	0.249	0.246	0.249	0.213	0.251	0.242	4.78
69) bromodichloromethane	0.514	0.508	0.550	0.543	0.546	0.564	0.535	0.452	0.532	0.527	6.27
70) 2-nitropropane	0.145	0.131	0.136	0.145	0.129	0.145				0.138	5.30
71) epichlorohydrin	0.038	0.039	0.040	0.040	0.038	0.040		0.043		0.040	4.65
72) cis-1,3-dichloropropene	0.613	0.599	0.653	0.647	0.642	0.669	0.624	0.517	0.630	0.622	7.20
73) 4-methyl-2-pentanone	0.154	0.156	0.156	0.160	0.162	0.151	0.161	0.125	0.159	0.154	7.29
74) isoamyl alcohol	0.010	0.011	0.011	0.012	0.012	0.011	0.012		0.012	0.011	7.72
75) I chlorobenzene-d5	-----ISTD-----										
76) toluene-d8 (s)	1.283	1.276	1.256	1.254	1.273	1.204	1.280	1.285	1.280	1.266	2.03
77) toluene	1.107	1.079	1.065	1.087	1.109	1.056	1.116	0.993	1.151	1.085	4.14
78) ethyl methacrylate	0.477	0.488	0.490	0.502	0.512	0.470	0.514	0.415	0.516	0.487	6.55
79) trans-1,3-dichloropropene	0.581	0.546	0.568	0.580	0.575	0.563	0.559	0.500	0.538	0.557	4.67
80) 1,1,2-trichloroethane	0.317	0.306	0.296	0.304	0.311	0.289	0.299	0.255	0.306	0.298	6.06
81) tetrachloroethene	0.383	0.386	0.397	0.399	0.399	0.393	0.404	0.326	0.405	0.388	6.30
82) 2-hexanone	0.143	0.144	0.139	0.144	0.146	0.132	0.150	0.114	0.152	0.140	8.23
83) 1,3-dichloropropane											

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Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICC3432
Lab FileID: 4B82575.D

84)	butyl acetate	0.566	0.568	0.563	0.575	0.581	0.558	0.579	0.514	0.610	0.568	4.47
		0.239	0.260	0.239	0.253	0.261	0.230	0.259		0.244	0.248	4.76
85)	dibromochloromethane	0.303	0.338	0.402	0.394	0.377	0.406	0.354	0.315	0.331	0.358	10.77
86)	1,2-dibromoethane	0.392	0.369	0.379	0.386	0.386	0.374	0.384	0.314	0.383	0.374	6.33
87)	n-butyl ether	2.218	2.199	2.043	2.111	2.193	2.025	2.214	2.131	2.275	2.157	3.93
88)	chlorobenzene	1.185	1.135	1.149	1.159	1.172	1.161	1.186	1.100	1.198	1.161	2.59
89)	1,1,1,2-tetrachloroethane	0.443	0.459	0.488	0.492	0.493	0.487	0.486	0.458	0.471	0.475	3.82
90)	ethylbenzene	2.117	2.093	2.097	2.108	2.161	2.136	2.153	2.003	2.209	2.120	2.70
91)	m,p-xylene	0.790	0.803	0.798	0.801	0.814	0.802	0.808	0.723	0.822	0.796	3.63
92)	o-xylene	1.825	1.811	1.784	1.807	1.867	1.796	1.846	1.730	1.944	1.823	3.26
93)	styrene	1.230	1.312	1.324	1.315	1.334	1.349	1.325	1.154	1.351	1.299	5.02
94)	butyl acrylate	0.909	0.896	0.802	0.838	0.872	0.777	0.873	0.820	0.922	0.856	5.84
95)	isopropylbenzene	2.352	2.347	2.321	2.366	2.438	2.350	2.426	2.188	2.449	2.360	3.34
96)	bromoform	0.186	0.203	0.265	0.253	0.228	0.273	0.219		0.210	0.230	13.56
97)	cis-1,4-dichloro-2-butene	0.106	0.146	0.144	0.134	0.147	0.123				0.133	12.30
98)	I 1,4-dichlorobenzene-d	-----ISTD-----										
99)	4-bromofluorobenzene (s)	0.775	0.766	0.773	0.780	0.769	0.755	0.765	0.762	0.760	0.767	1.06
100)	1,1,2,2-tetrachloroethane	0.883	0.855	0.859	0.890	0.900	0.816	0.869	0.902	0.897	0.875	3.23
101)	trans-1,4-dichloro-2-butene	0.190	0.181	0.185	0.191	0.185	0.180	0.181		0.177	0.184	2.73
102)	1,2,3-trichloropropane	0.223	0.214	0.207	0.213	0.216	0.196	0.208		0.218	0.212	3.88
103)	bromobenzene	0.862	0.849	0.902	0.899	0.908	0.908	0.877	0.710	0.885	0.867	7.17
104)	n-propylbenzene	4.293	4.255	4.378	4.395	4.502	4.378	4.359	3.897	4.364	4.314	3.95
105)	2-chlorotoluene	0.916	0.867	0.893	0.900	0.922	0.885	0.879	0.789	0.878	0.881	4.40
106)	4-chlorotoluene	2.464	2.372	2.428	2.426	2.476	2.470	2.418	2.166	2.448	2.408	3.99
107)	1,3,5-trimethylbenzene	3.137	3.261	3.392	3.396	3.466	3.374	3.364	2.940	3.297	3.292	4.95
108)	tert-butylbenzene	2.636	2.693	2.920	2.916	2.918	2.883	2.810	2.389	2.733	2.766	6.39
109)	1,2,4-trimethylbenzene	3.302	3.276	3.335	3.358	3.444	3.341	3.338	2.961	3.372	3.303	4.14
110)	sec-butylbenzene	4.232	4.331	4.588	4.587	4.695	4.530	4.490	3.863	4.446	4.418	5.67
111)	p-isopropyltoluene	3.576	3.718	3.893	3.881	3.948	3.840	3.837	3.371	3.764	3.759	4.86
112)	1,3-dichlorobenzene	1.822	1.767	1.847	1.838	1.887	1.868	1.836	1.714	1.900	1.831	3.20
113)	1,4-dichlorobenzene											

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICC3432
Lab FileID: 4B82575.D

114)	1,2-dichlorobenzene	1.913	1.796	1.857	1.839	1.879	1.878	1.849	1.699	1.897	1.845	3.51
115)	benzyl chloride	1.886	1.890	1.900	1.914	1.968	1.877	1.922	1.909	1.958	1.914	1.64
116)	n-butylbenzene	1.357	1.436	1.614	1.608	1.575	1.604	1.465	1.425	1.437	1.502	6.50
117)	hexachloroethane	1.886	1.950	1.996	1.994	2.071	1.959	1.992	1.765	1.984	1.955	4.43
118)	1,2-dibromo-3-chloropropane	0.464	0.478	0.677	0.648	0.585	0.695	0.536		0.460	0.568	17.17
119)	1,3,5-trichlorobenzene	0.159	0.189	0.222	0.224	0.216	0.211	0.197		0.169	0.198	12.42
120)	1,2,4-trichlorobenzene	1.903	1.926	1.991	2.002	2.090	1.907	2.002	1.857	1.949	1.959	3.58
121)	2-ethylhexyl acrylate	1.576	1.543	1.674	1.674	1.710	1.581	1.628	1.593	1.560	1.616	3.63
122)	hexachlorobutadiene	0.853	1.213	1.166	1.084	1.191	0.953				1.076	13.47
123)	naphthalene	0.905	0.920	0.951	0.937	0.975	0.895	0.935	0.877	0.894	0.921	3.39
124)	1,2,3-trichlorobenzene	3.093	2.984	3.139	3.194	3.254	2.897	3.077	3.879	3.058	3.175	8.97
125)	2-methylnaphthalene	1.397	1.312	1.438	1.430	1.492	1.351	1.423	1.440	1.380	1.407	3.82
126)	Bis(chloromethyl)ether	1.267	1.256	1.533	1.495	1.469	1.436	1.331		1.271	1.382	8.20
127)	Ethylenimine										0.000	-1.00
											0.000	-1.00

 (#) = Out of Range ### Number of calibration levels exceeded format ###

M4B3432.M Fri Jun 08 11:45:38 2018 GCMS4B

6.9.6
6

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICV3432
Lab FileID: 4B82580.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\V4B3431\4B82580.D Vial: 13
 Acq On : 8 Jun 2018 1:07 am Operator: HueanHT
 Sample : icv3432-50 Inst : MS4B
 Misc : MS26915,V4B3432,5,,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B3432.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Fri Jun 08 11:32:59 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	98	0.00	6.79
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.387	1.350	2.7	97	0.00	6.90
4	1,4-dioxane	0.122	0.121	0.8	100	-0.01	10.26
5 I	pentafluorobenzene	1.000	1.000	0.0	96	0.00	8.78
6	chlorodifluoromethane	1.370	1.015	25.9	74	0.00	3.92
7	dichlorodifluoromethane	1.316	1.396	-6.1	98	0.00	3.90
8	chloromethane	1.573	1.748	-11.1	113	0.00	4.23
9	vinyl chloride	1.357	1.413	-4.1	100	0.00	4.44
10	1,3-butadiene			-----NA-----			
11	bromomethane	0.881	0.811	7.9	100	0.00	4.98
12	chloroethane	0.683	0.646	5.4	98	0.00	5.13
13	trichlorofluoromethane	1.157	1.186	-2.5	97	0.00	5.53
14	vinyl bromide	0.719	0.782	-8.8	104	0.00	5.42
15	ethyl ether	0.296	0.280	5.4	90	0.00	5.83
16	2-chloropropane	1.289	1.249	3.1	96	0.00	6.05
17	acrolein	0.129	0.130	-0.8	97	0.00	6.05
18	freon 113	0.564	0.587	-4.1	97	0.00	6.23
19	1,1-dichloroethene	1.152	1.008	12.5	83	0.00	6.22
20	acetone	0.048	0.049	-2.1	99	0.00	6.23
21	acetonitrile			-----NA-----			
22	iodomethane	1.054	1.177	-11.7	107	0.00	6.46
23	carbon disulfide	2.137	2.563	-19.9	115	0.00	6.59
24	methylene chloride	0.732	0.674	7.9	91	0.00	6.83
25	methyl acetate	0.444	0.403	9.2	87	-0.01	6.58
26	methyl tert butyl ether	1.882	1.833	2.6	95	0.00	7.14
27	trans-1,2-dichloroethene	0.963	0.893	7.3	89	0.00	7.17
28	hexane	0.497	0.434	12.7	84	-0.02	7.45
29	di-isopropyl ether	2.484	2.443	1.7	97	0.00	7.65
30	2-butanone	0.053	0.056	-5.7	96	0.00	8.23
31	1,1-dichloroethane	1.190	1.139	4.3	93	0.00	7.67
32	chloroprene	0.979	0.966	1.3	95	0.00	7.76
33	acrylonitrile	0.210	0.241	-14.8	104	0.00	7.08
34	vinyl acetate	0.078	0.083	-6.4	98	0.00	7.59
35	ethyl tert-butyl ether	2.132	2.118	0.7	95	0.00	8.06
36	ethyl acetate	0.090	0.089	1.1	93	0.00	8.23
37	2,2-dichloropropane	1.032	0.957	7.3	92	0.00	8.35
38	cis-1,2-dichloroethene	0.689	0.662	3.9	93	0.00	8.31
39	propionitrile	0.093	0.094	-1.1	95	0.00	8.31
40	methyl acrylate	0.073	0.074	-1.4	90	0.00	8.32
41	methacrylonitrile	0.211	0.209	0.9	94	0.00	8.49

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICV3432
Lab FileID: 4B82580.D

42	bromochloromethane	0.312	0.308	1.3	94	0.00	8.58
43	tetrahydrofuran	0.070	0.070	0.0	92	-0.01	8.59
44	chloroform	1.114	1.062	4.7	94	0.00	8.65
45	tert-butyl formate	0.464	0.397	14.4	79	0.00	8.68
46 S	dibromofluoromethane (s)	0.472	0.475	-0.6	97	0.00	8.83
47	1,1,1-trichloroethane	1.085	1.037	4.4	92	0.00	8.91
48	cyclohexane	1.133	1.079	4.8	95	0.00	9.01
49	isobutyl alcohol			-----NA-----			
50	1,1-dichloropropene	0.837	0.819	2.2	93	0.00	9.04
51	carbon tetrachloride	0.876	0.872	0.5	95	0.00	9.09
52	tert-amyl alcohol	0.035	0.035	0.0	103	0.00	9.15
53	isopropyl acetate	0.103	0.103	0.0	94	0.00	9.16
54 I	1,4-difluorobenzene	1.000	1.000	0.0	96	0.00	9.65
55 S	1,2-dichloroethane-d4 (s)	0.359	0.354	1.4	97	0.00	9.21
56	n-butyl alcohol	0.010	0.010	0.0	100	0.00	9.68
57	2,2,4-trimethylpentane	2.032	2.028	0.2	91	0.00	9.35
58	benzene	1.751	1.683	3.9	93	0.00	9.28
59	tert-amyl methyl ether	1.390	1.365	1.8	96	0.00	9.34
60	heptane	0.359	0.377	-5.0	101	0.00	9.49
61	1,2-dichloroethane	0.530	0.519	2.1	95	0.00	9.30
62	ethyl acrylate	0.433	0.435	-0.5	96	0.00	9.91
63	trichloroethene	0.413	0.417	-1.0	95	0.00	9.95
64	2-chloroethyl vinyl ether	0.228	0.253	-11.0	103	0.00	10.70
65	methyl methacrylate	0.085	0.088	-3.5	96	0.00	10.17
66	methylcyclohexane	0.958	0.901	5.9	91	0.00	10.24
67	1,2-dichloropropane	0.454	0.441	2.9	93	0.00	10.23
68	dibromomethane	0.242	0.249	-2.9	97	0.00	10.33
69	bromodichloromethane	0.527	0.530	-0.6	94	0.00	10.48
70	2-nitropropane	0.138	0.149	-8.0	106	0.00	10.67
71	epichlorohydrin	0.040	0.039	2.5	95	0.00	10.79
72	cis-1,3-dichloropropene	0.622	0.634	-1.9	94	0.00	10.93
73	4-methyl-2-pentanone	0.154	0.163	-5.8	98	0.00	11.02
74	isoamyl alcohol	0.011	0.012	-9.1	101	0.00	11.02
75 I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	12.83
76 S	toluene-d8 (s)	1.266	1.260	0.5	98	0.00	11.24
77	toluene	1.085	1.063	2.0	95	0.00	11.31
78	ethyl methacrylate	0.487	0.475	2.5	92	0.00	11.48
79	trans-1,3-dichloropropene	0.557	0.542	2.7	91	0.00	11.50
80	1,1,2-trichloroethane	0.298	0.295	1.0	94	0.00	11.73
81	tetrachloroethene			-----NA-----			
82	2-hexanone	0.140	0.144	-2.9	97	0.00	11.90
83	1,3-dichloropropane	0.568	0.575	-1.2	97	0.00	11.92
84	butyl acetate	0.248	0.257	-3.6	99	0.00	11.97
85	dibromochloromethane	0.358	0.395	-10.3	97	0.00	12.19
86	1,2-dibromoethane	0.374	0.378	-1.1	95	0.00	12.35
87	n-butyl ether	2.157	2.057	4.6	95	0.00	12.81
88	chlorobenzene	1.161	1.141	1.7	96	0.00	12.86
89	1,1,1,2-tetrachloroethane	0.475	0.496	-4.4	98	0.00	12.94
90	ethylbenzene	2.120	2.113	0.3	97	0.00	12.93
91	m,p-xylene	0.796	0.804	-1.0	98	0.00	13.06
92	o-xylene	1.823	1.805	1.0	97	0.00	13.50
93	styrene	1.299	1.320	-1.6	98	0.00	13.51
94	butyl acrylate	0.856	0.834	2.6	97	0.00	13.30
95	isopropylbenzene	2.360	2.367	-0.3	97	0.00	13.88
96	bromoform	0.230	0.259	-12.6	100	0.00	13.76
97	cis-1,4-dichloro-2-butene	0.133	0.138	-3.8	93	0.00	13.92
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	98	0.00	15.40

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICV3432
Lab FileID: 4B82580.D

99 S	4-bromofluorobenzene (s)	0.767	0.767	0.0	96	0.00	14.10
100	1,1,2,2-tetrachloroethane	0.875	0.869	0.7	96	0.00	14.19
101	trans-1,4-dichloro-2-bute	0.184	0.200	-8.7	103	0.00	14.22
102	1,2,3-trichloropropane	0.212	0.210	0.9	97	0.00	14.28
103	bromobenzene	0.867	0.897	-3.5	98	0.00	14.31
104	n-propylbenzene	4.314	4.359	-1.0	97	0.00	14.34
105	2-chlorotoluene	0.881	0.882	-0.1	96	0.00	14.48
106	4-chlorotoluene	2.408	2.471	-2.6	100	0.00	14.61
107	1,3,5-trimethylbenzene	3.292	3.333	-1.2	96	0.00	14.51
108	tert-butylbenzene	2.766	2.914	-5.4	98	0.00	14.89
109	1,2,4-trimethylbenzene	3.303	3.418	-3.5	100	0.00	14.94
110	sec-butylbenzene	4.418	4.597	-4.1	98	0.00	15.13
111	p-isopropyltoluene	3.759	3.910	-4.0	99	0.00	15.28
112	1,3-dichlorobenzene	1.831	1.843	-0.7	98	0.00	15.32
113	1,4-dichlorobenzene	1.845	1.826	1.0	97	0.00	15.43
114	1,2-dichlorobenzene	1.914	1.899	0.8	97	0.00	15.84
115	benzyl chloride	1.502	1.270	15.4	77	0.00	15.53
116	n-butylbenzene	1.955	2.002	-2.4	98	0.00	15.73
117	hexachloroethane	0.568	0.650	-14.4	98	0.00	16.17
118	1,2-dibromo-3-chloropropa	0.198	0.219	-10.6	96	0.00	16.69
119	1,3,5-trichlorobenzene	1.959	1.999	-2.0	98	0.00	16.89
120	1,2,4-trichlorobenzene	1.616	1.667	-3.2	98	0.00	17.57
121	2-ethylhexyl acrylate	1.076	1.303	-21.1	110	0.00	17.58
122	hexachlorobutadiene	0.921	0.928	-0.8	97	0.00	17.69
123	naphthalene	3.175	3.209	-1.1	99	0.00	17.88
124	1,2,3-trichlorobenzene	1.407	1.415	-0.6	97	0.00	18.11
125	2-methylnaphthalene	1.382	1.422	-2.9	93	0.00	19.17
126	Bis(chloromethyl)ether			-----NA-----			
127	Ethylenimine			-----NA-----			

(#) = Out of Range
 4B82575.D M4B3432.M

SPCC's out = 0 CCC's out = 0
 Fri Jun 08 11:45:13 2018 GCMS4B

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICV3432
Lab FileID: 4B82581.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\V4B3431\4B82581.D Vial: 14
 Acq On : 8 Jun 2018 1:36 am Operator: HueanhT
 Sample : icv3432-50 Inst : MS4B
 Misc : MS26915,V4B3432,5,,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B3432.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Fri Jun 08 11:32:59 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	99	0.00	6.79
2	ethanol			-----NA-----			
3	tertiary butyl alcohol			-----NA-----			
4	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	8.78
6	chlorodifluoromethane			-----NA-----			
7	dichlorodifluoromethane			-----NA-----			
8	chloromethane			-----NA-----			
9	vinyl chloride			-----NA-----			
10	1,3-butadiene	1.171	0.982	16.1	80	0.00	4.46
11	bromomethane			-----NA-----			
12	chloroethane			-----NA-----			
13	trichlorofluoromethane			-----NA-----			
14	vinyl bromide			-----NA-----			
15	ethyl ether			-----NA-----			
16	2-chloropropane			-----NA-----			
17	acrolein			-----NA-----			
18	freon 113			-----NA-----			
19	1,1-dichloroethene			-----NA-----			
20	acetone			-----NA-----			
21	acetonitrile	0.097	0.099	-2.1	98	0.00	6.60
22	iodomethane			-----NA-----			
23	carbon disulfide			-----NA-----			
24	methylene chloride			-----NA-----			
25	methyl acetate			-----NA-----			
26	methyl tert butyl ether			-----NA-----			
27	trans-1,2-dichloroethene			-----NA-----			
28	hexane			-----NA-----			
29	di-isopropyl ether			-----NA-----			
30	2-butanone			-----NA-----			
31	1,1-dichloroethane			-----NA-----			
32	chloroprene			-----NA-----			
33	acrylonitrile			-----NA-----			
34	vinyl acetate			-----NA-----			
35	ethyl tert-butyl ether			-----NA-----			
36	ethyl acetate			-----NA-----			
37	2,2-dichloropropane			-----NA-----			
38	cis-1,2-dichloroethene			-----NA-----			
39	propionitrile			-----NA-----			
40	methyl acrylate			-----NA-----			
41	methacrylonitrile			-----NA-----			

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICV3432
Lab FileID: 4B82581.D

42	bromochloromethane							
43	tetrahydrofuran							
44	chloroform							
45	tert-butyl formate							
46 S	dibromofluoromethane (s)	0.472	0.469	0.6	94	0.00	8.83	
47	1,1,1-trichloroethane							
48	cyclohexane							
49	isobutyl alcohol							
50	1,1-dichloropropene							
51	carbon tetrachloride							
52	tert-amyl alcohol							
53	isopropyl acetate							
54 I	1,4-difluorobenzene	1.000	1.000	0.0	93	0.00	9.65	
55 S	1,2-dichloroethane-d4 (s)	0.359	0.360	-0.3	96	0.00	9.22	
56	n-butyl alcohol							
57	2,2,4-trimethylpentane							
58	benzene							
59	tert-amyl methyl ether							
60	heptane							
61	1,2-dichloroethane							
62	ethyl acrylate							
63	trichloroethene							
64	2-chloroethyl vinyl ether							
65	methyl methacrylate							
66	methylcyclohexane							
67	1,2-dichloropropane							
68	dibromomethane							
69	bromodichloromethane							
70	2-nitropropane							
71	epichlorohydrin							
72	cis-1,3-dichloropropene							
73	4-methyl-2-pentanone							
74	isoamyl alcohol							
75 I	chlorobenzene-d5	1.000	1.000	0.0	91	0.00	12.83	
76 S	toluene-d8 (s)	1.266	1.273	-0.6	92	0.00	11.24	
77	toluene							
78	ethyl methacrylate							
79	trans-1,3-dichloropropene							
80	1,1,2-trichloroethane							
81	tetrachloroethene	0.388	0.388	0.0	88	0.00	11.89	
82	2-hexanone							
83	1,3-dichloropropane							
84	butyl acetate							
85	dibromochloromethane							
86	1,2-dibromoethane							
87	n-butyl ether							
88	chlorobenzene							
89	1,1,1,2-tetrachloroethane							
90	ethylbenzene							
91	m,p-xylene							
92	o-xylene							
93	styrene							
94	butyl acrylate							
95	isopropylbenzene							
96	bromoform							
97	cis-1,4-dichloro-2-butene							
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	15.40	

6.9.8
6

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3432-ICV3432
Lab FileID: 4B82581.D

99 S	4-bromofluorobenzene (s)	0.767	0.761	0.8	92	0.00	14.10
100	1,1,2,2-tetrachloroethane						
101	trans-1,4-dichloro-2-bute						
102	1,2,3-trichloropropane						
103	bromobenzene						
104	n-propylbenzene						
105	2-chlorotoluene						
106	4-chlorotoluene						
107	1,3,5-trimethylbenzene						
108	tert-butylbenzene						
109	1,2,4-trimethylbenzene						
110	sec-butylbenzene						
111	p-isopropyltoluene						
112	1,3-dichlorobenzene						
113	1,4-dichlorobenzene						
114	1,2-dichlorobenzene						
115	benzyl chloride						
116	n-butylbenzene						
117	hexachloroethane						
118	1,2-dibromo-3-chloropropa						
119	1,3,5-trichlorobenzene						
120	1,2,4-trichlorobenzene						
121	2-ethylhexyl acrylate						
122	hexachlorobutadiene						
123	naphthalene						
124	1,2,3-trichlorobenzene						
125	2-methylnaphthalene						
126	Bis(chloromethyl)ether						
127	Ethylenimine						

(#) = Out of Range
 4B82575.D M4B3432.M

SPPC's out = 0 CCC's out = 0
 Fri Jun 08 11:46:53 2018 GCMS4B

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3444-CC3432
Lab FileID: 4B82825.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ma...-18\v4b3444\4b82825.d Vial: 2
 Acq On : 17 Jun 2018 8:49 am Operator: HueanhT
 Sample : CC3432-20 Inst : MS4B
 Misc : MS27162,V4B3444,5,,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B3432.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Fri Jun 08 11:32:59 2018
 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	tert butyl alcohol-d9	1.000	1.000	0.0	85	-0.01	6.79
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.387	1.380	0.5	83	-0.01	6.88
4	1,4-dioxane	0.122	0.112	8.2	77	0.00	10.27
5 I	pentafluorobenzene	1.000	1.000	0.0	79	0.00	8.77
6	chlorodifluoromethane	1.370	1.128	17.7	64	0.00	3.92
7	dichlorodifluoromethane	1.316	1.339	-1.7	75	0.00	3.90
8	chloromethane	1.573	1.583	-0.6	81	0.00	4.23
9	vinyl chloride	1.357	1.390	-2.4	78	0.00	4.44
10	1,3-butadiene			-----NA-----			
11	bromomethane	0.881	0.844	4.2	79	0.00	4.98
12	chloroethane	0.683	0.690	-1.0	80	0.01	5.13
13	trichlorofluoromethane	1.157	1.272	-9.9	82	0.00	5.53
14	vinyl bromide	0.719	0.741	-3.1	79	0.00	5.42
15	ethyl ether	0.296	0.309	-4.4	80	0.00	5.83
16	2-chloropropane	1.289	1.345	-4.3	82	0.00	6.04
17	acrolein	0.129	0.137	-6.2	82	0.00	6.04
18	freon 113	0.564	0.618	-9.6	81	0.00	6.23
19	1,1-dichloroethene	1.152	1.234	-7.1	81	0.00	6.22
20	acetone	0.048	0.051	-6.2	83	0.00	6.22
21	acetonitrile	0.097	0.107	-10.3	85	0.00	6.59
22	iodomethane	1.054	1.097	-4.1	79	0.00	6.46
23	carbon disulfide	2.137	2.094	2.0	75	0.00	6.59
24	methylene chloride	0.732	0.785	-7.2	84	0.00	6.83
25	methyl acetate	0.444	0.469	-5.6	86	-0.02	6.58
26	methyl tert butyl ether	1.882	2.029	-7.8	82	0.00	7.14
27	trans-1,2-dichloroethene	0.963	1.026	-6.5	81	0.00	7.17
28	hexane	0.497	0.508	-2.2	79	0.00	7.47
29	di-isopropyl ether	2.484	2.639	-6.2	81	0.00	7.65
30	2-butanone	0.053	0.056	-5.7	79	0.00	8.23
31	1,1-dichloroethane	1.190	1.237	-3.9	79	0.00	7.68
32	chloroprene	0.979	0.982	-0.3	76	0.00	7.76
33	acrylonitrile	0.210	0.235	-11.9	83	0.00	7.08
34	vinyl acetate	0.078	0.077	1.3	73	0.00	7.59
35	ethyl tert-butyl ether	2.132	2.314	-8.5	82	0.00	8.06
36	ethyl acetate	0.090	0.090	0.0	73	0.00	8.24
37	2,2-dichloropropane	1.032	1.153	-11.7	86	0.00	8.35
38	cis-1,2-dichloroethene	0.689	0.688	0.1	76	0.00	8.31
39	propionitrile	0.093	0.096	-3.2	78	0.00	8.30
40	methyl acrylate	0.073	0.074	-1.4	80	0.00	8.31
41	methacrylonitrile	0.211	0.210	0.5	78	0.00	8.48

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3444-CC3432
Lab FileID: 4B82825.D

42	bromochloromethane	0.312	0.324	-3.8	79	0.00	8.58
43	tetrahydrofuran	0.070	0.072	-2.9	76	-0.01	8.59
44	chloroform	1.114	1.115	-0.1	79	0.00	8.65
45	tert-butyl formate	0.464	0.575	-23.9#	94	0.00	8.69
46 S	dibromofluoromethane (s)	0.472	0.483	-2.3	80	0.00	8.82
47	1,1,1-trichloroethane	1.085	1.164	-7.3	81	0.00	8.90
48	cyclohexane	1.133	1.156	-2.0	80	0.00	9.01
49	isobutyl alcohol			-----NA-----			
50	1,1-dichloropropene	0.837	0.816	2.5	74	0.00	9.04
51	carbon tetrachloride	0.876	1.002	-14.4	87	0.00	9.09
52	tert-amyl alcohol	0.035	0.038	-8.6	86	0.00	9.15
53	isopropyl acetate	0.103	0.108	-4.9	78	0.00	9.17
54 I	1,4-difluorobenzene	1.000	1.000	0.0	77	0.00	9.65
55 S	1,2-dichloroethane-d4 (s)	0.359	0.385	-7.2	83	-0.01	9.21
56	n-butyl alcohol	0.010	0.010	0.0	78	0.00	9.67
57	2,2,4-trimethylpentane	2.032	2.168	-6.7	80	0.00	9.35
58	benzene	1.751	1.715	2.1	74	0.00	9.28
59	tert-amyl methyl ether	1.390	1.520	-9.4	81	0.00	9.34
60	heptane	0.359	0.368	-2.5	77	0.00	9.49
61	1,2-dichloroethane	0.530	0.549	-3.6	77	0.00	9.30
62	ethyl acrylate	0.433	0.457	-5.5	80	0.00	9.91
63	trichloroethene	0.413	0.409	1.0	74	0.00	9.94
64	2-chloroethyl vinyl ether	0.228	0.246	-7.9	80	0.00	10.70
65	methyl methacrylate	0.085	0.087	-2.4	77	0.00	10.17
66	methylcyclohexane	0.958	1.011	-5.5	78	0.00	10.24
67	1,2-dichloropropane	0.454	0.465	-2.4	76	0.00	10.22
68	dibromomethane	0.242	0.255	-5.4	79	0.00	10.33
69	bromodichloromethane	0.527	0.563	-6.8	80	0.00	10.47
70	2-nitropropane	0.138	0.147	-6.5	79	0.00	10.67
71	epichlorohydrin	0.040	0.041	-2.5	79	0.00	10.79
72	cis-1,3-dichloropropene	0.622	0.662	-6.4	80	0.00	10.92
73	4-methyl-2-pentanone	0.154	0.174	-13.0	83	0.00	11.02
74	isoamyl alcohol	0.011	0.013	-18.2	80	0.00	11.01
75 I	chlorobenzene-d5	1.000	1.000	0.0	82	0.00	12.83
76 S	toluene-d8 (s)	1.266	1.244	1.7	80	0.00	11.24
77	toluene	1.085	1.029	5.2	76	0.00	11.31
78	ethyl methacrylate	0.487	0.503	-3.3	80	0.00	11.48
79	trans-1,3-dichloropropene	0.557	0.581	-4.3	82	0.00	11.50
80	1,1,2-trichloroethane	0.298	0.306	-2.7	80	0.00	11.73
81	tetrachloroethene	0.388	0.359	7.5	73	0.00	11.89
82	2-hexanone	0.140	0.158	-12.9	88	0.00	11.90
83	1,3-dichloropropane	0.568	0.578	-1.8	81	0.00	11.92
84	butyl acetate	0.248	0.275	-10.9	86	0.00	11.97
85	dibromochloromethane	0.358	0.409	-14.2	89	0.00	12.18
86	1,2-dibromoethane	0.374	0.393	-5.1	83	0.00	12.35
87	n-butyl ether	2.157	2.102	2.5	78	0.00	12.81
88	chlorobenzene	1.161	1.135	2.2	79	0.00	12.86
89	1,1,1,2-tetrachloroethane	0.475	0.495	-4.2	82	0.00	12.93
90	ethylbenzene	2.120	2.084	1.7	79	0.00	12.93
91	m,p-xylene	0.796	0.787	1.1	79	0.00	13.06
92	o-xylene	1.823	1.788	1.9	78	0.00	13.50
93	styrene	1.299	1.338	-3.0	82	0.00	13.51
94	butyl acrylate	0.856	0.916	-7.0	86	0.00	13.30
95	isopropylbenzene	2.360	2.275	3.6	76	0.00	13.88
96	bromoform	0.230	0.292	-27.0#	104	0.00	13.76
97	cis-1,4-dichloro-2-butene	0.133	0.168	-26.3#	102	0.00	13.91
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	88	0.00	15.40

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: V4B3444-CC3432
Lab FileID: 4B82825.D

99 S	4-bromofluorobenzene (s)	0.767	0.772	-0.7	88	0.00	14.10
100	1,1,2,2-tetrachloroethane	0.875	0.861	1.6	84	0.00	14.19
101	trans-1,4-dichloro-2-bute	0.184	0.208	-13.0	99	0.00	14.22
102	1,2,3-trichloropropane	0.212	0.215	-1.4	87	0.00	14.28
103	bromobenzene	0.867	0.860	0.8	83	0.00	14.30
104	n-propylbenzene	4.314	4.081	5.4	80	0.00	14.33
105	2-chlorotoluene	0.881	0.825	6.4	79	0.00	14.48
106	4-chlorotoluene	2.408	2.328	3.3	83	0.00	14.61
107	1,3,5-trimethylbenzene	3.292	3.022	8.2	77	0.00	14.51
108	tert-butylbenzene	2.766	2.391	13.6	72	0.00	14.89
109	1,2,4-trimethylbenzene	3.303	3.041	7.9	78	0.00	14.94
110	sec-butylbenzene	4.418	3.986	9.8	75	0.00	15.13
111	p-isopropyltoluene	3.759	3.425	8.9	76	0.00	15.27
112	1,3-dichlorobenzene	1.831	1.733	5.4	81	0.00	15.32
113	1,4-dichlorobenzene	1.845	1.747	5.3	82	0.00	15.43
114	1,2-dichlorobenzene	1.914	1.766	7.7	79	0.00	15.84
115	benzyl chloride	1.502	1.753	-16.7	98	0.00	15.53
116	n-butylbenzene	1.955	1.814	7.2	77	0.00	15.73
117	hexachloroethane	0.568	0.549	3.3	83	0.00	16.17
118	1,2-dibromo-3-chloropropa	0.198	0.215	-8.6	88	0.00	16.69
119	1,3,5-trichlorobenzene	1.959	1.789	8.7	75	0.00	16.89
120	1,2,4-trichlorobenzene	1.616	1.562	3.3	80	0.00	17.56
121	2-ethylhexyl acrylate	1.076	0.973	9.6	79	0.00	17.57
122	hexachlorobutadiene	0.921	0.809	12.2	73	0.00	17.69
123	naphthalene	3.175	3.073	3.2	83	0.00	17.87
124	1,2,3-trichlorobenzene	1.407	1.373	2.4	81	0.00	18.11
125	2-methylnaphthalene	1.382	1.454	-5.2	87	0.00	19.17
126	Bis(chloromethyl)ether			-----NA-----			
127	Ethylenimine			-----NA-----			

(#) = Out of Range
 4B82574.D M4B3432.M

SPCC's out = 0 CCC's out = 0
 Tue Jun 19 01:35:44 2018

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: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12842A-MB1	3P69244.D	1	06/28/18	CC	06/17/18	OP12842A	E3P3284

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

JC68071-1, JC68071-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.025	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.021	ug/l	
120-12-7	Anthracene	ND	0.10	0.020	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.043	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.036	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.033	ug/l	
218-01-9	Chrysene	ND	0.10	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.022	ug/l	
86-73-7	Fluorene	ND	0.10	0.025	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.038	ug/l	
91-20-3	Naphthalene	ND	0.10	0.029	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.023	ug/l	
129-00-0	Pyrene	ND	0.10	0.019	ug/l	
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	38%	15-110%
4165-62-2	Phenol-d5	26%	12-110%
118-79-6	2,4,6-Tribromophenol	58%	32-143%
4165-60-0	Nitrobenzene-d5	56%	29-124%
321-60-8	2-Fluorobiphenyl	50%	23-122%
1718-51-0	Terphenyl-d14	67%	22-130%

7.1.1
7

Blank Spike/Blank Spike Duplicate Summary

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12842A-BS12	3P69245.D	1	06/28/18	CC	06/17/18	OP12842A	E3P3284
OP12842A-BS12	3P69294.D	1	06/29/18	JB	06/17/18	OP12842A	E3P3286

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

JC68071-1, JC68071-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	1	0.574	57	0.789	79	32	31-135/38
208-96-8	Acenaphthylene	1	0.568	57	0.784	78	32	28-130/42
120-12-7	Anthracene	1	0.686	69	0.855	86	22	40-125/32
56-55-3	Benzo(a)anthracene	1	0.595	60	0.801	80	30	38-132/31
50-32-8	Benzo(a)pyrene	1	0.417	42	0.768	77	59* a	31-110/37
205-99-2	Benzo(b)fluoranthene	1	0.452	45	0.835	84	60* a	31-113/37
191-24-2	Benzo(g,h,i)perylene	1	0.309	31	0.844	84	93* a	18-110/54
207-08-9	Benzo(k)fluoranthene	1	0.479	48	0.771	77	47* a	31-119/43
218-01-9	Chrysene	1	0.526	53	0.689	69	27	43-119/33
53-70-3	Dibenzo(a,h)anthracene	1	0.336	34	0.875	88	89* a	20-112/50
206-44-0	Fluoranthene	1	0.605	61	0.723	72	18	48-118/27
86-73-7	Fluorene	1	0.582	58	0.771	77	28	42-123/34
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.320	32	0.853	85	91* a	18-113/49
91-20-3	Naphthalene	1	0.565	57	0.717	72	24	30-114/40
85-01-8	Phenanthrene	1	0.670	67	0.816	82	20	45-125/31
129-00-0	Pyrene	1	0.667	67	0.792	79	17	48-125/29
123-91-1	1,4-Dioxane	1	0.407	41	0.524	52	25	10-110/40

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	41%	59%	15-110%
4165-62-2	Phenol-d5	28%	40%	12-110%
118-79-6	2,4,6-Tribromophenol	60%	80%	32-143%
4165-60-0	Nitrobenzene-d5	55%	79%	29-124%
321-60-8	2-Fluorobiphenyl	49%	82%	23-122%
1718-51-0	Terphenyl-d14	72%	103%	22-130%

(a) Analytical precision exceeds in-house control limits.

* = Outside of Control Limits.

7.2.1
7

Instrument Performance Check (DFTPP)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3280-DFTPP	Injection Date: 06/26/18
Lab File ID: 3P69157.D	Injection Time: 21:48
Instrument ID: GCMS3P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	50305	33.4	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	68352	45.4	Pass
70	Less than 2.0% of mass 69	325	0.22 (0.48) ^a	Pass
127	40.0 - 60.0% of mass 198	76744	51.0	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	150392	100.0	Pass
199	5.0 - 9.0% of mass 198	9847	6.55	Pass
275	10.0 - 30.0% of mass 198	38357	25.5	Pass
365	1.0 - 100.0% of mass 198	4728	3.14	Pass
441	Present, but less than mass 443	13521	8.99 (76.9) ^b	Pass
442	40.0 - 100.0% of mass 198	89451	59.5	Pass
443	17.0 - 23.0% of mass 442	17573	11.7 (19.6) ^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
E3P3280-IC3280	3P69158.D	06/26/18	22:38	00:50	Initial cal 5
E3P3280-IC3280	3P69159.D	06/26/18	22:59	01:11	Initial cal 2.5
E3P3280-ICC3280	3P69160A.D	06/26/18	23:37	01:49	Initial cal 1
E3P3280-IC3280	3P69161.D	06/26/18	23:59	02:11	Initial cal 0.5
E3P3280-IC3280	3P69162.D	06/27/18	00:20	02:32	Initial cal 0.2
E3P3280-IC3280	3P69163.D	06/27/18	00:42	02:54	Initial cal 0.1
E3P3280-IC3280	3P69164.D	06/27/18	01:03	03:15	Initial cal 0.05
E3P3280-IC3280	3P69165.D	06/27/18	01:25	03:37	Initial cal 0.02
E3P3280-IC3280	3P69166.D	06/27/18	01:46	03:58	Initial cal 0.01
E3P3280-ICV3280	3P69167.D	06/27/18	02:08	04:20	Initial cal verification 5

7.3.1
7

Instrument Performance Check (DFTPP)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3281-DFTPP	Injection Date: 06/27/18
Lab File ID: 3P69169.D	Injection Time: 09:58
Instrument ID: GCMS3P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	25252	32.1	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	34647	44.0	Pass
70	Less than 2.0% of mass 69	201	0.26 (0.58) ^a	Pass
127	40.0 - 60.0% of mass 198	39349	50.0	Pass
197	Less than 1.0% of mass 198	317	0.40	Pass
198	Base peak, 100% relative abundance	78758	100.0	Pass
199	5.0 - 9.0% of mass 198	5484	6.96	Pass
275	10.0 - 30.0% of mass 198	20539	26.1	Pass
365	1.0 - 100.0% of mass 198	2486	3.16	Pass
441	Present, but less than mass 443	6973	8.85 (76.7) ^b	Pass
442	40.0 - 100.0% of mass 198	46109	58.5	Pass
443	17.0 - 23.0% of mass 442	9089	11.5 (19.7) ^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
E3P3281-ICV3280	3P69172.D	06/27/18	11:21	01:23	Initial cal verification 1

7.3.2
7

Instrument Performance Check (DFTPP)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3284-DFTPP	Injection Date: 06/28/18
Lab File ID: 3P69233.D	Injection Time: 11:40
Instrument ID: GCMS3P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	32587	31.7	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	45823	44.5	Pass
70	Less than 2.0% of mass 69	352	0.34 (0.77) ^a	Pass
127	40.0 - 60.0% of mass 198	52105	50.6	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	102952	100.0	Pass
199	5.0 - 9.0% of mass 198	6649	6.46	Pass
275	10.0 - 30.0% of mass 198	27160	26.4	Pass
365	1.0 - 100.0% of mass 198	3452	3.35	Pass
441	Present, but less than mass 443	9693	9.42 (75.4) ^b	Pass
442	40.0 - 100.0% of mass 198	65080	63.2	Pass
443	17.0 - 23.0% of mass 442	12856	12.5 (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
E3P3284-CC3280	3P69235.D	06/28/18	12:20	00:40	Continuing cal 1.0
OP13022A-MB1	3P69236.D	06/28/18	12:53	01:13	Method Blank
OP13022A-BS12	3P69237.D	06/28/18	13:16	01:36	Blank Spike
OP13022A-BSD12	3P69238.D	06/28/18	13:39	01:59	Blank Spike Duplicate
ZZZZZZ	3P69239.D	06/28/18	14:02	02:22	(unrelated sample)
ZZZZZZ	3P69240.D	06/28/18	14:25	02:45	(unrelated sample)
ZZZZZZ	3P69241.D	06/28/18	14:48	03:08	(unrelated sample)
ZZZZZZ	3P69242.D	06/28/18	15:12	03:32	(unrelated sample)
ZZZZZZ	3P69243.D	06/28/18	15:38	03:58	(unrelated sample)
OP12842A-MB1	3P69244.D	06/28/18	16:32	04:52	Method Blank
OP12842A-BS12	3P69245.D	06/28/18	17:01	05:21	Blank Spike
ZZZZZZ	3P69246A.D	06/28/18	20:20	08:40	(unrelated sample)
ZZZZZZ	3P69247.D	06/28/18	20:42	09:02	(unrelated sample)
ZZZZZZ	3P69248.D	06/28/18	21:04	09:24	(unrelated sample)
ZZZZZZ	3P69249.D	06/28/18	21:27	09:47	(unrelated sample)
ZZZZZZ	3P69250.D	06/28/18	21:48	10:08	(unrelated sample)
ZZZZZZ	3P69251.D	06/28/18	22:10	10:30	(unrelated sample)
ZZZZZZ	3P69252.D	06/28/18	22:32	10:52	(unrelated sample)
ZZZZZZ	3P69253.D	06/28/18	22:54	11:14	(unrelated sample)

7.3.3
7

Instrument Performance Check (DFTPP)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3284-DFTPP	Injection Date: 06/28/18
Lab File ID: 3P69233.D	Injection Time: 11:40
Instrument ID: GCMS3P	

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	3P69254.D	06/28/18	23:16	11:36	(unrelated sample)
ZZZZZZ	3P69255.D	06/28/18	23:38	11:58	(unrelated sample)

7.3.3
7

Instrument Performance Check (DFTPP)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3285-DFTPP	Injection Date: 06/29/18
Lab File ID: 3P69268.D	Injection Time: 02:55
Instrument ID: GCMS3P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	37993	32.6	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	52162	44.7	Pass
70	Less than 2.0% of mass 69	357	0.31 (0.68) ^a	Pass
127	40.0 - 60.0% of mass 198	59295	50.8	Pass
197	Less than 1.0% of mass 198	412	0.35	Pass
198	Base peak, 100% relative abundance	116648	100.0	Pass
199	5.0 - 9.0% of mass 198	7851	6.73	Pass
275	10.0 - 30.0% of mass 198	29781	25.5	Pass
365	1.0 - 100.0% of mass 198	3528	3.02	Pass
441	Present, but less than mass 443	10631	9.11 (77.7) ^b	Pass
442	40.0 - 100.0% of mass 198	68539	58.8	Pass
443	17.0 - 23.0% of mass 442	13682	11.7 (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
E3P3285-CC3280	3P69269.D	06/29/18	03:06	00:11	Continuing cal 0.5
ZZZZZZ	3P69273.D	06/29/18	04:40	01:45	(unrelated sample)
ZZZZZZ	3P69274.D	06/29/18	05:01	02:06	(unrelated sample)
ZZZZZZ	3P69275.D	06/29/18	05:23	02:28	(unrelated sample)
ZZZZZZ	3P69276.D	06/29/18	05:44	02:49	(unrelated sample)
ZZZZZZ	3P69277.D	06/29/18	06:06	03:11	(unrelated sample)
ZZZZZZ	3P69279.D	06/29/18	06:49	03:54	(unrelated sample)
JC68071-1	3P69280.D	06/29/18	07:10	04:15	1-NAS-002-003-01
JC68071-2	3P69281.D	06/29/18	07:32	04:37	1-NAS-002-003-02
ZZZZZZ	3P69284.D	06/29/18	08:37	05:42	(unrelated sample)
ZZZZZZ	3P69285.D	06/29/18	08:58	06:03	(unrelated sample)
ZZZZZZ	3P69286.D	06/29/18	09:19	06:24	(unrelated sample)

7.3.4
7

Instrument Performance Check (DFTPP)

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3286-DFTPP	Injection Date: 06/29/18
Lab File ID: 3P69292.D	Injection Time: 12:33
Instrument ID: GCMS3P	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	62691	32.9	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	87399	45.9	Pass
70	Less than 2.0% of mass 69	699	0.37 (0.80) ^a	Pass
127	40.0 - 60.0% of mass 198	97437	51.2	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	190299	100.0	Pass
199	5.0 - 9.0% of mass 198	12812	6.73	Pass
275	10.0 - 30.0% of mass 198	48899	25.7	Pass
365	1.0 - 100.0% of mass 198	6049	3.18	Pass
441	Present, but less than mass 443	18026	9.47 (77.0) ^b	Pass
442	40.0 - 100.0% of mass 198	120075	63.1	Pass
443	17.0 - 23.0% of mass 442	23413	12.3 (19.5) ^c	Pass

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

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

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E3P3286-CC3280	3P69293.D	06/29/18	12:43	00:10	Continuing cal 1.0
OP12842A-BSD12	3P69294.D	06/29/18	13:05	00:32	Blank Spike Duplicate
ZZZZZZ	3P69295.D	06/29/18	13:26	00:53	(unrelated sample)
ZZZZZZ	3P69296.D	06/29/18	13:48	01:15	(unrelated sample)
OP13108A-MB1	3P69297.D	06/29/18	14:10	01:37	Method Blank
OP13108A-BS12	3P69298.D	06/29/18	14:31	01:58	Blank Spike
OP13108A-BSD12	3P69299.D	06/29/18	14:53	02:20	Blank Spike Duplicate
ZZZZZZ	3P69300.D	06/29/18	15:15	02:42	(unrelated sample)
ZZZZZZ	3P69301.D	06/29/18	15:37	03:04	(unrelated sample)
ZZZZZZ	3P69302.D	06/29/18	16:00	03:27	(unrelated sample)
ZZZZZZ	3P69303.D	06/29/18	16:23	03:50	(unrelated sample)
ZZZZZZ	3P69304.D	06/29/18	16:45	04:12	(unrelated sample)
ZZZZZZ	3P69306.D	06/29/18	17:28	04:55	(unrelated sample)
ZZZZZZ	3P69307.D	06/29/18	17:50	05:17	(unrelated sample)

7.3.5
7

Internal Standard Area Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Check Std: E3P3284-CC3280	Injection Date: 06/28/18
Lab File ID: 3P69235.D	Injection Time: 12:20
Instrument ID: GCMS3P	Method: SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	69283	7.08	86573	8.54	141185	10.65	107157	13.31
Upper Limit ^a	138566	7.58	173146	9.04	282370	11.15	214314	13.81
Lower Limit ^b	34642	6.58	43287	8.04	70593	10.15	53579	12.81

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP13022A-MB1	77014	7.08	102777	8.54	160734	10.65	124532	13.32
OP13022A-BS12	90388	7.08	111812	8.54	174110	10.65	126421	13.32
OP13022A-BSD1291772	84081	7.08	119599	8.54	183049	10.65	133563	13.32
ZZZZZZ	84081	7.08	111420	8.54	173368	10.65	130334	13.32
ZZZZZZ	66471	7.08	90304	8.54	143216	10.65	110383	13.32
ZZZZZZ	89767	7.08	119896	8.54	183250	10.65	138706	13.31
ZZZZZZ	79627	7.08	108705	8.54	166667	10.65	129739	13.32
ZZZZZZ	82218	7.08	108761	8.54	165089	10.65	132840	13.32
OP12842A-MB1	102183	7.08	134360	8.54	214510	10.65	159043	13.32
OP12842A-BS12	91698	7.08	121551	8.54	187877	10.65	144937	13.32
ZZZZZZ	63347	7.08	84376	8.54	130647	10.65	98096	13.33
ZZZZZZ	82922	7.08	104662	8.54	171074	10.65	126859	13.32
ZZZZZZ	54707	7.08	70623	8.54	118731	10.65	94318	13.32
ZZZZZZ	42989	7.07	54323	8.54	90606	10.65	68982	13.31
ZZZZZZ	54216	7.07	71250	8.54	118706	10.65	87858	13.31
ZZZZZZ	50104	7.07	65193	8.54	104194	10.65	75783	13.31
ZZZZZZ	78053	7.08	108891	8.54	151482	10.65	119606	13.31
ZZZZZZ	70748	7.08	111267	8.54	162339	10.65	129344	13.31
ZZZZZZ	80208	7.08	122893	8.54	174849	10.65	138774	13.31
ZZZZZZ	66444	7.08	86785	8.54	136517	10.65	106954	13.31

IS 1 = 1-Methylnaphthalene-d10
IS 2 = Fluorene-d10
IS 3 = Fluoranthene-d10
IS 4 = Benzo(a)pyrene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.1
7

Internal Standard Area Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Check Std: E3P3285-CC3280	Injection Date: 06/29/18
Lab File ID: 3P69269.D	Injection Time: 03:06
Instrument ID: GCMS3P	Method: SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	104437	7.06	131032	8.52	207831	10.63	155446	13.29
Upper Limit ^a	208874	7.56	262064	9.02	415662	11.13	310892	13.79
Lower Limit ^b	52219	6.56	65516	8.02	103916	10.13	77723	12.79

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
ZZZZZZ	79551	7.06	99683	8.52	160077	10.63	120869	13.29
ZZZZZZ	81315	7.06	98586	8.52	157115	10.63	116564	13.29
ZZZZZZ	81623	7.06	100719	8.52	162513	10.63	119836	13.30
ZZZZZZ	79448	7.06	96087	8.52	159357	10.63	117163	13.30
ZZZZZZ	82954	7.06	103597	8.52	156856	10.63	119260	13.30
ZZZZZZ	75792	7.06	95419	8.52	149401	10.63	110021	13.30
JC68071-1	66794	7.06	82683	8.52	129594	10.63	98242	13.30
JC68071-2	73965	7.06	91356	8.52	147302	10.63	110207	13.30
ZZZZZZ	75722	7.06	98182	8.52	152941	10.63	110933	13.30
ZZZZZZ	78128	7.07	97692	8.52	148236	10.64	119779	13.30
ZZZZZZ	74110	7.06	101807	8.52	142430	10.63	112365	13.30

- IS 1** = 1-Methylnaphthalene-d10
- IS 2** = Fluorene-d10
- IS 3** = Fluoranthene-d10
- IS 4** = Benzo(a)pyrene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.2
7

Internal Standard Area Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Check Std: E3P3286-CC3280	Injection Date: 06/29/18
Lab File ID: 3P69293.D	Injection Time: 12:43
Instrument ID: GCMS3P	Method: SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	103554	7.06	131934	8.52	210460	10.63	157766	13.30
Upper Limit ^a	207108	7.56	263868	9.02	420920	11.13	315532	13.80
Lower Limit ^b	51777	6.56	65967	8.02	105230	10.13	78883	12.80

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
OP12842A-BSD1293659		7.06	118915	8.52	190816	10.63	140253	13.30
ZZZZZZ	72310	7.06	89673	8.52	143399	10.63	109720	13.30
ZZZZZZ	79275	7.06	96687	8.52	155310	10.63	116400	13.30
OP13108A-MB1	71238	7.06	90058	8.52	140232	10.63	107310	13.30
OP13108A-BS12	86727	7.06	111098	8.52	166477	10.63	121069	13.30
OP13108A-BSD1282489		7.06	100416	8.52	158684	10.63	113647	13.30
ZZZZZZ	91527	7.06	120077	8.52	173042	10.63	136830	13.30
ZZZZZZ	88280	7.06	117380	8.52	182275	10.63	133646	13.30
ZZZZZZ	83624	7.06	108798	8.52	167811	10.63	123676	13.30
ZZZZZZ	77826	7.06	99152	8.52	158017	10.63	115689	13.30
ZZZZZZ	93197	7.06	120980	8.52	183289	10.63	130079	13.30
ZZZZZZ	86657	7.06	112265	8.52	167535	10.63	124031	13.30
ZZZZZZ	81643	7.06	103623	8.52	162620	10.63	114616	13.30

IS 1 = 1-Methylnaphthalene-d10
IS 2 = Fluorene-d10
IS 3 = Fluoranthene-d10
IS 4 = Benzo(a)pyrene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.3
7

Surrogate Recovery Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: SW846 8270D BY SIM	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JC68071-1	3P69280.D	72	68	81
JC68071-2	3P69281.D	69	69	83
OP12842A-BS12	3P69245.D	55	49	72
OP12842A-BSD123P69294.D		79	82	103
OP12842A-MB1	3P69244.D	56	50	67

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	29-124%
S2 = 2-Fluorobiphenyl	23-122%
S3 = Terphenyl-d14	22-130%

7.5.1
7

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3280-ICC3280
Lab FileID: 3P69160A.D

Response Factor Report MSGC3P

Method : C:\MSDCHEM\1\METHODS\M3P3280SIM.M (RTE Integrator)
 Title : Semi Volatile Extractables by GC/MS
 Last Update : Wed Jun 27 09:30:02 2018
 Response via : Initial Calibration

Calibration Files

2.5 =3p69159.D 1.0 =3p69160a.D 0.5 =3p69161.D 0.2 =3p69162.D
 0.1 =3p69163.D 0.05=3p69164.D 0.02=3p69165.D 0.01=3p69166.D
 5 =3p69158.D = = =

Compound	2.5	1.0	0.5	0.2	0.1	0.05	0.02	0.01	5	Avg	%RSD
1) I 1-Methylnaphthalene-d	-----ISTD-----										
2) 1,4-dioxane	0.263	0.290	0.285	0.192	0.224	0.224			0.289	0.253	15.45
3) 2-Fluorophenol	0.654	0.762	0.728	0.765	0.763	0.650	0.693	0.689	0.651	0.706	7.03
4) Phenol-d5	0.865	0.945	0.910	0.943	0.925	0.795	0.831	0.844	0.824	0.876	6.42
5) Phenol	0.936	1.012	0.973	1.037	1.024	0.878	0.909	0.926	0.894	0.954	6.20
6) bis(2-Chloroethyl)ether	0.626	0.676	0.644	0.696	0.690	0.592	0.655	0.651	0.636	0.652	5.00
7) Nitrobenzene-d5	0.743	0.813	0.804	0.853	0.845	0.730	0.799	0.785	0.679	0.783	7.20
8) Naphthalene	2.346	2.503	2.422	2.517	2.528	2.281	2.471	2.800	2.320	2.465	6.27
9) Hexachlorobutadiene	0.427	0.457	0.445	0.475	0.492	0.414	0.481	0.521	0.437	0.461	7.40
10) 2-Methylnaphthalene	1.329	1.367	1.344	1.429	1.453	1.279	1.613	1.973	1.299	1.454	15.10
11) 1-Methylnaphthalene	1.388	1.469	1.450	1.504	1.564	1.330	1.625	1.843	1.368	1.505	10.50
12) I Fluorene-d10	-----ISTD-----										
13) 2-Fluorobiphenyl	1.173	1.346	1.413	1.478	1.537	1.340	1.441	1.416	1.003	1.350	12.27
14) Acenaphthylene	1.777	1.830	1.772	1.841	1.855	1.621	1.846	1.989	1.776	1.812	5.38
15) Acenaphthene	1.169	1.239	1.189	1.225	1.274	1.126	1.246	1.301	1.165	1.215	4.67
16) 4,6-dinitro-2-methylphenol	0.228	0.206	0.161	0.124	0.107	0.084	0.084		0.259	0.157	43.19
	---- Quadratic regression ---- Coefficient = 0.9998										
	Response Ratio = -0.01278 + 0.20125 *A + 0.00953 *A^2										
17) Fluorene	1.313	1.374	1.356	1.353	1.450	1.211	1.407	1.560	1.274	1.366	7.41
18) 2,4,6-Tribromophenol	0.211	0.214	0.205	0.212	0.194	0.163	0.185	0.179	0.209	0.197	9.12
19) I Fluoranthene-d10	-----ISTD-----										
20) Hexachlorobenzene	0.261	0.271	0.270	0.286	0.287	0.255	0.284	0.300	0.271	0.276	5.14
21) Pentachlorophenol	0.180	0.174	0.147	0.135	0.117	0.100	0.107	0.098	0.188	0.138	25.66

7.6.1
7

Initial Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3280-ICC3280
Lab FileID: 3P69160A.D

---- Quadratic regression ---- Coefficient = 0.9998
 Response Ratio = -0.00606 + 0.17323 *A + 0.00250 *A^2

22)	Phenanthrene	1.122 1.157 1.122 1.197 1.214 1.067 1.338 1.635 1.136	1.221	14.20
23)	Anthracene	1.090 1.133 1.078 1.105 1.084 0.932 1.050 1.124 1.099	1.077	5.54
24)	Fluoranthene	1.292 1.331 1.264 1.373 1.387 1.250 1.679 2.046 1.270	1.432	18.49
25)	Pyrene	1.309 1.333 1.248 1.311 1.318 1.207 1.386 1.613 1.261	1.332	8.83
26)	Terphenyl-d14	0.606 0.695 0.740 0.775 0.768 0.658 0.672 0.705 0.504	0.680	12.53
27)	Benzo[a]anthracene	1.163 1.148 1.086 1.101 1.163 1.029 1.286 1.473 1.148	1.177	11.13
28)	Chrysene	1.221 1.274 1.226 1.263 1.371 1.273 1.575 1.957 1.173	1.370	18.21
29)	I Benzo(a)pyrene-d12	-----ISTD-----		
30)	Benzo[b]fluoranthene	1.589 1.562 1.556 1.549 1.539 1.409 1.746 2.106 1.743	1.644	12.30
31)	Benzo[k]fluoranthene	1.498 1.595 1.528 1.504 1.493 1.409 1.609 1.775 1.463	1.541	6.95
32)	Benzo[a]pyrene	1.386 1.464 1.438 1.520 1.492 1.374 1.439 1.686 1.407	1.467	6.46
33)	Indeno[1,2,3-cd]pyrene	1.604 1.580 1.476 1.479 1.458 1.224 1.347 1.331 1.556	1.451	8.77
34)	Dibenz[a,h]anthracene	1.289 1.266 1.185 1.164 1.136 0.896 0.964 0.980 1.258	1.126	12.90
35)	Benzo[g,h,i]perylene	1.290 1.307 1.245 1.271 1.289 1.092 1.169 1.282 1.279	1.247	5.67

 (#) = Out of Range ### Number of calibration levels exceeded format ###

M3P3280SIM.M Wed Jun 27 12:46:14 2018

7.6.1

7

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3280-ICV3280
Lab FileID: 3P69167.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3280\3p69167.D Vial: 11
Acq On : 27 Jun 2018 2:08 am Operator: chriss2
Sample : icv3280-5 Inst : MSGC3P
Misc : op10752a,e3p3280,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3P3280SIM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Wed Jun 27 09:30:02 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1-Methylnaphthalene-d10	1.000	1.000	0.0	87	0.00	7.11
5	Phenol	0.954	0.854	10.5	73	0.00	4.79
12 I	Fluorene-d10	1.000	1.000	0.0	84	0.00	8.57
	----- True Calc. % Drift -----						
16 t	4,6-dinitro-2-methylpheno	5.000	3.902	22.0	63	0.00	8.65
	----- AvgRF CCRF % Dev -----						
19 I	Fluoranthene-d10	1.000	1.000	0.0	83	0.00	10.68
	----- True Calc. % Drift -----						
21 t	Pentachlorophenol	5.000	4.609	7.8	75	0.00	9.34

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3p69160a.D M3P3280SIM.M Wed Jun 27 09:37:19 2018

Initial Calibration Verification

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3281-ICV3280
Lab FileID: 3P69172.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3281\3p69172.D Vial: 2
Acq On : 27 Jun 2018 11:21 am Operator: seanbl
Sample : icv3280-1 Inst : MSGC3P
Misc : op10752a,e3p3281,1000,,,1,1 Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3P3280SIM.M (RTE Integrator)
Title : Semi Volatile Extractables by GC/MS
Last Update : Wed Jun 27 09:30:02 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1-Methylnaphthalene-d10	1.000	1.000	0.0	90	0.00	7.11
2 t	1,4-dioxane	0.253	0.260	-2.8	81	0.00	2.18
6 t	bis(2-Chloroethyl)ether	0.652	0.598	8.3	80	0.00	4.87
8 t	Naphthalene	2.465	2.038	17.3	73	0.00	6.37
9 t	Hexachlorobutadiene	0.461	0.396	14.1	78	0.00	6.51
10 t	2-Methylnaphthalene	1.454	1.113	23.5	73	0.00	7.05
12 I	Fluorene-d10	1.000	1.000	0.0	88	0.00	8.57
14 t	Acenaphthylene	1.812	1.430	21.1	69	0.00	7.92
15 t	Acenaphthene	1.215	0.998	17.9	71	0.00	8.09
17 t	Fluorene	1.366	1.064	22.1	68	0.00	8.60
19 I	Fluoranthene-d10	1.000	1.000	0.0	81	0.00	10.69
20 t	Hexachlorobenzene	0.276	0.233	15.6	70	0.00	9.15
22 t	Phenanthrene	1.221	0.986	19.2	69	0.00	9.54
23 t	Anthracene	1.077	0.902	16.2	65	0.00	9.58
24 t	Fluoranthene	1.432	1.067	25.5	65	0.00	10.71
25 t	Pyrene	1.332	1.025	23.0	62	0.00	10.92
27 t	Benzo[a]anthracene	1.177	0.918	22.0	65	0.00	12.10
28 t	Chrysene	1.370	0.971	29.1	62	0.00	12.14
29 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	69	0.00	13.36
30 t	Benzo[b]fluoranthene	1.644	1.224	25.5	54	0.00	13.10
31 t	Benzo[k]fluoranthene	1.541	1.275	17.3	55	0.00	13.12
32 t	Benzo[a]pyrene	1.467	1.174	20.0	55	0.00	13.39
33 t	Indeno[1,2,3-cd]pyrene	1.451	1.161	20.0	51	0.01	14.53
34 t	Dibenz[a,h]anthracene	1.126	0.905	19.6	49#	0.01	14.56
35 t	Benzo[g,h,i]perylene	1.247	1.011	18.9	53	0.00	14.85

(#) = Out of Range
3p69160a.D M3P3280SIM.M

SPCC's out = 0 CCC's out = 0
Wed Jun 27 11:55:27 2018

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3284-CC3280
Lab FileID: 3P69235.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3284\3p69235.D Vial: 2
 Acq On : 28 Jun 2018 12:20 pm Operator: christc2
 Sample : cc3280-1.0 Inst : MSGC3P
 Misc : op10752a,e3p3284,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3P3280SIM.M (RTE Integrator)
 Title : Semi Volatile Extractables by GC/MS
 Last Update : Wed Jun 27 09:30:02 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.050 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-Methylnaphthalene-d10	1.000	1.000	0.0	99	-0.03	7.08
2 t	1,4-dioxane	0.253	0.302	-19.4	103	-0.02	2.15
3 S	2-Fluorophenol	0.706	0.793	-12.3	103	-0.03	3.83
4 S	Phenol-d5	0.876	0.946	-8.0	99	-0.03	4.75
5	Phenol	0.954	1.006	-5.5	98	-0.03	4.76
6 t	bis(2-Chloroethyl)ether	0.652	0.649	0.5	95	-0.03	4.84
7 S	Nitrobenzene-d5	0.783	0.803	-2.6	98	-0.03	5.62
8 t	Naphthalene	2.465	2.496	-1.3	99	-0.03	6.34
9 t	Hexachlorobutadiene	0.461	0.503	-9.1	109	-0.03	6.47
10 t	2-Methylnaphthalene	1.454	1.383	4.9	100	-0.04	7.01
11 t	1-Methylnaphthalene	1.505	1.469	2.4	99	-0.03	7.11
12 I	Fluorene-d10	1.000	1.000	0.0	93	-0.04	8.54
13 S	2-Fluorobiphenyl	1.350	1.428	-5.8	99	-0.04	7.38
14 t	Acenaphthylene	1.812	1.828	-0.9	93	-0.04	7.89
15 t	Acenaphthene	1.215	1.246	-2.6	94	-0.04	8.06
16 t	4,6-dinitro-2-methylpheno	5.000	4.309	13.8	78	-0.04	8.62
17 t	Fluorene	1.366	1.365	0.1	93	-0.03	8.57
18 S	2,4,6-Tribromophenol	0.197	0.210	-6.6	91	-0.04	8.80
19 I	Fluoranthene-d10	1.000	1.000	0.0	88	-0.04	10.65
20 t	Hexachlorobenzene	0.276	0.291	-5.4	94	-0.04	9.11
21 t	Pentachlorophenol	5.000	5.314	-6.3	92	-0.04	9.30
22 t	Phenanthrene	1.221	1.201	1.6	91	-0.04	9.50
23 t	Anthracene	1.077	1.151	-6.9	89	-0.05	9.54
24 t	Fluoranthene	1.432	1.335	6.8	88	-0.04	10.67
25 t	Pyrene	1.332	1.361	-2.2	90	-0.04	10.89
26 S	Terphenyl-d14	0.680	0.747	-9.9	95	-0.04	11.05
27 t	Benzo[a]anthracene	1.177	1.158	1.6	89	-0.04	12.06
28 t	Chrysene	1.370	1.291	5.8	89	-0.05	12.09
29 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	81	-0.04	13.31
30 t	Benzo[b]fluoranthene	1.644	1.818	-10.6	95	-0.04	13.05
31 t	Benzo[k]fluoranthene	1.541	1.535	0.4	78	-0.04	13.07

7.6.4

7

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3284-CC3280
Lab FileID: 3P69235.D

32 t	Benzo[a]pyrene	1.467	1.540	-5.0	86	-0.04	13.34
33 t	Indeno[1,2,3-cd]pyrene	1.451	1.661	-14.5	86	-0.06	14.46
34 t	Dibenz[a,h]anthracene	1.126	1.322	-17.4	85	-0.06	14.49
35 t	Benzo[g,h,i]perylene	1.247	1.341	-7.5	84	-0.07	14.77

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

3p69160a.D M3P3280SIM.M

Thu Jun 28 16:34:02 2018

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3285-CC3280
Lab FileID: 3P69269.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3285\3p69269.D Vial: 2
 Acq On : 29 Jun 2018 3:06 am Operator: chriss2
 Sample : cc3280-0.5 Inst : MSGC3P
 Misc : op10752a,e3p3285,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3P3280SIM.M (RTE Integrator)
 Title : Semi Volatile Extractables by GC/MS
 Last Update : Wed Jun 27 09:30:02 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.050 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-Methylnaphthalene-d10	1.000	1.000	0.0	145	-0.04	7.06
2 t	1,4-dioxane	0.253	0.323	-27.7#	165	-0.04	2.13
3 S	2-Fluorophenol	0.706	0.873	-23.7#	174	-0.04	3.82
4 S	Phenol-d5	0.876	1.064	-21.5#	170	-0.04	4.74
5	Phenol	0.954	1.122	-17.6	168	-0.04	4.75
6 t	bis(2-Chloroethyl)ether	0.652	0.742	-13.8	167	-0.04	4.82
7 S	Nitrobenzene-d5	0.783	0.891	-13.8	161	-0.05	5.60
8 t	Naphthalene	2.465	2.762	-12.0	166	-0.05	6.32
9 t	Hexachlorobutadiene	0.461	0.544	-18.0	178	-0.05	6.46
10 t	2-Methylnaphthalene	1.454	1.511	-3.9	164	-0.05	7.00
11 t	1-Methylnaphthalene	1.505	1.542	-2.5	155	-0.05	7.10
12 I	Fluorene-d10	1.000	1.000	0.0	140	-0.05	8.52
13 S	2-Fluorobiphenyl	1.350	1.548	-14.7	153	-0.05	7.37
14 t	Acenaphthylene	1.812	1.926	-6.3	152	-0.05	7.87
15 t	Acenaphthene	1.215	1.354	-11.4	159	-0.05	8.05
16 t	4,6-dinitro-2-methylpheno	2.500	2.013	19.5	126	-0.06	8.60
17 t	Fluorene	1.366	1.478	-8.2	152	-0.05	8.55
18 S	2,4,6-Tribromophenol	0.197	0.224	-13.7	152	-0.05	8.79
19 I	Fluoranthene-d10	1.000	1.000	0.0	126	-0.05	10.63
20 t	Hexachlorobenzene	0.276	0.316	-14.5	147	-0.05	9.10
21 t	Pentachlorophenol	2.500	1.968	21.3#	109	-0.05	9.28
22 t	Phenanthrene	1.221	1.338	-9.6	150	-0.05	9.49
23 t	Anthracene	1.077	1.226	-13.8	143	-0.06	9.53
24 t	Fluoranthene	1.432	1.392	2.8	138	-0.06	10.65
25 t	Pyrene	1.332	1.461	-9.7	147	-0.06	10.87
26 S	Terphenyl-d14	0.680	0.805	-18.4	137	-0.06	11.03
27 t	Benzo[a]anthracene	1.177	1.228	-4.3	142	-0.06	12.04
28 t	Chrysene	1.370	1.303	4.9	133	-0.06	12.08
29 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	115	-0.06	13.29
30 t	Benzo[b]fluoranthene	1.644	1.920	-16.8	142	-0.06	13.03
31 t	Benzo[k]fluoranthene	1.541	1.680	-9.0	127	-0.06	13.05

7.6.5
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Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3285-CC3280
Lab FileID: 3P69269.D

32 t	Benzo[a]pyrene	1.467	1.617	-10.2	130	-0.07	13.31
33 t	Indeno[1,2,3-cd]pyrene	1.451	1.719	-18.5	134	-0.09	14.43
34 t	Dibenz[a,h]anthracene	1.126	1.371	-21.8#	134	-0.09	14.45
35 t	Benzo[g,h,i]perylene	1.247	1.411	-13.2	131	-0.10	14.74

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

3p69161.D M3P3280SIM.M

Fri Jun 29 12:25:37 2018

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3286-CC3280
Lab FileID: 3P69293.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\E3P3286\3p69293.D Vial: 2
 Acq On : 29 Jun 2018 12:43 pm Operator: johnb1
 Sample : cc3280-1.0 Inst : MSGC3P
 Misc : op10752a,e3p3286,1000,,,1,1 Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M3P3280SIM.M (RTE Integrator)
 Title : Semi Volatile Extractables by GC/MS
 Last Update : Wed Jun 27 09:30:02 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.050 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-Methylnaphthalene-d10	1.000	1.000	0.0	148	-0.04	7.06
2 t	1,4-dioxane	0.253	0.311	-22.9#	159	-0.05	2.12
3 S	2-Fluorophenol	0.706	0.759	-7.5	148	-0.04	3.82
4 S	Phenol-d5	0.876	0.928	-5.9	145	-0.04	4.74
5	Phenol	0.954	1.007	-5.6	147	-0.04	4.75
6 t	bis(2-Chloroethyl)ether	0.652	0.663	-1.7	145	-0.04	4.82
7 S	Nitrobenzene-d5	0.783	0.785	-0.3	143	-0.05	5.60
8 t	Naphthalene	2.465	2.486	-0.9	147	-0.05	6.32
9 t	Hexachlorobutadiene	0.461	0.478	-3.7	155	-0.05	6.46
10 t	2-Methylnaphthalene	1.454	1.374	5.5	149	-0.05	7.00
11 t	1-Methylnaphthalene	1.505	1.398	7.1	141	-0.05	7.10
12 I	Fluorene-d10	1.000	1.000	0.0	142	-0.05	8.52
13 S	2-Fluorobiphenyl	1.350	1.311	2.9	138	-0.05	7.37
14 t	Acenaphthylene	1.812	1.805	0.4	140	-0.05	7.87
15 t	Acenaphthene	1.215	1.214	0.1	139	-0.05	8.04
----- True Calc. % Drift -----							
16 t	4,6-dinitro-2-methylpheno	5.000	4.401	12.0	121	-0.06	8.60
----- AvgRF CCRF % Dev -----							
17 t	Fluorene	1.366	1.313	3.9	136	-0.05	8.55
18 S	2,4,6-Tribromophenol	0.197	0.199	-1.0	132	-0.05	8.79
19 I	Fluoranthene-d10	1.000	1.000	0.0	131	-0.05	10.63
20 t	Hexachlorobenzene	0.276	0.273	1.1	132	-0.05	9.10
----- True Calc. % Drift -----							
21 t	Pentachlorophenol	5.000	4.847	3.1	125	-0.05	9.28
----- AvgRF CCRF % Dev -----							
22 t	Phenanthrene	1.221	1.185	2.9	134	-0.05	9.49
23 t	Anthracene	1.077	1.142	-6.0	132	-0.06	9.53
24 t	Fluoranthene	1.432	1.253	12.5	123	-0.06	10.65
25 t	Pyrene	1.332	1.297	2.6	128	-0.06	10.87
26 S	Terphenyl-d14	0.680	0.645	5.1	122	-0.06	11.04
27 t	Benzo[a]anthracene	1.177	1.161	1.4	133	-0.05	12.05
28 t	Chrysene	1.370	1.113	18.8	114	-0.05	12.08
29 I	Benzo(a)pyrene-d12	1.000	1.000	0.0	120	-0.05	13.30
30 t	Benzo[b]fluoranthene	1.644	1.681	-2.3	129	-0.05	13.04
31 t	Benzo[k]fluoranthene	1.541	1.403	9.0	105	-0.05	13.06

Continuing Calibration Summary

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample: E3P3286-CC3280
Lab FileID: 3P69293.D

32 t	Benzo[a]pyrene	1.467	1.432	2.4	117	-0.06	13.32
33 t	Indeno[1,2,3-cd]pyrene	1.451	1.580	-8.9	120	-0.08	14.44
34 t	Dibenz[a,h]anthracene	1.126	1.281	-13.8	121	-0.08	14.46
35 t	Benzo[g,h,i]perylene	1.247	1.281	-2.7	118	-0.09	14.75

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

3p69160a.D M3P3280SIM.M

Fri Jun 29 15:04:22 2018

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
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV
Analyst: JA
Parameters: Hg

Date Analyzed: 06/16/18
Run ID: MA44661
Methods: SW846 7470A

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:41	MA44661-STD1	1		B=1.9398E-004 C=6.5758E-003 R=0.9999697
09:42	MA44661-STD2	1		STDB
09:44	MA44661-STD3	1		STDC
09:45	MA44661-STD4	1		STDD
09:47	MA44661-STD5	1		STDE
09:48	MA44661-STD6	1		STDF
10:01	MA44661-ICV1	1		
10:02	MA44661-ICB1	1		
10:04	MA44661-CCV1	1		
10:05	MA44661-CCB1	1		
10:07	MA44661-CRI1	1		
10:09	MP7681-MB1	1		
10:11	MP7681-B1	1		
10:12	MP7681-S1	1		
10:14	MP7681-S2	1		
10:15	JC67980-2	1		(sample used for QC only; not part of login JC68071)
10:17	ZZZZZZ	1		
10:18	ZZZZZZ	1		
10:19	MA44661-CCV2	1		
10:21	MA44661-CCB2	1		
10:22	ZZZZZZ	1		
10:24	ZZZZZZ	1		
10:25	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:28	ZZZZZZ	1		
10:29	ZZZZZZ	1		
10:30	ZZZZZZ	1		
10:31	ZZZZZZ	1		
10:33	ZZZZZZ	1		
10:34	MA44661-CCV3	1		
10:35	MA44661-CCB3	1		
10:37	ZZZZZZ	1		
10:38	MP7682-MB1	1		Any hits in this MP are confirmed in this run.

8.1
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
Analyst: JA Run ID: MA44661
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:40	MP7682-B1	1		
10:41	MP7682-B2	1		
10:43	MP7682-S1	1		
10:44	MP7682-S2	1		
10:46	MP7682-D1	1		
10:48	JC68089-1	1		(sample used for QC only; not part of login JC68071)
10:49	MA44661-CCV4	1		
10:50	MA44661-CCB4	1		
10:52	ZZZZZZ	1		
10:53	ZZZZZZ	1		
10:54	ZZZZZZ	1		
10:56	ZZZZZZ	1		
10:57	ZZZZZZ	1		
10:58	ZZZZZZ	1		
11:00	ZZZZZZ	1		
11:01	JC68071-1	1		
11:02	JC68071-2	1		
----->	Last reportable sample/prep for job JC68071			
11:04	MA44661-CCV5	1		
11:05	MA44661-CCB5	1		
11:06	ZZZZZZ	1		
11:08	ZZZZZZ	1		
11:09	ZZZZZZ	1		
11:11	ZZZZZZ	1		
11:12	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:14	ZZZZZZ	1		
11:16	ZZZZZZ	1		
11:17	ZZZZZZ	1		
11:18	MA44661-CCV6	1		
11:20	MA44661-CCB6	1		
11:21	ZZZZZZ	5		Hits confirmed.
11:23	ZZZZZZ	1		Hits confirmed.
11:24	ZZZZZZ	1		Hits confirmed.

8.1
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV

Date Analyzed: 06/16/18

Methods: SW846 7470A

Analyst: JA

Run ID: MA44661

Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:28	ZZZZZ	1		Hits confirmed.
11:29	ZZZZZ	1		Hits confirmed.
11:32	MA44661-CRI2	1		
11:39	MA44661-CCV7	1		
11:41	MA44661-CCB7	1		

-----> Last reportable CCB for job JC68071
Refer to raw data for calibration curve and standards.

8.1

8

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
 Analyst: JA Run ID: MA44661
 Parameters: Hg

Time	Sample Description	Element:	H Dilution g
10:01	MA44661-ICV1	1	X
10:02	MA44661-ICB1	1	X
10:04	MA44661-CCV1	1	X
10:05	MA44661-CCB1	1	X
10:07	MA44661-CRI1	1	X
10:09	MP7681-MB1	1	X
10:11	MP7681-B1	1	X
10:12	MP7681-S1	1	X
10:14	MP7681-S2	1	X
10:15	JC67980-2	1	X (a)
10:17	ZZZZZZ	1	
10:18	ZZZZZZ	1	
10:19	MA44661-CCV2	1	X
10:21	MA44661-CCB2	1	X
10:22	ZZZZZZ	1	
10:24	ZZZZZZ	1	
10:25	ZZZZZZ	1	
10:26	ZZZZZZ	1	
10:28	ZZZZZZ	1	
10:29	ZZZZZZ	1	
10:30	ZZZZZZ	1	
10:31	ZZZZZZ	1	
10:33	ZZZZZZ	1	
10:34	MA44661-CCV3	1	X
10:35	MA44661-CCB3	1	X
10:37	ZZZZZZ	1	
10:38	MP7682-MB1	1	X
10:40	MP7682-B1	1	X
10:41	MP7682-B2	1	X
10:43	MP7682-S1	1	X
10:44	MP7682-S2	1	X
10:46	MP7682-D1	1	X
10:48	JC68089-1	1	X (a)
		Element:	H g

8.1.1
8

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
 Analyst: JA Run ID: MA44661
 Parameters: Hg

Time	Sample Description	Element: H Dilution g	
10:49	MA44661-CCV4	1	X
10:50	MA44661-CCB4	1	X
10:52	ZZZZZZ	1	
10:53	ZZZZZZ	1	
10:54	ZZZZZZ	1	
10:56	ZZZZZZ	1	
10:57	ZZZZZZ	1	
10:58	ZZZZZZ	1	
11:00	ZZZZZZ	1	
11:01	JC68071-1	1	X
11:02	JC68071-2	1	X
11:04	MA44661-CCV5	1	X
11:05	MA44661-CCB5	1	X
11:06	ZZZZZZ	1	
11:08	ZZZZZZ	1	
11:09	ZZZZZZ	1	
11:11	ZZZZZZ	1	
11:12	ZZZZZZ	1	
11:13	ZZZZZZ	1	
11:14	ZZZZZZ	1	
11:16	ZZZZZZ	1	
11:17	ZZZZZZ	1	
11:18	MA44661-CCV6	1	X
11:20	MA44661-CCB6	1	X
11:21	ZZZZZZ	5	
11:23	ZZZZZZ	1	
11:24	ZZZZZZ	1	
11:28	ZZZZZZ	1	
11:29	ZZZZZZ	1	
11:32	MA44661-CRI2	1	X
11:39	MA44661-CCV7	1	X
11:41	MA44661-CCB7	1	X

(a) Sample used for QC only; not part of login JC68071.

Element: H
g

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA44661 Units: ug/l

	Time:		10:02		10:05		10:21		10:35	
Sample ID:	RL	IDL	ICB1	final	CCB1	final	CCB2	final	CCB3	final
Metal			raw		raw		raw		raw	
Mercury	0.20	.052	-0.0960	<0.20	-0.0972	<0.20	-0.0792	<0.20	-0.0623	<0.20

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

8.1.2
 8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
 QC Limits: result < RL Run ID: MA44661 Units: ug/l

	Time:		10:50		11:05		11:20		11:41	
	Sample ID:		CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.052	-0.0718	<0.20	-0.0635	<0.20	-0.0761	<0.20	-0.0693	<0.20

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44661 Units: ug/l

	Time:		10:01		10:04		10:19		
Sample ID:	ICV		ICV1	CCV	CCV1	CCV	CCV2		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.95	98.3	2.5	2.54	101.6	2.5	2.52	100.8

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44661 Units: ug/l

	Time:		10:34		10:49		11:04		
Sample ID:	CCV		CCV3	CCV	CCV4	CCV	CCV5		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.48	99.2	2.5	2.48	99.2	2.5	2.50	100.0

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

8.1.3
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA44661 Units: ug/l

	Time:	11:18		11:39		
Sample ID:	CCV	CCV6	CCV	CCV7		
Metal	True	Results	% Rec	True	Results	
					% Rec	
Mercury	2.5	2.41	96.4	2.5	2.51	100.4

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

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: H9061618W1.CSV Date Analyzed: 06/16/18 Methods: SW846 7470A
 QC Limits: 70 to 130 % Recovery Run ID: MA44661 Units: ug/l

	Time:		10:07		11:32	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.204	102.0	0.202	101.0

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

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44684
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:45	MA44684-STD1	1		STDA
11:49	MA44684-STD2	1		STDB
11:53	ZZZZZZ	1		
11:57	ZZZZZZ	1		
12:02	MA44684-ICV1	1		
12:09	MA44684-ICB1	1		
12:12	MA44684-ICCV1	1		
12:21	MA44684-CCB1	1		
12:24	MA44684-CRI1	1		
12:29	MA44684-CRID1	1		
12:33	MA44684-ICSA1	1		
12:38	MA44684-ICSAB1	1		
12:42	MA44684-HSTD1	1		
12:46	MA44684-HSTD2	1		
12:50	ZZZZZZ	1		
12:55	ZZZZZZ	1		
12:59	ZZZZZZ	1		
13:03	MA44684-CCV1	1		
13:07	MA44684-CCB2	1		
13:12	ZZZZZZ	5		
13:16	ZZZZZZ	5		
13:20	ZZZZZZ	10		
13:25	ZZZZZZ	10		
13:29	MP7714-B1	1		
13:33	MP7714-MB1	1		
13:37	MP7714-S1	1		
13:41	MP7714-S2	1		
13:45	JC67951-1	1		(sample used for QC only; not part of login JC68071)
13:50	MA44684-CCV2	1		
13:54	MA44684-CCB3	1		
13:58	MP7714-SD1	5		JC67951-1 USED
14:02	ZZZZZZ	1		
14:07	ZZZZZZ	1		

8.2
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44684
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:11	ZZZZZZ	1		
14:15	ZZZZZZ	1		
14:19	ZZZZZZ	1		
14:24	ZZZZZZ	1		
14:28	ZZZZZZ	1		
14:32	ZZZZZZ	1		
14:37	MA44684-CCV3	1		
14:41	MA44684-CCB4	1		
14:45	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:54	ZZZZZZ	1		
14:58	ZZZZZZ	1		
15:02	ZZZZZZ	1		
15:06	JC67951-2	1		(sample used for QC only; not part of login JC68071)
15:11	JC68071-1	1		
15:15	JC68071-2	1		
----->	Last reportable sample/prep for job JC68071			
15:19	MP7731-B1	5		
15:23	MA44684-CCV4	1		
15:28	MA44684-CCB5	1		
15:32	MP7731-MB1	5		
15:36	MP7731-S1	2		CR high
15:41	MP7731-S2	2		CR high
15:45	FA55008-1	2		(sample used for QC only; not part of login JC68071)
15:49	MP7731-SD1	10		CR high
15:54	MP7733-MB1	1		
15:58	MP7733-B1	1		
16:02	MP7733-S1	1		
16:07	ZZZZZZ	1		
16:11	MA44684-CCV5	1		
16:15	MA44684-CCB6	1		
16:19	MP7733-S2	1		
16:23	JC68225-2	1		(sample used for QC only; not part of login JC68071)
16:28	MP7733-SD1	5		

8.2
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44684
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:32	MP7734-MB1	5		
16:36	MP7734-B1	5		
16:40	MP7734-S1	1		
16:44	MP7734-S2	1		
16:48	TD22716-1	1		(sample used for QC only; not part of login JC68071)
16:53	MP7734-SD1	5		
16:57	ZZZZZZ	1		
17:01	MA44684-CCV6	1		
17:05	MA44684-CCB7	1		
17:10	MP7732-MB1	5		
17:14	MP7732-B1	5		
17:18	MP7732-S1	2		
17:22	MP7732-S2	2		
17:26	TD22581-1B	2		(sample used for QC only; not part of login JC68071)
17:30	MP7732-SD1	10		
17:35	ZZZZZZ	1		
17:39	ZZZZZZ	1		
17:43	MA44684-CCV7	1		
17:47	MA44684-CCB8	1		
17:52	MA44684-CRI2	1		
17:56	MA44684-CRID2	1		
18:00	MA44684-ICSA2	1		
18:05	MA44684-ICSAB2	1		
18:09	MA44684-CCV8	1		
18:13	MA44684-CCB9	1		
----->	Last reportable CCB for job JC68071			
18:17	ZZZZZZ	1		
18:22	ZZZZZZ	1		
18:26	ZZZZZZ	1		
18:30	ZZZZZZ	1		
18:35	ZZZZZZ	1		
18:39	ZZZZZZ	1		
18:43	ZZZZZZ	1		
18:48	ZZZZZZ	1		

8.2
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44684
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:52	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:05	ZZZZZZ	1		
19:09	MA44684-CCV9	1		
19:13	MA44684-CCB10	1		
19:18	MP7730-MB1	1		
19:22	MP7730-MB2	1		
19:26	MP7730-B1	1		
19:31	MP7730-B2	1		
19:35	MP7730-S1	1		S high
19:39	MP7730-S2	1		S high
19:43	JC68060-2	1		(sample used for QC only; not part of login JC68071)
19:47	MP7730-SD1	5		
19:51	ZZZZZZ	1		
19:55	MA44684-CCV10	1		
20:00	MA44684-CCB11	1		
20:04	ZZZZZZ	1		
20:08	ZZZZZZ	1		
20:12	ZZZZZZ	1		
20:17	ZZZZZZ	1		
20:21	ZZZZZZ	1		
20:25	ZZZZZZ	1		
20:30	ZZZZZZ	1		
20:34	ZZZZZZ	1		
20:38	ZZZZZZ	1		
20:43	MA44684-CCV11	1		
20:47	MA44684-CCB12	1		
20:51	ZZZZZZ	1		
20:56	ZZZZZZ	1		
21:00	ZZZZZZ	1		
21:04	ZZZZZZ	1		
21:08	ZZZZZZ	1		

8.2
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
Analyst: ND Run ID: MA44684
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:13	ZZZZZZ	1		
21:17	ZZZZZZ	1		
21:21	ZZZZZZ	1		
21:26	ZZZZZZ	1		
21:30	MA44684-CCV12	1		
21:34	MA44684-CCB13	1		
21:38	MP7730-SD1	5		S high
21:43	MP7733-S1	1		
21:47	MP7733-S2	1		
21:51	JC68225-2	1		(sample used for QC only; not part of login JC68071)
21:55	MP7733-SD1	5		
21:59	ZZZZZZ	1		
22:04	ZZZZZZ	2		
22:08	ZZZZZZ	2		
22:12	MA44684-CCV13	1		
22:16	MA44684-CCB14	1		
22:21	MA44684-CRI3	1		
22:25	MA44684-CRID3	1		
22:29	MA44684-CCV14	1		
22:33	MA44684-CCB15	1		
22:38	ZZZZZZ	1		
22:42	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

8.2
8

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
11:53	ZZZZZZ	1											
11:57	ZZZZZZ	1											
12:02	MA44684-ICV1	1	X	X	X	X	X	X	X	X	X	X	X
12:09	MA44684-ICB1	1	X	X	X	X	X	X	X	X	X	X	X
12:12	MA44684-ICCV1	1	X	X	X	X	X	X	X	X	X	X	X
12:21	MA44684-CCB1	1	X	X	X	X	X	X	X	X	X	X	X
12:24	MA44684-CRI1	1	X	X	X	X	X	X	X	X	X	X	X
12:29	MA44684-CRID1	1	X	X	X	X	X	X	X	X	X	X	X
12:33	MA44684-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X
12:38	MA44684-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X
12:42	MA44684-HSTD1	1	X	X	X	X		X	X	X	X	X	X
12:46	MA44684-HSTD2	1						X					
12:50	ZZZZZZ	1											
12:55	ZZZZZZ	1											
12:59	ZZZZZZ	1											
13:03	MA44684-CCV1	1	X	X	X	X	X	X	X	X	X	X	X
13:07	MA44684-CCB2	1	X	X	X	X	X	X	X	X	X	X	X
13:12	ZZZZZZ	5											
13:16	ZZZZZZ	5											
13:20	ZZZZZZ	10											
13:25	ZZZZZZ	10											
13:29	MP7714-B1	1	X	X	X	X	X	X	X	X	X	X	X
13:33	MP7714-MB1	1	X	X	X	X	X	X	X	X	X	X	X
13:37	MP7714-S1	1	X	X	X	X	X	X	X	X	X	X	X
13:41	MP7714-S2	1	X	X	X	X	X	X	X	X	X	X	X
13:45	JC67951-1	1	X	X	X	X	X	X	X	X	X	X	(a)
13:50	MA44684-CCV2	1	X	X	X	X	X	X	X	X	X	X	X
13:54	MA44684-CCB3	1	X	X	X	X	X	X	X	X	X	X	X
13:58	MP7714-SD1	5	JC67951-1 USED										
14:02	ZZZZZZ	1											
14:07	ZZZZZZ	1											
14:11	ZZZZZZ	1											
14:15	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	Ba	Be	B	Cr	Cu	Fe	Pb	Mn	Ni	Se	Zn
14:19	ZZZZZZ	1											
14:24	ZZZZZZ	1											
14:28	ZZZZZZ	1											
14:32	ZZZZZZ	1											
14:37	MA44684-CCV3	1	X	X	X	X	X	X	X	X	X	X	X
14:41	MA44684-CCB4	1	X	X	X	X	X	X	X	X	X	X	X
14:45	ZZZZZZ	1											
14:49	ZZZZZZ	1											
14:54	ZZZZZZ	1											
14:58	ZZZZZZ	1											
15:02	ZZZZZZ	1											
15:06	JC67951-2	1	X	X	X	X	X	X	X	X	X	X	(a)
15:11	JC68071-1	1	X	X	X	X	X	X	X	X	X	X	X
15:15	JC68071-2	1	X	X	X	X	X	X	X	X	X	X	X
15:19	MP7731-B1	5			X				X				
15:23	MA44684-CCV4	1	X	X	X	X	X	X	X	X	X	X	X
15:28	MA44684-CCB5	1	X	X	X	X	X	X	X	X	X	X	X
15:32	MP7731-MB1	5			X				X				
15:36	MP7731-S1	2							X				
15:41	MP7731-S2	2							X				
15:45	FA55008-1	2							X				(a)
15:49	MP7731-SD1	10							X				
15:54	MP7733-MB1	1	X		X				X			X	
15:58	MP7733-B1	1	X		X				X			X	
16:02	MP7733-S1	1											
16:07	ZZZZZZ	1											
16:11	MA44684-CCV5	1	X	X	X	X	X	X	X	X	X	X	X
16:15	MA44684-CCB6	1	X	X	X	X	X	X	X	X	X	X	X
16:19	MP7733-S2	1											
16:23	JC68225-2	1											
16:28	MP7733-SD1	5											
16:32	MP7734-MB1	5	X		X				X			X	
16:36	MP7734-B1	5	X		X				X			X	

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	Ba	Be	B	Cr	Cu	Fe	Pb	Mn	Ni	Se	Zn
16:40	MP7734-S1	1	X			X			X			X	
16:44	MP7734-S2	1	X			X			X			X	
16:48	TD22716-1	1	X			X			X			X	(a)
16:53	MP7734-SD1	5	X			X			X			X	
16:57	ZZZZZZ	1											
17:01	MA44684-CCV6	1	X	X	X	X	X	X	X	X	X	X	X
17:05	MA44684-CCB7	1	X	X	X	X	X	X	X	X	X	X	X
17:10	MP7732-MB1	5	X			X			X			X	
17:14	MP7732-B1	5	X			X			X			X	
17:18	MP7732-S1	2	X			X			X			X	
17:22	MP7732-S2	2	X			X			X			X	
17:26	TD22581-1B	2	X			X			X			X	(a)
17:30	MP7732-SD1	10	X			X			X			X	
17:35	ZZZZZZ	1											
17:39	ZZZZZZ	1											
17:43	MA44684-CCV7	1	X	X	X	X	X	X	X	X	X	X	X
17:47	MA44684-CCB8	1	X	X	X	X	X	X	X	X	X	X	X
17:52	MA44684-CRI2	1	X	X	X	X	X	X	X	X	X	X	X
17:56	MA44684-CRID2	1	X	X	X	X	X	X	X	X	X	X	X
18:00	MA44684-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X
18:05	MA44684-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X
18:09	MA44684-CCV8	1	X	X	X	X	X	X	X	X	X	X	X
18:13	MA44684-CCB9	1	X	X	X	X	X	X	X	X	X	X	X
18:17	ZZZZZZ	1											
18:22	ZZZZZZ	1											
18:26	ZZZZZZ	1											
18:30	ZZZZZZ	1											
18:35	ZZZZZZ	1											
18:39	ZZZZZZ	1											
18:43	ZZZZZZ	1											
18:48	ZZZZZZ	1											
18:52	ZZZZZZ	1											
18:56	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	Ba	Be	B	Cr	Cu	Fe	Pb	Mn	Ni	Se	Zn
19:01	ZZZZZZ	1											
19:05	ZZZZZZ	1											
19:09	MA44684-CCV9	1	X	X	X	X	X	X	X	X	X	X	X
19:13	MA44684-CCB10	1	X	X	X	X	X	X	X	X	X	X	X
19:18	MP7730-MB1	1	X	X		X	X	X	X	X	X	X	X
19:22	MP7730-MB2	1	X	X		X	X	X	X	X	X	X	X
19:26	MP7730-B1	1	X	X		X	X	X	X	X	X	X	X
19:31	MP7730-B2	1	X	X		X	X	X	X	X	X	X	X
19:35	MP7730-S1	1	X	X		X	X	X	X	X	X	X	X
19:39	MP7730-S2	1	X	X		X	X	X	X	X	X	X	X
19:43	JC68060-2	1	X	X		X	X	X	X	X	X	X	X (a)
19:47	MP7730-SD1	5											
19:51	ZZZZZZ	1											
19:55	MA44684-CCV10	1	X	X	X	X	X	X	X	X	X	X	X
20:00	MA44684-CCB11	1	X	X	X	X	X	X	X	X	X	X	X
20:04	ZZZZZZ	1											
20:08	ZZZZZZ	1											
20:12	ZZZZZZ	1											
20:17	ZZZZZZ	1											
20:21	ZZZZZZ	1											
20:25	ZZZZZZ	1											
20:30	ZZZZZZ	1											
20:34	ZZZZZZ	1											
20:38	ZZZZZZ	1											
20:43	MA44684-CCV11	1	X	X	X	X	X	X	X	X	X	X	X
20:47	MA44684-CCB12	1	X	X	X	X	X	X	X	X	X	X	X
20:51	ZZZZZZ	1											
20:56	ZZZZZZ	1											
21:00	ZZZZZZ	1											
21:04	ZZZZZZ	1											
21:08	ZZZZZZ	1											
21:13	ZZZZZZ	1											
21:17	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	Ba	Be	B	Cr	Cu	Fe	Pb	Mn	Ni	Se	Zn
21:21	ZZZZZZ	1											
21:26	ZZZZZZ	1											
21:30	MA44684-CCV12	1	X	X	X	X	X	X	X	X	X	X	X
21:34	MA44684-CCB13	1	X	X	X	X	X	X	X	X	X	X	X
21:38	MP7730-SD1	5	X	X		X	X	X	X	X	X	X	X
21:43	MP7733-S1	1	X		X			X				X	
21:47	MP7733-S2	1	X		X			X				X	
21:51	JC68225-2	1	X		X			X				X	(a)
21:55	MP7733-SD1	5	X		X			X				X	
21:59	ZZZZZZ	1											
22:04	ZZZZZZ	2											
22:08	ZZZZZZ	2											
22:12	MA44684-CCV13	1	X	X	X	X	X	X	X	X	X	X	X
22:16	MA44684-CCB14	1	X	X	X	X	X	X	X	X	X	X	X
22:21	MA44684-CRI3	1	X	X	X	X	X	X	X	X	X	X	X
22:25	MA44684-CRID3	1	X	X	X	X	X	X	X	X	X	X	X
22:29	MA44684-CCV14	1	X	X	X	X	X	X	X	X	X	X	X
22:33	MA44684-CCB15	1	X	X	X	X	X	X	X	X	X	X	X
22:38	ZZZZZZ	1											
22:42	ZZZZZZ	1											

(a) Sample used for QC only; not part of login JC68071.

Element: B B B C C F P M N S Z
 a e r u e b n i e n

8.2.1
8

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:45	MA44684-STD1	3653 R	81799 R	15440 R	7893 R
11:49	MA44684-STD2	3440	76817	15222	6844
11:53	ZZZZZZ	3543	78649	15444	7126
11:57	ZZZZZZ	3674	82377	15539	7933
12:02	MA44684-ICV1	3556	79068	15395	7162
12:09	MA44684-ICB1	3670	82625	15470	7912
12:12	MA44684-ICCV1	3540	78995	15446	7121
12:21	MA44684-CCB1	3659	81701	15348	7902
12:24	MA44684-CRI1	3614	81297	15362	7702
12:29	MA44684-CRID1	3646	82087	15444	7840
12:33	MA44684-ICSA1	3268	71852	14931	6284
12:38	MA44684-ICSAB1	3255	72124	14925	6282
12:42	MA44684-HSTD1	3605	81120	15451	7678
12:46	MA44684-HSTD2	3336	73391	14943	6379
12:50	ZZZZZZ	3579	80579	15303	7774
12:55	ZZZZZZ	3560	81393	15355	7832
12:59	ZZZZZZ	3651	82491	15290	7898
13:03	MA44684-CCV1	3538	78799	15251	7111
13:07	MA44684-CCB2	3650	82077	15409	7876
13:12	ZZZZZZ	3441	77011	15217	6882
13:16	ZZZZZZ	3455	77376	15420	6810
13:20	ZZZZZZ	3482	77717	15111	7042
13:25	ZZZZZZ	3475	77728	15066	7034
13:29	MP7714-B1	3554	79295	15301	7248
13:33	MP7714-MB1	3651	82588	15471	7869
13:37	MP7714-S1	3511	78752	15343	7041
13:41	MP7714-S2	3500	78152	15425	7010
13:45	JC67951-1	3527	79292	15355	7290
13:50	MA44684-CCV2	3527	77718	15166	7093
13:54	MA44684-CCB3	3645	81449	15284	7866
13:58	MP7714-SD1	No results reported for the elements associated with this internal standard.			
14:02	ZZZZZZ	3437	77802	15242	6974
14:07	ZZZZZZ	3448	77917	15303	6990

8.2.2
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INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:11	ZZZZZZ	3551	79014	15307	7315
14:15	ZZZZZZ	3439	77006	15224	6928
14:19	ZZZZZZ	3460	78041	15255	6979
14:24	ZZZZZZ	3458	78491	15355	7098
14:28	ZZZZZZ	3420	77613	15153	6922
14:32	ZZZZZZ	3545	79081	15279	7345
14:37	MA44684-CCV3	3520	77593	15123	7063
14:41	MA44684-CCB4	3643	81439	15381	7840
14:45	ZZZZZZ	3523	79224	15296	7255
14:49	ZZZZZZ	3542	79215	15420	7315
14:54	ZZZZZZ	5143 !a	116040 !a	23051 !a	6876
14:58	ZZZZZZ	3514	79056	15243	7317
15:02	ZZZZZZ	3474	78669	15091	7129
15:06	JC67951-2	3571	80321	15365	7397
15:11	JC68071-1	3463	77910	15318	6945
15:15	JC68071-2	3531	78850	15474	7183
15:19	MP7731-B1	2936	65273	14261	5560
15:23	MA44684-CCV4	3535	77993	15259	7062
15:28	MA44684-CCB5	3668	81795	15547	7844
15:32	MP7731-MB1	2928	64961	14289	5577
15:36	MP7731-S1	2614	63165	14083	5655
15:41	MP7731-S2	2627	63489	14112	5673
15:45	FA55008-1	2601	63541	13639	5653
15:49	MP7731-SD1	3173	72328	15323	6357
15:54	MP7733-MB1	3638	81345	15519	7778
15:58	MP7733-B1	3546	77807	15090	7176
16:02	MP7733-S1	No results reported for the elements associated with this internal standard.			
16:07	ZZZZZZ	3617	80413	15155	7743
16:11	MA44684-CCV5	3552	78809	15399	7107
16:15	MA44684-CCB6	3664	82254	15516	7865
16:19	MP7733-S2	No results reported for the elements associated with this internal standard.			
16:23	JC68225-2	No results reported for the elements associated with this internal standard.			
16:28	MP7733-SD1	No results reported for the elements associated with this internal standard.			

8.2.2
8

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:32	MP7734-MB1	3674	82380	15457	7897
16:36	MP7734-B1	3655	81080	15310	7664
16:40	MP7734-S1	3533	78827	15367	7153
16:44	MP7734-S2	3535	78974	15242	7166
16:48	TD22716-1	3592	80640	15418	7589
16:53	MP7734-SD1	3641	81181	15238	7786
16:57	ZZZZZZ	3580	80001	15145	7569
17:01	MA44684-CCV6	3536	78297	15158	7072
17:05	MA44684-CCB7	3653	81371	15271	7845
17:10	MP7732-MB1	3638	81411	15190	7821
17:14	MP7732-B1	3633	80727	15178	7634
17:18	MP7732-S1	3532	78303	15155	7113
17:22	MP7732-S2	3536	78485	15217	7116
17:26	TD22581-1B	3564	79206	15215	7284
17:30	MP7732-SD1	3636	81035	15229	7700
17:35	ZZZZZZ	3489	78468	14770	7325
17:39	ZZZZZZ	3613	81449	15365	7697
17:43	MA44684-CCV7	3535	78107	15239	7063
17:47	MA44684-CCB8	3642	81593	15247	7836
17:52	MA44684-CRI2	3605	80422	15111	7641
17:56	MA44684-CRID2	3636	80995	15209	7780
18:00	MA44684-ICSA2	3239	70978	14546	6208
18:05	MA44684-ICSAB2	3238	71123	14530	6208
18:09	MA44684-CCV8	3537	77618	14949	7067
18:13	MA44684-CCB9	3642	81463	15141	7833
18:17	ZZZZZZ	3640	81260	15068	7800
18:22	ZZZZZZ	3719	75596	15715	6965
18:26	ZZZZZZ	3295	74945	14528	6621
18:30	ZZZZZZ	3333	75282	14733	6666
18:35	ZZZZZZ	3622	81158	15218	7753
18:39	ZZZZZZ	3625	80806	15192	7735
18:43	ZZZZZZ	3635	81350	15204	7776
18:48	ZZZZZZ	3606	80674	15143	7739

8.2.2
8

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:52	ZZZZZZ	3647	81641	15170	7836
18:56	ZZZZZZ	3627	81237	14997	7774
19:01	ZZZZZZ	3624	81290	15129	7804
19:05	ZZZZZZ	3644	81256	15175	7848
19:09	MA44684-CCV9	3522	77254	15022	7043
19:13	MA44684-CCB10	3631	81447	15084	7803
19:18	MP7730-MB1	3634	81257	15316	7802
19:22	MP7730-MB2	3622	81296	15249	7776
19:26	MP7730-B1	3546	78197	15114	7194
19:31	MP7730-B2	3527	78127	15116	7174
19:35	MP7730-S1	3353	75469	14936	6675
19:39	MP7730-S2	3330	75522	14812	6633
19:43	JC68060-2	3397	76621	14862	6837
19:47	MP7730-SD1	No results reported for the elements associated with this internal standard.			
19:51	ZZZZZZ	3580	79873	15269	7405
19:55	MA44684-CCV10	3519	77641	15049	7025
20:00	MA44684-CCB11	3641	81777	15268	7806
20:04	ZZZZZZ	3394	76769	15002	6832
20:08	ZZZZZZ	3622	81263	15302	7777
20:12	ZZZZZZ	3592	79975	15314	7437
20:17	ZZZZZZ	3443	77403	15074	6981
20:21	ZZZZZZ	3433	77471	15085	6963
20:25	ZZZZZZ	3496	78594	15271	7111
20:30	ZZZZZZ	3526	79022	15339	7255
20:34	ZZZZZZ	3505	78864	15313	7113
20:38	ZZZZZZ	3263	74955	14962	6536
20:43	MA44684-CCV11	3509	77619	15212	7009
20:47	MA44684-CCB12	3635	81650	15287	7804
20:51	ZZZZZZ	3494	79322	15263	7197
20:56	ZZZZZZ	3622	81918	15386	7773
21:00	ZZZZZZ	3495	78685	15140	7195
21:04	ZZZZZZ	3393	76350	15007	6728
21:08	ZZZZZZ	3341	76441	15138	6633

8.2.2
8

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 Analyst: ND Run ID: MA44684
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
21:13	ZZZZZZ	3553	79610	15629	7143
21:17	ZZZZZZ	3577	80573	15510	7256
21:21	ZZZZZZ	3585	80911	15562	7247
21:26	ZZZZZZ	3581	80537	15626	7238
21:30	MA44684-CCV12	3518	77952	15144	7023
21:34	MA44684-CCB13	3633	81912	15392	7786
21:38	MP7730-SD1	3546	79880	15314	7413
21:43	MP7733-S1	3503	78661	15335	7119
21:47	MP7733-S2	3517	78818	15301	7151
21:51	JC68225-2	3594	80528	15198	7698
21:55	MP7733-SD1	3657	82686	15643	7856
21:59	ZZZZZZ	3636	82363	15595	7796
22:04	ZZZZZZ	3715	81737	16144	7214
22:08	ZZZZZZ	3690	80622	15926	7150
22:12	MA44684-CCV13	3513	78164	15163	7028
22:16	MA44684-CCB14	3643	81972	15359	7831
22:21	MA44684-CRI3	3586	80935	15280	7612
22:25	MA44684-CRID3	3612	81627	15271	7744
22:29	MA44684-CCV14	3508	78142	15255	7015
22:33	MA44684-CCB15	3637	81954	14874	7821
22:38	ZZZZZZ	3629	81672	15314	7780
22:42	ZZZZZZ	3637	81772	15387	7788

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

8.2.2
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44684 Units: ug/l

Metal	RL	IDL	12:09		12:21		13:07		13:54	
			ICB1	final	CCB1	final	CCB2	final	CCB3	final
Aluminum	200	12	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.4	0.300	<200	0.500	<200	0.400	<200	0.400	<200
Beryllium	1.0	.1	0.00	<1.0	0.00	<1.0	0.100	<1.0	0.00	<1.0
Bismuth	20	1.4								
Boron	100	1.1	1.00	<100	1.10	<100	1.10	<100	1.40	<100
Cadmium	3.0	.3	anr							
Calcium	5000	2.7	anr							
Chromium	10	.5	0.500	<10	0.200	<10	0.400	<10	0.500	<10
Cobalt	50	.2	anr							
Copper	10	.6	0.200	<10	0.100	<10	-0.400	<10	0.100	<10
Iron	100	4	1.90	<100	1.80	<100	5.00	<100	4.00	<100
Lead	3.0	1.6	0.00	<3.0	-0.800	<3.0	0.00	<3.0	-0.100	<3.0
Lithium	50	2.5								
Magnesium	5000	26	anr							
Manganese	15	.1	0.00	<15	0.200	<15	0.100	<15	0.200	<15
Molybdenum	20	.4								
Nickel	10	.4	0.00	<10	-0.100	<10	0.00	<10	-0.200	<10
Phosphorus	50	2.5								
Potassium	10000	29	anr							
Selenium	10	2.3	-0.900	<10	-1.30	<10	-1.00	<10	-0.600	<10
Silicon	200	1.5								
Silver	10	.6	anr							
Sodium	10000	12	anr							
Strontium	10	.1								
Sulfur	50	2.9								
Thallium	2.0	.9	anr							
Tin	10	.6								
Titanium	10	.4								
Tungsten	50	1.1								
Vanadium	50	.6	anr							
Zinc	20	.2	-0.100	<20	0.00	<20	-0.100	<20	0.00	<20

8.2.3
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

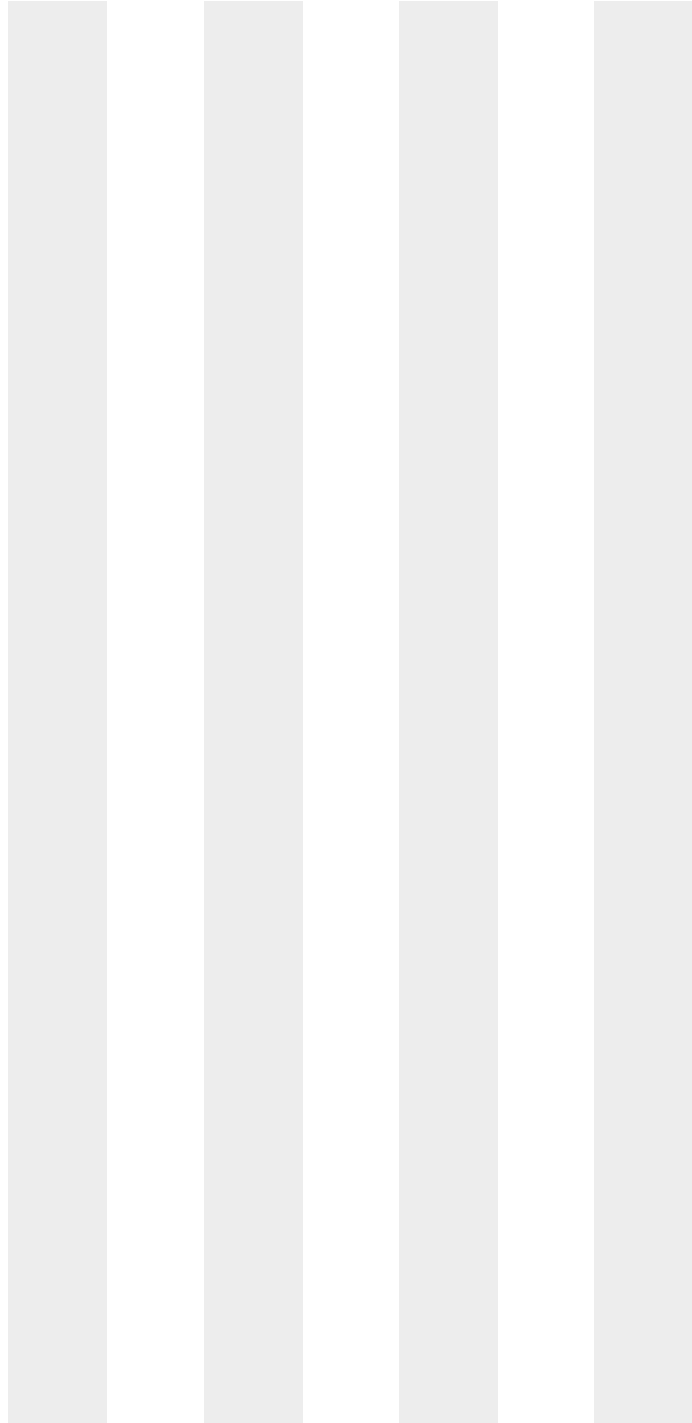
Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44684 Units: ug/l

Time:	12:09	12:21	13:07	13:54				
Sample ID:	ICB1	CCB1	CCB2	CCB3				
Metal	RL	IDL	raw	final	raw	final	raw	final

Zirconium 10 .4

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



8.2.3
 8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44684 Units: ug/l

Metal	RL	IDL	14:41	15:28		16:15		17:05		
			CCB4	raw	final	raw	final	raw	final	raw
Aluminum	200	12	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.4	0.400	<200	0.600	<200	0.900	<200	0.500	<200
Beryllium	1.0	.1	0.00	<1.0	0.00	<1.0	0.100	<1.0	-0.200	<1.0
Bismuth	20	1.4								
Boron	100	1.1	0.500	<100	0.800	<100	8.20	<100	2.60	<100
Cadmium	3.0	.3	anr							
Calcium	5000	2.7	anr							
Chromium	10	.5	0.100	<10	0.700	<10	0.500	<10	0.400	<10
Cobalt	50	.2	anr							
Copper	10	.6	0.300	<10	-0.300	<10	-0.600	<10	-0.100	<10
Iron	100	4	5.80	<100	3.80	<100	6.40	<100	2.90	<100
Lead	3.0	1.6	-0.400	<3.0	-0.400	<3.0	0.500	<3.0	0.600	<3.0
Lithium	50	2.5								
Magnesium	5000	26	anr							
Manganese	15	.1	0.300	<15	0.200	<15	0.300	<15	0.100	<15
Molybdenum	20	.4								
Nickel	10	.4	0.200	<10	0.300	<10	0.100	<10	-0.100	<10
Phosphorus	50	2.5								
Potassium	10000	29	anr							
Selenium	10	2.3	0.200	<10	-0.800	<10	0.400	<10	-2.80	<10
Silicon	200	1.5								
Silver	10	.6	anr							
Sodium	10000	12	anr							
Strontium	10	.1								
Sulfur	50	2.9								
Thallium	2.0	.9	anr							
Tin	10	.6								
Titanium	10	.4								
Tungsten	50	1.1								
Vanadium	50	.6	anr							
Zinc	20	.2	0.300	<20	0.200	<20	0.300	<20	0.300	<20

8.2.3
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

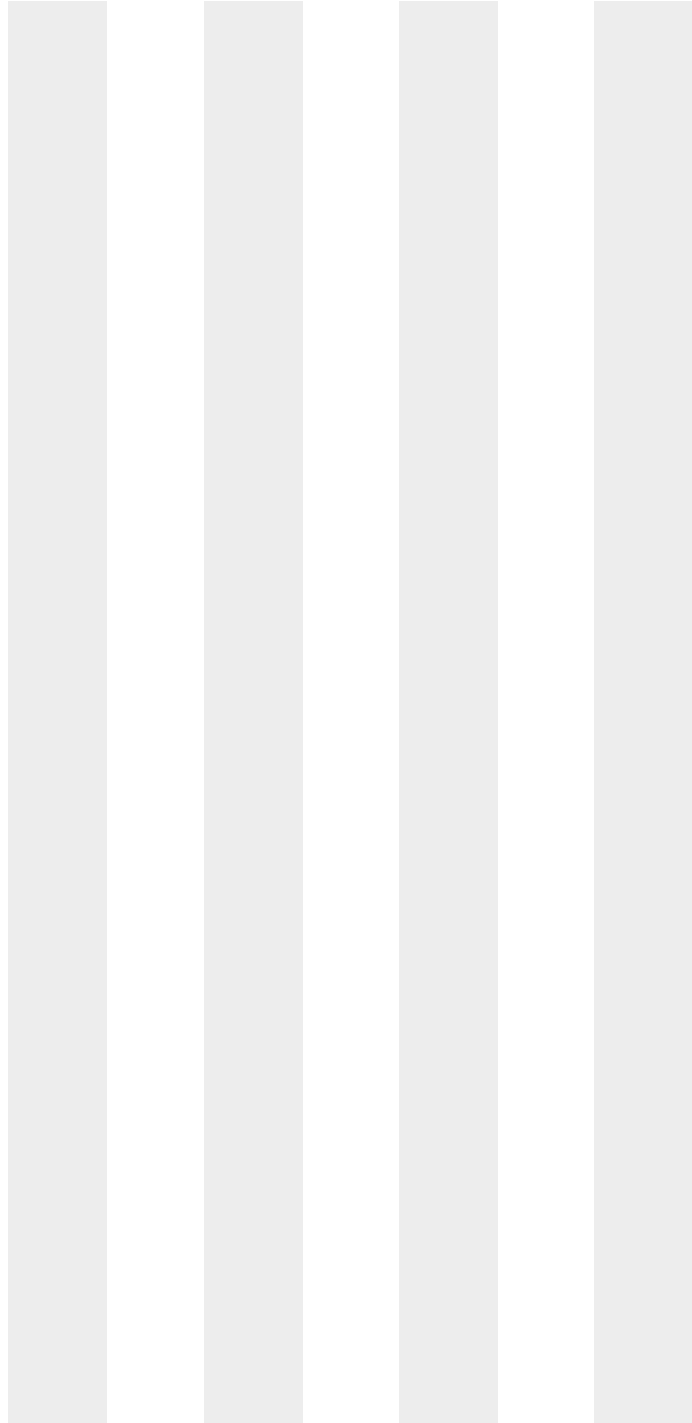
Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44684 Units: ug/l

Time:	14:41	15:28	16:15	17:05						
Sample ID:	CCB4	CCB5	CCB6	CCB7						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .4

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



8.2.3
 8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44684 Units: ug/l

Metal	RL	IDL	17:47 CCB8		18:13 CCB9	
			raw	final	raw	final
Aluminum	200	12	anr			
Antimony	6.0	1.6	anr			
Arsenic	3.0	1.5	anr			
Barium	200	.4	0.300	<200	0.500	<200
Beryllium	1.0	.1	-0.200	<1.0	-0.200	<1.0
Bismuth	20	1.4				
Boron	100	1.1	2.20	<100	1.60	<100
Cadmium	3.0	.3	anr			
Calcium	5000	2.7	anr			
Chromium	10	.5	0.600	<10	0.300	<10
Cobalt	50	.2	anr			
Copper	10	.6	0.00	<10	-0.600	<10
Iron	100	4	2.80	<100	3.50	<100
Lead	3.0	1.6	0.100	<3.0	-0.100	<3.0
Lithium	50	2.5				
Magnesium	5000	26	anr			
Manganese	15	.1	0.100	<15	0.100	<15
Molybdenum	20	.4				
Nickel	10	.4	-0.200	<10	-0.100	<10
Phosphorus	50	2.5				
Potassium	10000	29	anr			
Selenium	10	2.3	-0.400	<10	-0.400	<10
Silicon	200	1.5				
Silver	10	.6	anr			
Sodium	10000	12	anr			
Strontium	10	.1				
Sulfur	50	2.9				
Thallium	2.0	.9	anr			
Tin	10	.6				
Titanium	10	.4				
Tungsten	50	1.1				
Vanadium	50	.6	anr			
Zinc	20	.2	0.00	<20	-0.300	<20

8.2.3
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

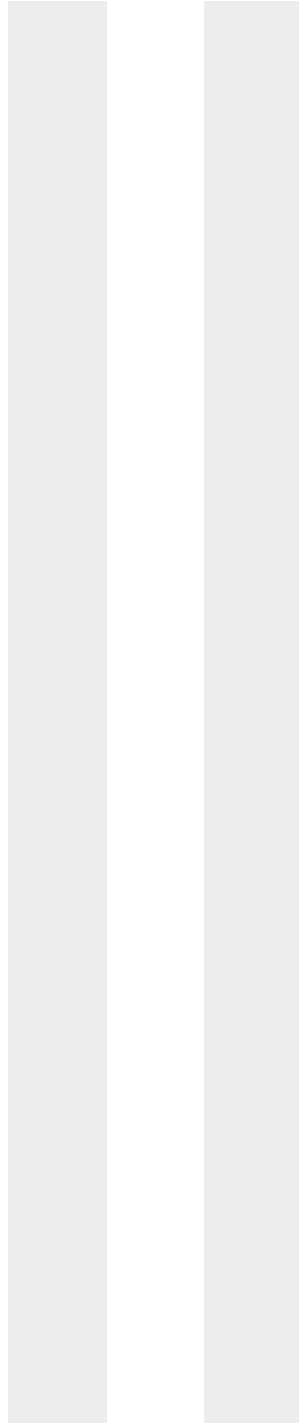
Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: result < RL Run ID: MA44684 Units: ug/l

Time:	17:47	18:13				
Sample ID:	CCB8	CCB9				
Metal	RL	IDL	raw	final	raw	final

Zirconium 10 .4

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



8.2.3
 8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: to % Recovery Run ID: MA44684 Units: ug/l

Time:	12:12		
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	2000	1990	99.5
Beryllium	2000	2010	100.5
Bismuth			
Boron	2000	2000	100.0
Cadmium	anr		
Calcium	anr		
Chromium	2000	1990	99.5
Cobalt	anr		
Copper	2000	1930	96.5
Iron	40000	40900	102.3
Lead	2000	2010	100.5
Lithium			
Magnesium	anr		
Manganese	2000	2000	100.0
Molybdenum			
Nickel	2000	2000	100.0
Phosphorus			
Potassium	anr		
Selenium	2000	1980	99.0
Silicon			
Silver	anr		
Sodium	anr		
Strontium			
Sulfur			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	anr		
Zinc	2000	2030	101.5

8.2.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: to % Recovery Run ID: MA44684 Units: ug/l

Time:	12:12
Sample ID:	ICCV ICCV1
Metal	True Results % Rec

Zirconium

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

8.2.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44684 Units: ug/l

Metal	Time: Sample ID: ICV	12:02			13:03			13:50		
		ICV	ICV1	CCV	CCV1	CCV	CCV2	Results	% Rec	
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	2000	2000	100.0	2000	1980	99.0	2000	1970	98.5	
Beryllium	2000	2060	103.0	2000	1990	99.5	2000	1960	98.0	
Bismuth										
Boron	2000	2050	102.5	2000	2010	100.5	2000	2010	100.5	
Cadmium	anr									
Calcium	anr									
Chromium	2000	1960	98.0	2000	1990	99.5	2000	2010	100.5	
Cobalt	anr									
Copper	2000	1980	99.0	2000	1940	97.0	2000	1940	97.0	
Iron	40000	40100	100.3	40000	40900	102.3	40000	40600	101.5	
Lead	2000	1990	99.5	2000	2010	100.5	2000	2010	100.5	
Lithium										
Magnesium	anr									
Manganese	2000	1980	99.0	2000	2010	100.5	2000	2020	101.0	
Molybdenum										
Nickel	2000	1990	99.5	2000	1990	99.5	2000	1980	99.0	
Phosphorus										
Potassium	anr									
Selenium	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5	
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	anr									
Tin										
Titanium										
Tungsten										
Vanadium	anr									
Zinc	2000	2020	101.0	2000	2030	101.5	2000	2030	101.5	

8.2.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44684 Units: ug/l

	Time:		12:02		13:03		13:50		
Sample ID:	ICV	ICV1		CCV		CCV		CCV2	
Metal	True	Results	% Rec	True <td>Results</td> <td>% Rec</td> <th>True <td>Results</td> <td>% Rec</td> </th>	Results	% Rec	True <td>Results</td> <td>% Rec</td>	Results	% Rec

Zirconium

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



8.2.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44684 Units: ug/l

Metal	Sample ID:	Time: 14:37		CCV	Time: 15:23		CCV	Time: 16:11	
		CCV	CCV3		CCV4	CCV5			
	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	1970	98.5	2000	1980	99.0	2000	1980	99.0
Beryllium	2000	1950	97.5	2000	1950	97.5	2000	1940	97.0
Bismuth									
Boron	2000	2010	100.5	2000	2040	102.0	2000	2060	103.0
Cadmium	anr								
Calcium	anr								
Chromium	2000	2020	101.0	2000	2040	102.0	2000	2030	101.5
Cobalt	anr								
Copper	2000	1950	97.5	2000	1970	98.5	2000	1990	99.5
Iron	40000	40600	101.5	40000	40800	102.0	40000	41000	102.5
Lead	2000	2020	101.0	2000	2050	102.5	2000	2030	101.5
Lithium									
Magnesium	anr								
Manganese	2000	2020	101.0	2000	2040	102.0	2000	2040	102.0
Molybdenum									
Nickel	2000	1990	99.5	2000	2020	101.0	2000	2000	100.0
Phosphorus									
Potassium	anr								
Selenium	2000	1970	98.5	2000	2010	100.5	2000	2000	100.0
Silicon									
Silver	anr								
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	2000	2030	101.5	2000	2040	102.0	2000	2020	101.0

8.2.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44684 Units: ug/l

	Time:		14:37		15:23		16:11		
Sample ID:	CCV	CCV3		CCV		CCV4		CCV	
Metal	True	Results	% Rec	True <td></td> <th>Results</th> <td>% Rec</td> <th>True <td></td> </th>		Results	% Rec	True <td></td>	

Zirconium

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



8.2.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44684 Units: ug/l

Metal	Sample ID:	17:01			17:43			18:09		
		CCV	CCV6	% Rec	CCV	CCV7	% Rec	CCV	CCV8	% Rec
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5	
Beryllium	2000	1930	96.5	2000	1920	96.0	2000	1930	96.5	
Bismuth										
Boron	2000	2050	102.5	2000	2060	103.0	2000	2040	102.0	
Cadmium	anr									
Calcium	anr									
Chromium	2000	2020	101.0	2000	2030	101.5	2000	2030	101.5	
Cobalt	anr									
Copper	2000	1980	99.0	2000	2000	100.0	2000	1980	99.0	
Iron	40000	41000	102.5	40000	41000	102.5	40000	41300	103.3	
Lead	2000	2040	102.0	2000	2040	102.0	2000	2050	102.5	
Lithium										
Magnesium	anr									
Manganese	2000	2040	102.0	2000	2050	102.5	2000	2060	103.0	
Molybdenum										
Nickel	2000	1990	99.5	2000	1990	99.5	2000	1990	99.5	
Phosphorus										
Potassium	anr									
Selenium	2000	2000	100.0	2000	2000	100.0	2000	1990	99.5	
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	anr									
Tin										
Titanium										
Tungsten										
Vanadium	anr									
Zinc	2000	2020	101.0	2000	2030	101.5	2000	2040	102.0	

8.2.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

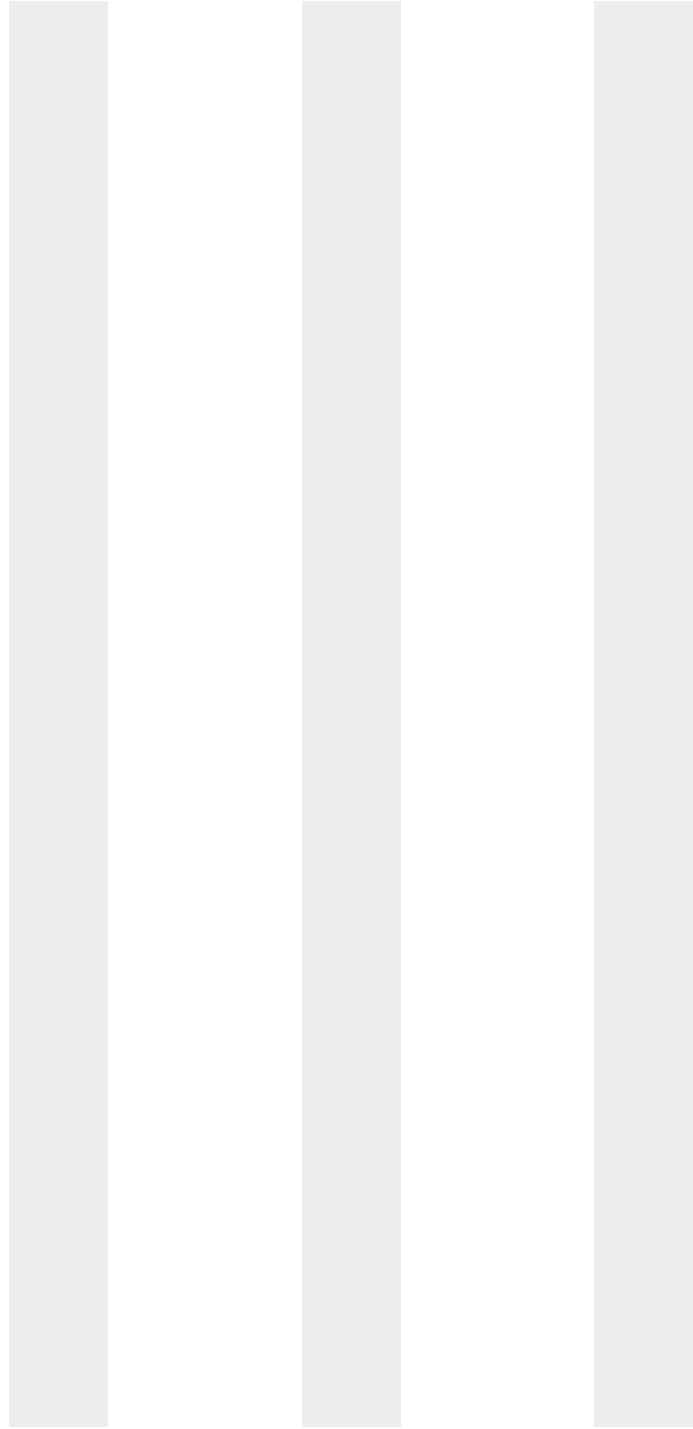
Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA44684 Units: ug/l

	Time:		17:01		17:43		18:09		
Sample ID:	CCV	CCV6	CCV	CCV7	CCV	CCV8			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zirconium

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



8.2.5
8

HIGH STANDARD CHECK SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44684 Units: ug/l

Metal	Time: 12:42		% Rec	Time: 12:46		% Rec
	HSTD	HSTD1		HSTD	HSTD2	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	5000	5130	102.6			
Beryllium	5000	5190	103.8			
Bismuth						
Boron	5000	5160	103.2			
Cadmium	anr					
Calcium						
Chromium	5000	5210	104.2			
Cobalt	anr					
Copper	5000	5110	102.2			
Iron				150000	150000	100.0
Lead	5000	5160	103.2			
Lithium						
Magnesium						
Manganese	5000	5190	103.8			
Molybdenum						
Nickel	5000	5070	101.4			
Phosphorus						
Potassium						
Selenium	5000	5070	101.4			
Silicon						
Silver	anr					
Sodium						
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	5000	5280	105.6			

8.2.6
8

HIGH STANDARD CHECK SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44684 Units: ug/l

Time:	12:42	12:46				
Sample ID:	HSTD	HSTD1	HSTD	HSTD2		
Metal	True	Results	% Rec	True	Results	% Rec

Zirconium

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

8.2.6
 8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA44684 Units: ug/l

Time:				12:24			12:29			17:52
Sample ID:	CRI	CRIA	CRID	CR11	% Rec	CRID1	% Rec	CR12	% Rec	
Metal	True	True	True	Results		Results		Results		
Aluminum	200	500	100	anr						
Antimony	6.0	20	3.0	anr						
Arsenic	8.0	20	3.0	anr						
Barium	200		4.0	203	101.5	4.20	105.0	203	101.5	
Beryllium	2.0		1.0	1.90	95.0	0.900	90.0	1.80	90.0	
Bismuth	20									
Boron	100		10	105	105.0			109	109.0	
Cadmium	3.0		1.0	anr						
Calcium	5000	2000	1000	anr						
Chromium	10		2.0	10.4	104.0	1.90	95.0	11.0	110.0	
Cobalt	50		3.0	anr						
Copper	10		2.0	9.80	98.0			9.80	98.0	
Iron	100	500		110	110.0			109	109.0	
Lead	3.0	20	2.5	2.90	96.7			3.10	103.3	
Lithium	50									
Magnesium	5000	2000	100	anr						
Manganese	15		3.0	15.8	105.3	3.20	106.7	16.3	108.7	
Molybdenum	20									
Nickel	10		4.0	9.80	98.0	4.10	102.5	10.4	104.0	
Phosphorus	50									
Potassium	5000		2000	anr						
Selenium	10	20	5.0	11.1	111.0	4.60	92.0	10.1	101.0	
Silicon	200									
Silver	5.0		2.0	anr						
Sodium	5000		1000	anr						
Strontium	10									
Sulfur	50									
Thallium	10		2.0	anr						
Tin	10									
Titanium	10									
Tungsten	50									
Vanadium	50		2.0	anr						
Zinc	20		10	20.0	100.0	9.40	94.0	20.2	101.0	

8.2.7
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

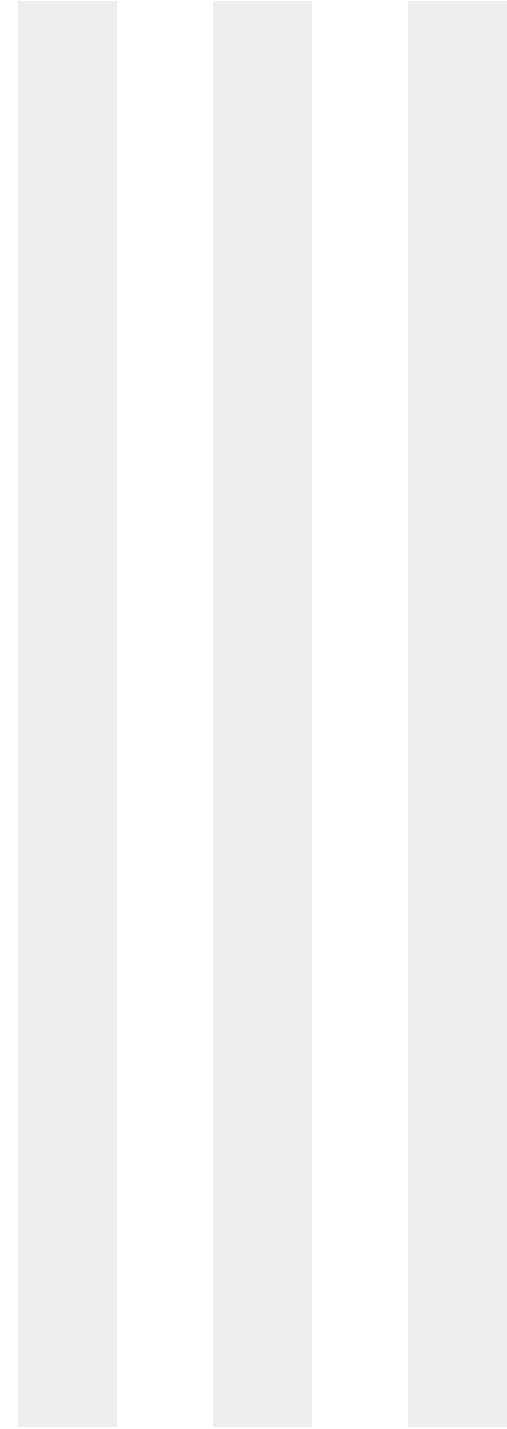
Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA44684 Units: ug/l

Time:	12:24		12:29		17:52		
Sample ID:	CRI	CRIA	CRID	CRID1	CRID2	CRID3	
Metal	True	True	True	Results	% Rec	Results	% Rec

Zirconium 10

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



8.2.7
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA44684 Units: ug/l

Time:	Sample ID:	CRI	CRIA	CRID	17:56 CRID2	Results	% Rec
Metal	True	True	True	True	Results	% Rec	
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0				
Arsenic	8.0	20	3.0	anr			
Barium	200		4.0	4.60	115.0		
Beryllium	2.0		1.0	0.800	80.0		
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	anr			
Calcium	5000	2000	1000	anr			
Chromium	10		2.0	2.00	100.0		
Cobalt	50		3.0	anr			
Copper	10		2.0				
Iron	100	500					
Lead	3.0	20	2.5				
Lithium	50						
Magnesium	5000	2000	100	anr			
Manganese	15		3.0	3.30	110.0		
Molybdenum	20						
Nickel	10		4.0	4.10	102.5		
Phosphorus	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0	4.00	80.0		
Silicon	200						
Silver	5.0		2.0				
Sodium	5000		1000	anr			
Strontium	10						
Sulfur	50						
Thallium	10		2.0	anr			
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10	9.30	93.0		

8.2.7
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA44684 Units: ug/l

Time:				17:56		
Sample ID:	CRI	CRIA	CRID	CRID2		
Metal	True	True	True	Results	%	Rec

Zirconium 10

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

8.2.7
 8

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

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA44684 Units: ug/l

Metal	Time:		12:33		12:38		18:00		18:05	
	Sample ID:	ICSAB	ICSAL	% Rec	ICSAB1	% Rec	ICSA2	% Rec	ICSAB2	% Rec
Aluminum	500000	500000	540000	108.0	533000	106.6	524000	104.8	516000	103.2
Antimony		1000	-2.70		1020	102.0	-8.90		991	99.1
Arsenic		1000	3.40		1040	104.0	0.400		1020	102.0
Barium		500	0.100		507	101.4	0.400		506	101.2
Beryllium		500	0.100		493	98.6	0.100		478	95.6
Bismuth		500	-9.80		490	98.0	-16.4		475	95.0
Boron		500	-4.40		494	98.8	-2.50		504	100.8
Cadmium		1000	-0.500		1020	102.0	-1.40		1000	100.0
Calcium	400000	400000	397000	99.3	402000	100.5	380000	95.0	387000	96.8
Chromium		500	-0.400		489	97.8	-0.400		498	99.6
Cobalt		500	-1.30		485	97.0	-1.70		498	99.6
Copper		500	-1.10		510	102.0	1.30		525	105.0
Iron	200000	200000	199000	99.5	204000	102.0	200000	100.0	206000	103.0
Lead		1000	3.50		966	96.6	0.900		984	98.4
Lithium		500	3.70		516	103.2	4.50		495	99.0
Magnesium	500000	500000	529000	105.8	530000	106.0	520000	104.0	523000	104.6
Manganese		500	-0.700		503	100.6	-3.20		514	102.8
Molybdenum		500	-1.50		485	97.0	-1.30		491	98.2
Nickel		1000	1.80		973	97.3	2.00		972	97.2
Phosphorus		500	-1.50		493	98.6	5.40		517	103.4
Potassium			-472		-481		-473		-459	
Selenium		1000	1.30		1010	101.0	-3.40		1020	102.0
Silicon		500	-12.5		491	98.2	-11.1		499	99.8
Silver		1000	-1.90		1050	105.0	-6.90		1070	107.0
Sodium			12.7		5.20		159		180	
Strontium		500	4.70		526	105.2	5.00		525	105.0
Sulfur		500	-9.10		484	96.8	-11.0		502	100.4
Thallium		1000	-1.10		1000	100.0	-1.30		1020	102.0
Tin		500	-4.30		462	92.4	-4.00		467	93.4
Titanium		500	-1.20		505	101.0	-0.700		511	102.2
Tungsten		500	-0.700		480	96.0	0.800		481	96.2
Vanadium		500	-0.100		496	99.2	1.00		508	101.6
Zinc		1000	4.20		951	95.1	3.80		955	95.5

82.8
8

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

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062018M1.ICP Date Analyzed: 06/20/18 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA44684 Units: ug/l

	Time:		12:33		12:38		18:00		18:05	
Sample ID:	ICSA	ICSAB	ICSAB1	% Rec	ICSAB1	% Rec	ICSAB2	% Rec	ICSAB2	% Rec
Metal	True	True	Results		Results		Results		Results	

Zirconium		500	0.100		502	100.4	-1.60		512	102.4
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(*) Outside of QC limits
(anr) Analyte not requested

8.2.8
8

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44691
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:43	MA44691-STD1	1		STDA
12:47	MA44691-STD2	1		STDB
12:51	ZZZZZZ	1		
12:55	ZZZZZZ	1		
13:01	MA44691-ICV1	1		
13:08	MA44691-ICB1	1		
13:14	MA44691-ICCV1	1		
13:22	MA44691-CCB1	1		
13:25	MA44691-CRI1	1		
13:29	MA44691-CRID1	1		
13:34	MA44691-ICSA1	1		
13:38	MA44691-ICSAB1	1		
13:42	MA44691-HSTD1	1		
13:46	MA44691-HSTD2	1		
13:51	ZZZZZZ	1		
13:55	ZZZZZZ	1		
13:59	ZZZZZZ	1		
14:04	MA44691-CCV1	1		
14:08	MA44691-CCB2	1		
14:12	MA44691-CRID2	1		
14:16	ZZZZZZ	1		
14:21	ZZZZZZ	1		
14:25	ZZZZZZ	2		
14:29	ZZZZZZ	2		
14:33	ZZZZZZ	5		
14:38	ZZZZZZ	1		
14:42	ZZZZZZ	1		
14:46	MP7730-S1	2		
14:50	MA44691-CCV2	1		
14:54	MA44691-CCB3	1		
15:00	MP7730-S2	2		
15:04	JC68060-2	2		(sample used for QC only; not part of login JC68071)
15:08	MP7730-SD1	10		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44691
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:12	ZZZZZZ	2		
15:17	ZZZZZZ	2		
15:21	ZZZZZZ	1		
15:25	ZZZZZZ	1		
15:29	ZZZZZZ	5		
15:33	ZZZZZZ	2		
15:38	MA44691-CCV3	1		
15:42	MA44691-CCB4	1		
15:46	ZZZZZZ	5		
15:50	ZZZZZZ	5		
15:55	ZZZZZZ	5		
15:59	ZZZZZZ	1		
16:03	ZZZZZZ	1		
16:07	ZZZZZZ	5		
16:11	ZZZZZZ	2		
16:16	ZZZZZZ	3		
16:20	ZZZZZZ	3		
16:24	MA44691-CCV4	1		
16:28	MA44691-CCB5	1		
16:33	ZZZZZZ	5		
16:37	ZZZZZZ	3		
16:41	MP7753-B1	1		
16:45	MP7753-MB1	1		
16:49	MP7753-S1	1		
16:53	MP7753-S2	1		
16:57	JC68360-1	1		(sample used for QC only; not part of login JC68071)
17:02	MP7753-SD1	5		
17:06	ZZZZZZ	1		
17:10	MA44691-CCV5	1		
17:14	MA44691-CCB6	1		
17:19	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:27	ZZZZZZ	1		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44691
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:32	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:40	ZZZZZZ	1		
17:44	ZZZZZZ	1		
17:49	ZZZZZZ	1		
17:53	ZZZZZZ	1		
17:57	MA44691-CCV6	1		
18:01	MA44691-CCB7	1		
18:06	ZZZZZZ	1		
18:10	ZZZZZZ	1		
18:14	ZZZZZZ	1		
18:19	ZZZZZZ	1		
18:23	ZZZZZZ	1		
18:27	ZZZZZZ	1		
18:32	ZZZZZZ	1		
18:36	ZZZZZZ	1		
18:40	ZZZZZZ	1		
18:44	MA44691-CCV7	1		
18:49	MA44691-CCB8	1		
18:54	ZZZZZZ	1		
18:58	ZZZZZZ	1		
19:02	MP7714-SD1	5		
----->	Last reportable sample/prep for job JC68071			
19:06	MA44691-CCV8	1		
19:11	MA44691-CCB9	1		
19:15	MA44691-CRI2	1		
19:19	MA44691-CRID3	1		
19:24	MA44691-ICSA2	1		
19:28	MA44691-ICSAB2	1		
19:32	MA44691-CCV9	1		
19:36	MA44691-CCB10	1		
----->	Last reportable CCB for job JC68071			
19:41	ZZZZZZ	1		
19:45	ZZZZZZ	1		
19:49	ZZZZZZ	1		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44691
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:54	ZZZZZZ	1		
19:58	ZZZZZZ	1		
20:02	ZZZZZZ	1		
20:07	ZZZZZZ	1		
20:11	ZZZZZZ	1		
20:15	ZZZZZZ	1		
20:20	ZZZZZZ	1		
20:24	ZZZZZZ	1		
20:28	ZZZZZZ	1		
20:33	MA44691-CCV10	1		
20:37	MA44691-CCB11	1		
20:41	MP7750-MB1	1		
20:45	MP7750-B1	1		
20:50	MP7750-S1	1		
20:54	MP7750-S2	1		
20:58	JC68272-2	1		(sample used for QC only; not part of login JC68071)
21:02	MP7750-SD1	5		
21:06	ZZZZZZ	1		
21:10	ZZZZZZ	1		
21:15	ZZZZZZ	1		
21:19	MA44691-CCV11	1		
21:27	MA44691-CCB12	1		
21:32	ZZZZZZ	1		
21:36	ZZZZZZ	1		
21:40	ZZZZZZ	1		
21:45	MP7747-B1	1		
21:52	MP7747-MB1	1		
21:56	MP7747-MB2	1		
22:00	MP7747-B2	1		
22:04	MP7747-S1	1		
22:08	MP7747-S2	1		
22:12	MA44691-CCV12	1		
22:16	MA44691-CCB13	1		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44691
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
22:21	JC68250-2	1		(sample used for QC only; not part of login JC68071)
22:25	MP7747-SD1	5		
22:29	ZZZZZZ	1		
22:34	ZZZZZZ	1		
22:38	ZZZZZZ	1		
22:42	ZZZZZZ	1		
22:47	ZZZZZZ	1		
22:51	ZZZZZZ	1		
22:55	ZZZZZZ	1		
22:59	MA44691-CCV13	1		
23:03	MA44691-CCB14	1		
23:08	ZZZZZZ	1		
23:12	ZZZZZZ	1		
23:17	ZZZZZZ	1		
23:21	ZZZZZZ	1		
23:25	ZZZZZZ	1		
23:30	MP7748-B1	1		
23:34	MP7748-MB1	1		
23:38	MP7748-S1	1		
23:42	MP7748-S2	1		
23:46	MA44691-CCV14	1		
23:50	MA44691-CCB15	1		
23:54	JC68310-3	1		(sample used for QC only; not part of login JC68071)
23:59	MP7748-SD1	5		
00:03	ZZZZZZ	1		
00:07	ZZZZZZ	1		
00:11	ZZZZZZ	1		
00:16	ZZZZZZ	1		
00:20	ZZZZZZ	1		
00:24	ZZZZZZ	1		
00:29	ZZZZZZ	1		
00:33	MA44691-CCV15	1		
00:37	MA44691-CCB16	1		



SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
Analyst: ND Run ID: MA44691
Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:41	ZZZZZZ	1		
00:46	ZZZZZZ	1		
00:50	ZZZZZZ	1		
00:54	ZZZZZZ	1		
00:58	ZZZZZZ	1		
01:03	ZZZZZZ	1		
01:07	ZZZZZZ	1		
01:11	ZZZZZZ	1		
01:16	ZZZZZZ	1		
01:20	MA44691-CCV16	1		
01:24	MA44691-CCB17	1		
01:29	MA44691-CRI3	1		
01:33	MA44691-CRID4	1		
01:37	MA44691-CCV17	1		
01:41	MA44691-CCB18	1		

Refer to raw data for calibration curve and standards.



REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
12:51	ZZZZZZ	1											
12:55	ZZZZZZ	1											
13:01	MA44691-ICV1	1	X	X	X	X	X	X	X	X	X	X	X
13:08	MA44691-ICB1	1	X	X	X	X	X	X	X	X	X	X	X
13:14	MA44691-ICCV1	1	X	X	X	X	X	X	X	X	X	X	X
13:22	MA44691-CCB1	1	X	X	X	X	X	X	X	X	X	X	X
13:25	MA44691-CRI1	1	X	X	X	X	X	X	X	X	X	X	X
13:29	MA44691-CRID1	1											
13:34	MA44691-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X
13:38	MA44691-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X
13:42	MA44691-HSTD1	1	X	X	X	X		X	X	X	X	X	X
13:46	MA44691-HSTD2	1						X					
13:51	ZZZZZZ	1											
13:55	ZZZZZZ	1											
13:59	ZZZZZZ	1											
14:04	MA44691-CCV1	1	X	X	X	X	X	X	X	X	X	X	X
14:08	MA44691-CCB2	1	X	X	X	X	X	X	X	X	X	X	X
14:12	MA44691-CRID2	1	X	X	X	X	X	X	X	X	X	X	X
14:16	ZZZZZZ	1											
14:21	ZZZZZZ	1											
14:25	ZZZZZZ	2											
14:29	ZZZZZZ	2											
14:33	ZZZZZZ	5											
14:38	ZZZZZZ	1											
14:42	ZZZZZZ	1											
14:46	MP7730-S1	2											
14:50	MA44691-CCV2	1	X	X	X	X	X	X	X	X	X	X	X
14:54	MA44691-CCB3	1	X	X	X	X	X	X	X	X	X	X	X
15:00	MP7730-S2	2											
15:04	JC68060-2	2											(a)
15:08	MP7730-SD1	10											
15:12	ZZZZZZ	2											
15:17	ZZZZZZ	2											

8.3.1
8

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	Ba	Be	B	Cr	Cu	Fe	Pb	Mn	Ni	Se	Zn
15:21	ZZZZZZ	1											
15:25	ZZZZZZ	1											
15:29	ZZZZZZ	5											
15:33	ZZZZZZ	2											
15:38	MA44691-CCV3	1	X	X	X	X	X	X	X	X	X	X	X
15:42	MA44691-CCB4	1	X	X	X	X	X	X	X	X	X	X	X
15:46	ZZZZZZ	5											
15:50	ZZZZZZ	5											
15:55	ZZZZZZ	5											
15:59	ZZZZZZ	1											
16:03	ZZZZZZ	1											
16:07	ZZZZZZ	5											
16:11	ZZZZZZ	2											
16:16	ZZZZZZ	3											
16:20	ZZZZZZ	3											
16:24	MA44691-CCV4	1	X	X	X	X	X	X	X	X	X	X	X
16:28	MA44691-CCB5	1	X	X	X	X	X	X	X	X	X	X	X
16:33	ZZZZZZ	5											
16:37	ZZZZZZ	3											
16:41	MP7753-B1	1	X	X		X	X	X	X	X	X	X	X
16:45	MP7753-MB1	1	X	X		X	X	X	X	X	X	X	X
16:49	MP7753-S1	1	X	X		X	X	X	X	X	X	X	X
16:53	MP7753-S2	1	X	X		X	X	X	X	X	X	X	X
16:57	JC68360-1	1				X		X		X			(a)
17:02	MP7753-SD1	5	X	X		X	X	X	X	X	X	X	X
17:06	ZZZZZZ	1											
17:10	MA44691-CCV5	1	X	X	X	X	X	X	X	X	X	X	X
17:14	MA44691-CCB6	1	X	X	X	X	X	X	X	X	X	X	X
17:19	ZZZZZZ	1											
17:23	ZZZZZZ	1											
17:27	ZZZZZZ	1											
17:32	ZZZZZZ	1											
17:36	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
17:40	ZZZZZZ	1											
17:44	ZZZZZZ	1											
17:49	ZZZZZZ	1											
17:53	ZZZZZZ	1											
17:57	MA44691-CCV6	1	X	X	X	X	X	X	X	X	X	X	X
18:01	MA44691-CCB7	1	X	X	X	X	X	X	X	X	X	X	X
18:06	ZZZZZZ	1											
18:10	ZZZZZZ	1											
18:14	ZZZZZZ	1											
18:19	ZZZZZZ	1											
18:23	ZZZZZZ	1											
18:27	ZZZZZZ	1											
18:32	ZZZZZZ	1											
18:36	ZZZZZZ	1											
18:40	ZZZZZZ	1											
18:44	MA44691-CCV7	1	X	X	X	X	X	X	X	X	X	X	X
18:49	MA44691-CCB8	1	X	X	X	X	X	X	X	X	X	X	X
18:54	ZZZZZZ	1											
18:58	ZZZZZZ	1											
19:02	MP7714-SD1	5	X	X	X	X	X	X	X	X	X	X	X
19:06	MA44691-CCV8	1	X	X	X	X	X	X	X	X	X	X	X
19:11	MA44691-CCB9	1	X	X	X	X	X	X	X	X	X	X	X
19:15	MA44691-CRI2	1	X	X	X	X	X	X	X	X	X	X	X
19:19	MA44691-CRID3	1	X	X	X	X	X	X	X	X	X	X	X
19:24	MA44691-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X
19:28	MA44691-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X
19:32	MA44691-CCV9	1	X	X	X	X	X	X	X	X	X	X	X
19:36	MA44691-CCB10	1	X	X	X	X	X	X	X	X	X	X	X
19:41	ZZZZZZ	1											
19:45	ZZZZZZ	1											
19:49	ZZZZZZ	1											
19:54	ZZZZZZ	1											
19:58	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
20:02	ZZZZZZ	1											
20:07	ZZZZZZ	1											
20:11	ZZZZZZ	1											
20:15	ZZZZZZ	1											
20:20	ZZZZZZ	1											
20:24	ZZZZZZ	1											
20:28	ZZZZZZ	1											
20:33	MA44691-CCV10	1	X	X	X	X	X	X	X	X	X	X	X
20:37	MA44691-CCB11	1	X	X	X	X	X	X	X	X	X	X	X
20:41	MP7750-MB1	1	X	X	X	X	X	X	X	X	X	X	X
20:45	MP7750-B1	1	X	X	X	X	X	X	X	X	X	X	X
20:50	MP7750-S1	1	X	X	X	X	X	X	X	X	X	X	X
20:54	MP7750-S2	1	X	X	X	X	X	X	X	X	X	X	X
20:58	JC68272-2	1						X				X	(a)
21:02	MP7750-SD1	5	X	X	X	X	X	X	X	X	X	X	X
21:06	ZZZZZZ	1											
21:10	ZZZZZZ	1											
21:15	ZZZZZZ	1											
21:19	MA44691-CCV11	1	X	X	X	X	X	X	X	X	X	X	X
21:27	MA44691-CCB12	1	X	X	X	X	X	X	X	X	X	X	X
21:32	ZZZZZZ	1											
21:36	ZZZZZZ	1											
21:40	ZZZZZZ	1											
21:45	MP7747-B1	1	X	X	X	X	X	X	X	X	X	X	X
21:52	MP7747-MB1	1	X	X	X	X	X	X	X	X	X	X	X
21:56	MP7747-MB2	1	X	X	X	X	X	X	X	X	X	X	X
22:00	MP7747-B2	1	X	X	X	X	X	X	X	X	X	X	X
22:04	MP7747-S1	1	X	X	X	X	X	X	X	X	X	X	X
22:08	MP7747-S2	1	X	X	X	X	X	X	X	X	X	X	X
22:12	MA44691-CCV12	1	X	X	X	X	X	X	X	X	X	X	X
22:16	MA44691-CCB13	1	X	X	X	X	X	X	X	X	X	X	X
22:21	JC68250-2	1	X	X	X	X	X	X	X	X	X	X	(a)
22:25	MP7747-SD1	5	X	X	X	X	X	X	X	X	X	X	X

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
22:29	ZZZZZZ	1											
22:34	ZZZZZZ	1											
22:38	ZZZZZZ	1											
22:42	ZZZZZZ	1											
22:47	ZZZZZZ	1											
22:51	ZZZZZZ	1											
22:55	ZZZZZZ	1											
22:59	MA44691-CCV13	1	X	X	X	X	X	X	X	X	X	X	X
23:03	MA44691-CCB14	1	X	X	X	X	X	X	X	X	X	X	X
23:08	ZZZZZZ	1											
23:12	ZZZZZZ	1											
23:17	ZZZZZZ	1											
23:21	ZZZZZZ	1											
23:25	ZZZZZZ	1											
23:30	MP7748-B1	1							X				
23:34	MP7748-MB1	1							X				
23:38	MP7748-S1	1							X				
23:42	MP7748-S2	1							X				
23:46	MA44691-CCV14	1	X	X	X	X	X	X	X	X	X	X	X
23:50	MA44691-CCB15	1	X	X	X	X	X	X	X	X	X	X	X
23:54	JC68310-3	1							X				(a)
23:59	MP7748-SD1	5							X				
00:03	ZZZZZZ	1											
00:07	ZZZZZZ	1											
00:11	ZZZZZZ	1											
00:16	ZZZZZZ	1											
00:20	ZZZZZZ	1											
00:24	ZZZZZZ	1											
00:29	ZZZZZZ	1											
00:33	MA44691-CCV15	1	X	X	X	X	X	X	X	X	X	X	X
00:37	MA44691-CCB16	1	X	X	X	X	X	X	X	X	X	X	X
00:41	ZZZZZZ	1											
00:46	ZZZZZZ	1											

Element: B B B C C F P M N S Z
 a e r u e b n i e n

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Element: Dilution	B a	B e	B r	C r	C u	F e	P b	M n	N i	S e	Z n
00:50	ZZZZZZ	1											
00:54	ZZZZZZ	1											
00:58	ZZZZZZ	1											
01:03	ZZZZZZ	1											
01:07	ZZZZZZ	1											
01:11	ZZZZZZ	1											
01:16	ZZZZZZ	1											
01:20	MA44691-CCV16	1	X	X	X	X	X	X	X	X	X	X	X
01:24	MA44691-CCB17	1	X	X	X	X	X	X	X	X	X	X	X
01:29	MA44691-CRI3	1	X	X	X	X	X	X	X	X	X	X	X
01:33	MA44691-CRID4	1	X	X	X	X	X	X	X	X	X	X	X
01:37	MA44691-CCV17	1	X	X	X	X	X	X	X	X	X	X	X
01:41	MA44691-CCB18	1	X	X	X	X	X	X	X	X	X	X	X

(a) Sample used for QC only; not part of login JC68071.

Element: B B B C C F P M N S Z
 a e r u e b n i e n

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:43	MA44691-STD1	3986 R	90108 R	16741 R	8606 R
12:47	MA44691-STD2	3763	85053	16486	7454
12:51	ZZZZZZ	3869	87328	16736	7752
12:55	ZZZZZZ	4004	90900	16789	8634
13:01	MA44691-ICV1	3889	86919	16650	7811
13:08	MA44691-ICB1	3994	91079	16768	8627
13:14	MA44691-ICCV1	3894	86996	16647	7800
13:22	MA44691-CCB1	4004	90979	16650	8660
13:25	MA44691-CRI1	3957	90153	16798	8434
13:29	MA44691-CRID1	No results reported for the elements associated with this internal standard.			
13:34	MA44691-ICSA1	3569	79921	16151	6820
13:38	MA44691-ICSAB1	3581	79288	16129	6849
13:42	MA44691-HSTD1	3970	89420	16651	8438
13:46	MA44691-HSTD2	3665	81510	16037	6979
13:51	ZZZZZZ	3946	89500	16637	8548
13:55	ZZZZZZ	3935	90771	16740	8628
13:59	ZZZZZZ	4024	90950	16768	8669
14:04	MA44691-CCV1	3883	86559	16574	7780
14:08	MA44691-CCB2	4013	90752	16655	8653
14:12	MA44691-CRID2	3999	89803	16599	8593
14:16	ZZZZZZ	4011	90377	16726	8664
14:21	ZZZZZZ	3912	87946	16719	7954
14:25	ZZZZZZ	3888	87943	16715	7995
14:29	ZZZZZZ	3884	87631	16722	7999
14:33	ZZZZZZ	4329	97285	18399	8278
14:38	ZZZZZZ	4010	90821	16850	8638
14:42	ZZZZZZ	3928	87769	16721	7984
14:46	MP7730-S1	3812	86400	16554	7728
14:50	MA44691-CCV2	3883	86506	16644	7767
14:54	MA44691-CCB3	4022	90147	16645	8652
15:00	MP7730-S2	3803	85790	16341	7704
15:04	JC68060-2	3830	86690	16447	7898
15:08	MP7730-SD1	3959	89087	16675	8394

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:12	ZZZZZZ	3852	87095	16677	7906
15:17	ZZZZZZ	3869	87660	16632	8010
15:21	ZZZZZZ	3897	86668	16646	7918
15:25	ZZZZZZ	3995	90364	16590	8592
15:29	ZZZZZZ	3879	86142	16442	7767
15:33	ZZZZZZ	3928	86827	16681	7810
15:38	MA44691-CCV3	3881	86148	16471	7732
15:42	MA44691-CCB4	4019	90306	16728	8625
15:46	ZZZZZZ	3879	86626	16605	7770
15:50	ZZZZZZ	3884	86079	16579	7762
15:55	ZZZZZZ	3866	85678	16248	7731
15:59	ZZZZZZ	4015	90229	16879	8646
16:03	ZZZZZZ	3908	87288	16651	7900
16:07	ZZZZZZ	3842	85655	16773	7509
16:11	ZZZZZZ	4021	87889	17064	8060
16:16	ZZZZZZ	4041	88145	17269	7948
16:20	ZZZZZZ	4083	90075	17475	8064
16:24	MA44691-CCV4	3898	85465	16651	7745
16:28	MA44691-CCB5	4016	89831	16818	8593
16:33	ZZZZZZ	3978	87841	17008	7960
16:37	ZZZZZZ	3928	86116	16691	7784
16:41	MP7753-B1	3836	85348	16588	7775
16:45	MP7753-MB1	3925	88474	16682	8422
16:49	MP7753-S1	3809	84382	16548	7612
16:53	MP7753-S2	3822	84909	16629	7630
16:57	JC68360-1	3876	86499	16632	8008
17:02	MP7753-SD1	3911	87751	16518	8313
17:06	ZZZZZZ	3629	81668	16211	7076
17:10	MA44691-CCV5	3821	84841	16466	7607
17:14	MA44691-CCB6	3941	88509	16581	8444
17:19	ZZZZZZ	3642	82024	16294	7076
17:23	ZZZZZZ	3604	81309	16228	7030
17:27	ZZZZZZ	3811	86031	16479	7807

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:32	ZZZZZZ	3794	85378	16565	7630
17:36	ZZZZZZ	3831	85606	16610	7796
17:40	ZZZZZZ	3773	85246	16606	7676
17:44	ZZZZZZ	3818	86502	16652	7814
17:49	ZZZZZZ	3956	89103	16806	8500
17:53	ZZZZZZ	3855	86638	16481	8024
17:57	MA44691-CCV6	3804	84429	16217	7611
18:01	MA44691-CCB7	3936	88969	16558	8469
18:06	ZZZZZZ	3650	82259	16328	7143
18:10	ZZZZZZ	3657	83094	16357	7137
18:14	ZZZZZZ	3633	81947	16376	7071
18:19	ZZZZZZ	3822	86269	16605	7838
18:23	ZZZZZZ	3776	85328	16468	7654
18:27	ZZZZZZ	3810	86546	16766	7831
18:32	ZZZZZZ	3796	86122	16574	7723
18:36	ZZZZZZ	3803	86600	16657	7827
18:40	ZZZZZZ	3942	89071	16626	8483
18:44	MA44691-CCV7	3828	85072	16366	7646
18:49	MA44691-CCB8	3955	89283	16646	8502
18:54	ZZZZZZ	3946	89670	16596	8504
18:58	ZZZZZZ	3864	86157	16604	7819
19:02	MP7714-SD1	3923	88106	16628	8323
19:06	MA44691-CCV8	3829	84975	16440	7639
19:11	MA44691-CCB9	3953	89154	16560	8501
19:15	MA44691-CRI2	3907	87978	16423	8289
19:19	MA44691-CRID3	3943	89102	16489	8453
19:24	MA44691-ICSA2	3523	78035	15904	6713
19:28	MA44691-ICSAB2	3518	78089	15951	6725
19:32	MA44691-CCV9	3830	85299	16542	7645
19:36	MA44691-CCB10	3957	89510	16591	8508
19:41	ZZZZZZ	4039	82841	17107	7551
19:45	ZZZZZZ	3578	82502	16000	7184
19:49	ZZZZZZ	3934	89151	16505	8440

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:54	ZZZZZZ	3943	89088	16583	8446
19:58	ZZZZZZ	3961	89070	16631	8439
20:02	ZZZZZZ	3961	89406	16694	8489
20:07	ZZZZZZ	3946	88796	16676	8449
20:11	ZZZZZZ	3985	89719	16771	8567
20:15	ZZZZZZ	3945	89189	16698	8485
20:20	ZZZZZZ	3946	89400	16654	8518
20:24	ZZZZZZ	3949	89320	16583	8509
20:28	ZZZZZZ	3703	84995	16492	7424
20:33	MA44691-CCV10	3823	85028	16516	7619
20:37	MA44691-CCB11	3945	89753	16697	8489
20:41	MP7750-MB1	4036	92126	17296	8784
20:45	MP7750-B1	3932	88747	17096	8017
20:50	MP7750-S1	3914	88333	17041	7906
20:54	MP7750-S2	3907	88290	17048	7913
20:58	JC68272-2	3970	90461	17070	8419
21:02	MP7750-SD1	3941	90175	16717	8461
21:06	ZZZZZZ	3852	88444	17126	7899
21:10	ZZZZZZ	3374	77615	16160	6320
21:15	ZZZZZZ	3827	87860	16936	7780
21:19	MA44691-CCV11	3806	85499	16460	7621
21:27	MA44691-CCB12	3947	89845	16595	8509
21:32	ZZZZZZ	3846	87838	16829	7808
21:36	ZZZZZZ	3958	90139	17052	8412
21:40	ZZZZZZ	3843	87748	16847	7798
21:45	MP7747-B1	3847	87061	16582	7820
21:52	MP7747-MB1	3957	89802	16786	8525
21:56	MP7747-MB2	3949	90423	16801	8523
22:00	MP7747-B2	3840	87579	16618	7820
22:04	MP7747-S1	3859	87255	16682	7773
22:08	MP7747-S2	3867	87251	16808	7793
22:12	MA44691-CCV12	3826	85579	16481	7653
22:16	MA44691-CCB13	3957	89884	16568	8516

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
22:21	JC68250-2	3881	88586	16596	8195
22:25	MP7747-SD1	3906	89187	16468	8395
22:29	ZZZZZZ	3942	89862	16631	8513
22:34	ZZZZZZ	3950	89112	16745	8175
22:38	ZZZZZZ	3873	88474	16757	7998
22:42	ZZZZZZ	3779	85772	15918	7631
22:47	ZZZZZZ	3745	85714	16428	7630
22:51	ZZZZZZ	3794	86850	16414	7837
22:55	ZZZZZZ	3803	86749	16392	7852
22:59	MA44691-CCV13	3833	86205	16333	7678
23:03	MA44691-CCB14	3960	90052	16487	8535
23:08	ZZZZZZ	3514	82051	16161	6954
23:12	ZZZZZZ	3540	82308	16199	6967
23:17	ZZZZZZ	3813	87178	16318	7954
23:21	ZZZZZZ	3937	89675	16588	8412
23:25	ZZZZZZ	3915	89407	16518	8377
23:30	MP7748-B1	3866	87036	16465	7863
23:34	MP7748-MB1	3949	90434	16605	8520
23:38	MP7748-S1	3753	84928	16356	7413
23:42	MP7748-S2	3758	84739	16331	7426
23:46	MA44691-CCV14	3837	85898	16370	7679
23:50	MA44691-CCB15	3960	89775	16482	8525
23:54	JC68310-3	3744	85819	16320	7651
23:59	MP7748-SD1	3892	88238	16386	8214
00:03	ZZZZZZ	3982	88540	16808	8332
00:07	ZZZZZZ	3960	90132	16679	8536
00:11	ZZZZZZ	3840	87499	16411	7961
00:16	ZZZZZZ	3857	87587	16580	7970
00:20	ZZZZZZ	3679	84471	16253	7345
00:24	ZZZZZZ	3804	87193	16415	7868
00:29	ZZZZZZ	3931	89419	16360	8350
00:33	MA44691-CCV15	3829	85904	16266	7667
00:37	MA44691-CCB16	3965	89885	16446	8538

8.3.2
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INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 Analyst: ND Run ID: MA44691
 Parameters: Ba,Be,B,Cr,Cu,Fe,Pb,Mn,Ni,Se,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
00:41	ZZZZZZ	3707	84912	16400	7515
00:46	ZZZZZZ	3870	87855	16422	7946
00:50	ZZZZZZ	3871	88193	16657	8056
00:54	ZZZZZZ	3809	87293	16384	7840
00:58	ZZZZZZ	3795	86899	16385	7754
01:03	ZZZZZZ	3731	85017	16155	7446
01:07	ZZZZZZ	3831	87713	16400	7941
01:11	ZZZZZZ	3620	82807	16014	7114
01:16	ZZZZZZ	3720	85347	16310	7552
01:20	MA44691-CCV16	3816	88127	16248	7638
01:24	MA44691-CCB17	3968	90285	16470	8565
01:29	MA44691-CRI3	3920	89133	16322	8326
01:33	MA44691-CRID4	3948	89947	16357	8479
01:37	MA44691-CCV17	3846	86197	16258	7686
01:41	MA44691-CCB18	3972	90423	16411	8549

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

8.3.2
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA44691 Units: ug/l

Time: Sample ID:	13:08 ICB1	13:22 CCB1	14:08 CCB2	14:54 CCB3						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	12	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.4	0.100	<200	0.100	<200	0.00	<200	0.100	<200
Beryllium	1.0	.1	0.100	<1.0	0.00	<1.0	0.00	<1.0	0.100	<1.0
Bismuth	20	1.4								
Boron	100	1.1	0.900	<100	1.40	<100	0.700	<100	0.700	<100
Cadmium	3.0	.3	anr							
Calcium	5000	2.7	anr							
Chromium	10	.5	0.00	<10	0.100	<10	0.00	<10	0.300	<10
Cobalt	50	.2	anr							
Copper	10	.6	0.500	<10	0.600	<10	0.300	<10	0.600	<10
Iron	100	4	2.90	<100	3.20	<100	1.70	<100	4.40	<100
Lead	3.0	1.6	-0.500	<3.0	0.100	<3.0	0.600	<3.0	0.800	<3.0
Lithium	50	2.5								
Magnesium	5000	26	anr							
Manganese	15	.1	0.00	<15	-0.100	<15	-0.100	<15	-0.100	<15
Molybdenum	20	.4	anr							
Nickel	10	.4	0.200	<10	-0.400	<10	-0.400	<10	-0.600	<10
Phosphorus	50	2.5								
Potassium	10000	29	anr							
Selenium	10	2.3	2.40	<10	-0.800	<10	1.20	<10	0.900	<10
Silicon	200	1.5	anr							
Silver	10	.6	anr							
Sodium	10000	12	anr							
Strontium	10	.1								
Sulfur	50	2.9								
Thallium	2.0	.9	anr							
Tin	10	.6	anr							
Titanium	10	.4	anr							
Tungsten	50	1.1								
Vanadium	50	.6	anr							
Zinc	20	.2	-0.100	<20	-0.200	<20	-1.70	<20	-1.70	<20

8.3.3
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

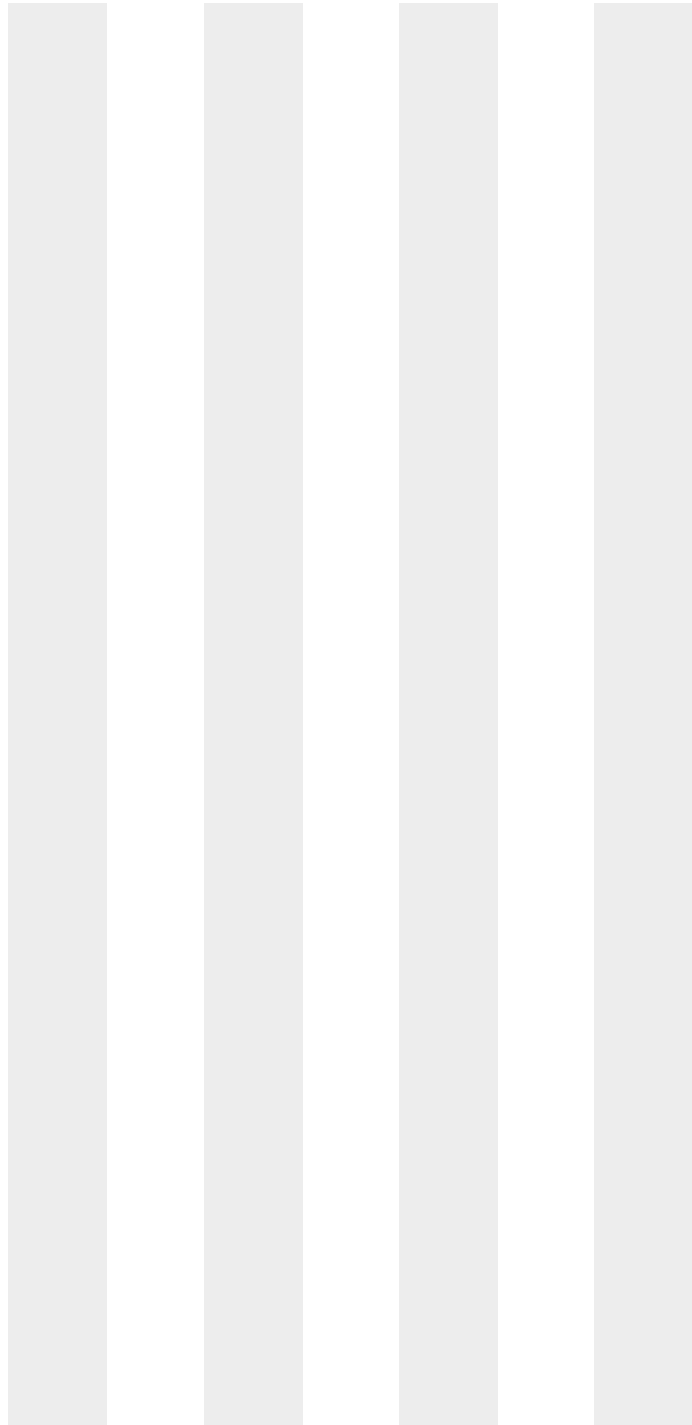
Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44691 Units: ug/l

Time:			13:08		13:22		14:08		14:54	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .4

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



8.3.3
 8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA44691 Units: ug/l

Metal	RL	IDL	15:42 CCB4		16:28 CCB5		17:14 CCB6		18:01 CCB7	
			raw	final	raw	final	raw	final	raw	final
Aluminum	200	12	anr							
Antimony	6.0	1.6	anr							
Arsenic	3.0	1.5	anr							
Barium	200	.4	0.200	<200	0.100	<200	-0.100	<200	0.100	<200
Beryllium	1.0	.1	0.200	<1.0	0.100	<1.0	0.100	<1.0	0.100	<1.0
Bismuth	20	1.4								
Boron	100	1.1	-0.300	<100	-0.500	<100	0.400	<100	-0.600	<100
Cadmium	3.0	.3	anr							
Calcium	5000	2.7	anr							
Chromium	10	.5	0.00	<10	0.200	<10	-0.400	<10	-0.400	<10
Cobalt	50	.2	anr							
Copper	10	.6	0.500	<10	0.300	<10	0.800	<10	0.700	<10
Iron	100	4	4.00	<100	5.60	<100	4.60	<100	5.00	<100
Lead	3.0	1.6	0.400	<3.0	0.100	<3.0	-0.400	<3.0	1.00	<3.0
Lithium	50	2.5								
Magnesium	5000	26	anr							
Manganese	15	.1	0.100	<15	-0.100	<15	0.00	<15	0.00	<15
Molybdenum	20	.4	anr							
Nickel	10	.4	-0.400	<10	-0.500	<10	-0.700	<10	-0.700	<10
Phosphorus	50	2.5								
Potassium	10000	29	anr							
Selenium	10	2.3	2.00	<10	1.10	<10	-0.200	<10	0.500	<10
Silicon	200	1.5	anr							
Silver	10	.6	anr							
Sodium	10000	12	anr							
Strontium	10	.1								
Sulfur	50	2.9								
Thallium	2.0	.9	anr							
Tin	10	.6	anr							
Titanium	10	.4	anr							
Tungsten	50	1.1								
Vanadium	50	.6	anr							
Zinc	20	.2	-1.50	<20	-1.70	<20	-1.50	<20	-1.40	<20

8.3.3
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

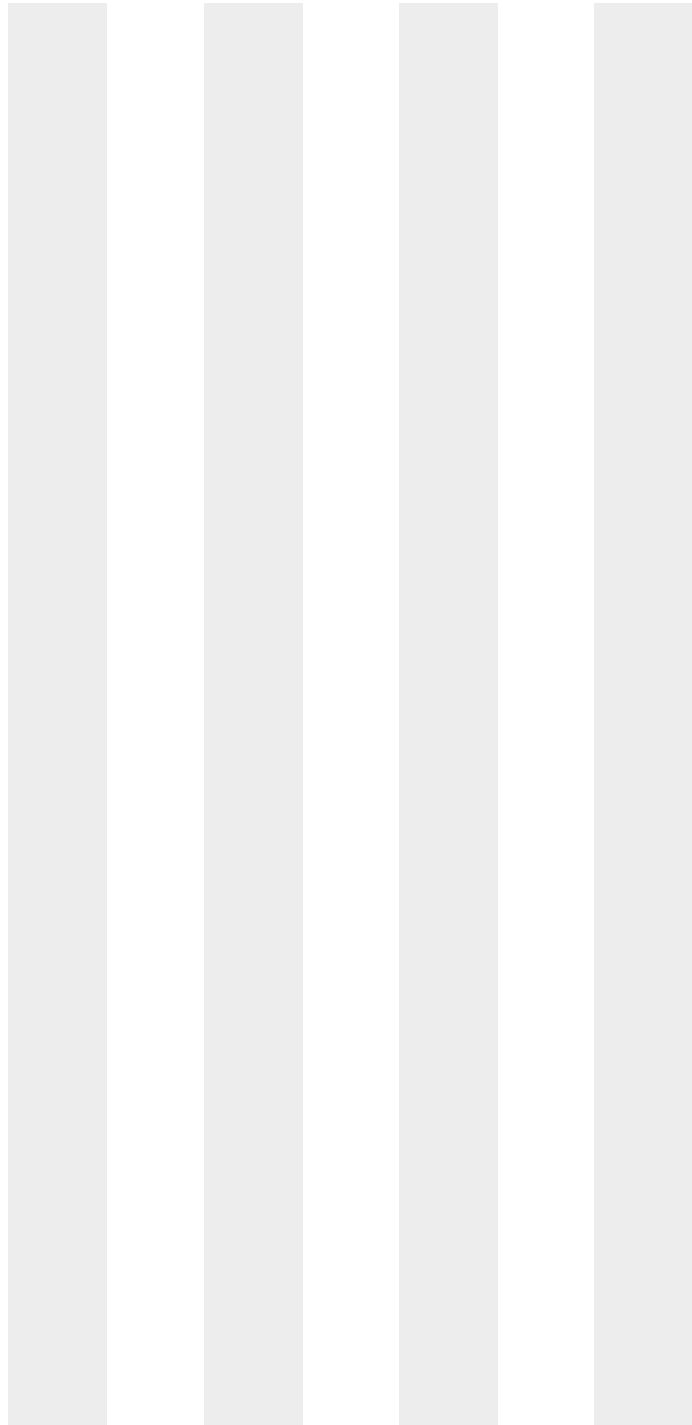
Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44691 Units: ug/l

Time:	15:42	16:28	17:14	18:01						
Sample ID:	CCB4	CCB5	CCB6	CCB7						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final

Zirconium 10 .4

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



8.3.3
 8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: result < RL Run ID: MA44691 Units: ug/l

Metal	Time:		18:49		19:11		19:36		
	Sample ID:	RL	IDL	CCB8	final	CCB9	final	CCB10	final
Aluminum	200	12	anr						
Antimony	6.0	1.6	anr						
Arsenic	3.0	1.5	anr						
Barium	200	.4	0.100	<200	0.200	<200	0.00	<200	
Beryllium	1.0	.1	0.00	<1.0	0.100	<1.0	0.00	<1.0	
Bismuth	20	1.4							
Boron	100	1.1	-0.900	<100	-0.200	<100	0.00	<100	
Cadmium	3.0	.3	anr						
Calcium	5000	2.7	anr						
Chromium	10	.5	0.00	<10	-0.300	<10	0.100	<10	
Cobalt	50	.2	anr						
Copper	10	.6	0.100	<10	0.800	<10	0.500	<10	
Iron	100	4	1.30	<100	6.40	<100	-1.70	<100	
Lead	3.0	1.6	0.100	<3.0	0.700	<3.0	0.400	<3.0	
Lithium	50	2.5							
Magnesium	5000	26	anr						
Manganese	15	.1	-0.100	<15	0.00	<15	-0.100	<15	
Molybdenum	20	.4	anr						
Nickel	10	.4	-0.700	<10	-0.600	<10	-0.500	<10	
Phosphorus	50	2.5							
Potassium	10000	29	anr						
Selenium	10	2.3	0.700	<10	2.20	<10	0.100	<10	
Silicon	200	1.5	anr						
Silver	10	.6	anr						
Sodium	10000	12	anr						
Strontium	10	.1							
Sulfur	50	2.9							
Thallium	2.0	.9	anr						
Tin	10	.6	anr						
Titanium	10	.4	anr						
Tungsten	50	1.1							
Vanadium	50	.6	anr						
Zinc	20	.2	-1.50	<20	-1.50	<20	-1.70	<20	

8.3.3
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: result < RL Run ID: MA44691 Units: ug/l

Time:	18:49	19:11	19:36					
Sample ID:	CCB8	CCB9	CCB10					
Metal	RL	IDL	raw	final	raw	final	raw	final

Zirconium 10 .4

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



8.3.3
 8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

Time:	13:14		
Sample ID:	ICCV ICCV1		
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	2000	1940	97.0
Beryllium	2000	1960	98.0
Bismuth			
Boron	2000	1970	98.5
Cadmium	anr		
Calcium	anr		
Chromium	2000	1990	99.5
Cobalt	anr		
Copper	2000	1900	95.0
Iron	40000	39800	99.5
Lead	2000	1980	99.0
Lithium			
Magnesium	anr		
Manganese	2000	1990	99.5
Molybdenum	anr		
Nickel	2000	1960	98.0
Phosphorus			
Potassium	anr		
Selenium	2000	1930	96.5
Silicon	anr		
Silver	anr		
Sodium	anr		
Strontium			
Sulfur			
Thallium	anr		
Tin	anr		
Titanium	anr		
Tungsten			
Vanadium	anr		
Zinc	2000	2000	100.0

8.3.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JC68071

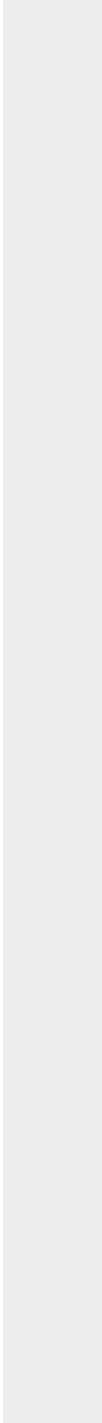
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

Time:	13:14		
Sample ID: ICCV	ICCV1		
Metal	True	Results	% Rec

Zirconium

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



8.3.4

8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

Metal	Time: Sample ID: ICV True	13:01		CCV True	14:04		CCV True	14:50	
		ICV1 Results	% Rec		CCV1 Results	% Rec		CCV2 Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	2000	1970	98.5	2000	1960	98.0	2000	1960	98.0
Beryllium	2000	2020	101.0	2000	1990	99.5	2000	1980	99.0
Bismuth									
Boron	2000	2040	102.0	2000	1990	99.5	2000	2000	100.0
Cadmium	anr								
Calcium	anr								
Chromium	2000	1960	98.0	2000	2010	100.5	2000	2020	101.0
Cobalt	anr								
Copper	2000	1960	98.0	2000	1930	96.5	2000	1930	96.5
Iron	40000	39200	98.0	40000	40400	101.0	40000	40300	100.8
Lead	2000	1970	98.5	2000	2000	100.0	2000	2000	100.0
Lithium									
Magnesium	anr								
Manganese	2000	1970	98.5	2000	2010	100.5	2000	2010	100.5
Molybdenum	anr								
Nickel	2000	1970	98.5	2000	1980	99.0	2000	1990	99.5
Phosphorus									
Potassium	anr								
Selenium	2000	1960	98.0	2000	1970	98.5	2000	1970	98.5
Silicon	anr								
Silver	anr								
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	2000	2010	100.5	2000	2030	101.5	2000	2030	101.5

8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

	Time:		13:01		14:04		14:50		
Sample ID:	ICV	ICV1		CCV	CCV1	CCV	CCV2		
Metal	True	Results	% Rec	True <td>Results</td> <td>% Rec</td> <th>True <td>Results</td> <td>% Rec</td> </th>	Results	% Rec	True <td>Results</td> <td>% Rec</td>	Results	% Rec

Zirconium

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



8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

Metal	Sample ID:	15:38			16:24			17:10		
		CCV	CCV3	% Rec	CCV	CCV4	% Rec	CCV	CCV5	% Rec
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	2000	1960	98.0	2000	1950	97.5	2000	2010	100.5	
Beryllium	2000	1980	99.0	2000	1960	98.0	2000	2020	101.0	
Bismuth										
Boron	2000	1990	99.5	2000	2000	100.0	2000	2060	103.0	
Cadmium	anr									
Calcium	anr									
Chromium	2000	2040	102.0	2000	2070	103.5	2000	2100	105.0	
Cobalt	anr									
Copper	2000	1930	96.5	2000	1940	97.0	2000	1990	99.5	
Iron	40000	40200	100.5	40000	39900	99.8	40000	41100	102.8	
Lead	2000	2010	100.5	2000	2030	101.5	2000	2070	103.5	
Lithium										
Magnesium	anr									
Manganese	2000	2020	101.0	2000	2030	101.5	2000	2080	104.0	
Molybdenum	anr									
Nickel	2000	1990	99.5	2000	2010	100.5	2000	2060	103.0	
Phosphorus										
Potassium	anr									
Selenium	2000	1960	98.0	2000	1980	99.0	2000	2030	101.5	
Silicon	anr									
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	anr									
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	anr									
Zinc	2000	2030	101.5	2000	2050	102.5	2000	2090	104.5	

8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

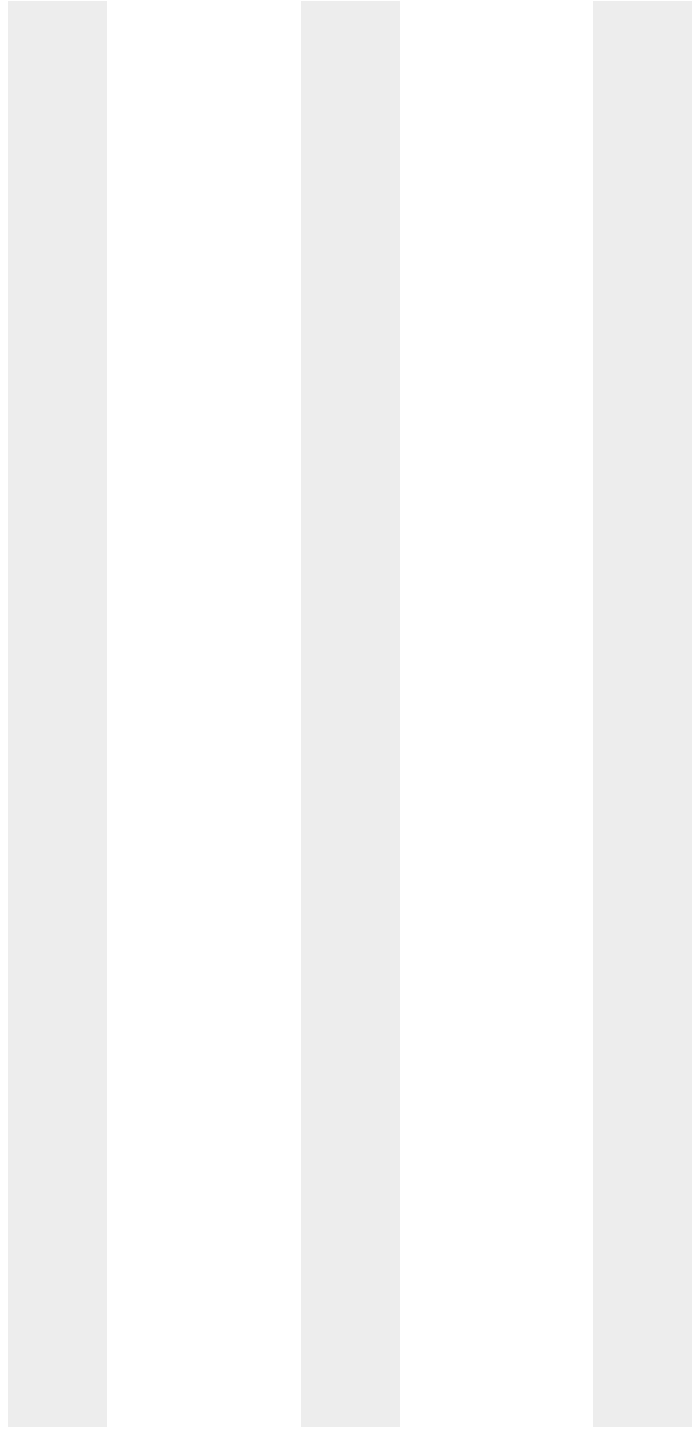
Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

	Time:				15:38			16:24		17:10	
	Sample ID:	CCV	CCV3	CCV	CCV4	CCV	CCV5				
Metal		True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	

Zirconium

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



8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

Metal	Sample ID:	17:57			18:44			19:06		
		CCV	CCV6	% Rec	CCV	CCV7	% Rec	CCV	CCV8	% Rec
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	2000	2000	100.0	2000	2000	100.0	2000	2010	100.5	
Beryllium	2000	2010	100.5	2000	2010	100.5	2000	2010	100.5	
Bismuth										
Boron	2000	2040	102.0	2000	2030	101.5	2000	2050	102.5	
Cadmium	anr									
Calcium	anr									
Chromium	2000	2080	104.0	2000	2070	103.5	2000	2100	105.0	
Cobalt	anr									
Copper	2000	1970	98.5	2000	1970	98.5	2000	1980	99.0	
Iron	40000	40900	102.3	40000	40900	102.3	40000	41100	102.8	
Lead	2000	2060	103.0	2000	2050	102.5	2000	2060	103.0	
Lithium										
Magnesium	anr									
Manganese	2000	2060	103.0	2000	2060	103.0	2000	2070	103.5	
Molybdenum	anr									
Nickel	2000	2040	102.0	2000	2040	102.0	2000	2050	102.5	
Phosphorus										
Potassium	anr									
Selenium	2000	2010	100.5	2000	2010	100.5	2000	2030	101.5	
Silicon	anr									
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	anr									
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	anr									
Zinc	2000	2080	104.0	2000	2070	103.5	2000	2090	104.5	

8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

	Time:								
	Sample ID:	CCV	17:57 CCV6	CCV	18:44 CCV7	CCV	19:06 CCV8	CCV	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zirconium

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



8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

Time:	19:32		
Sample ID:	CCV9		
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	2000	2010	100.5
Beryllium	2000	2010	100.5
Bismuth			
Boron	2000	2050	102.5
Cadmium	anr		
Calcium	anr		
Chromium	2000	2090	104.5
Cobalt	anr		
Copper	2000	1980	99.0
Iron	40000	41300	103.3
Lead	2000	2060	103.0
Lithium			
Magnesium	anr		
Manganese	2000	2070	103.5
Molybdenum	anr		
Nickel	2000	2050	102.5
Phosphorus			
Potassium	anr		
Selenium	2000	2030	101.5
Silicon	anr		
Silver	anr		
Sodium	anr		
Strontium			
Sulfur			
Thallium	anr		
Tin	anr		
Titanium	anr		
Tungsten			
Vanadium	anr		
Zinc	2000	2080	104.0

8.3.5
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

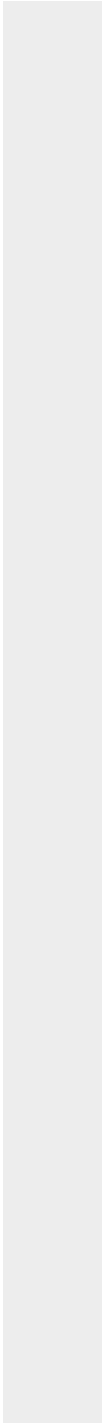
Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 95 to 105 % Recovery Run ID: MA44691 Units: ug/l

Time:	19:32		
Sample ID: CCV	CCV9		
Metal	True	Results	% Rec

Zirconium

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



HIGH STANDARD CHECK SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44691 Units: ug/l

Metal	Time: 13:42		% Rec	Time: 13:46		% Rec
	HSTD	HSTD1		HSTD	HSTD2	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	5000	5010	100.2			
Beryllium	5000	5100	102.0			
Bismuth						
Boron	5000	5060	101.2			
Cadmium	anr					
Calcium						
Chromium	5000	5170	103.4			
Cobalt	anr					
Copper	5000	5030	100.6			
Iron				150000	147000	98.0
Lead	5000	5070	101.4			
Lithium						
Magnesium						
Manganese	5000	5140	102.8			
Molybdenum	anr					
Nickel	5000	4970	99.4			
Phosphorus						
Potassium						
Selenium	5000	4960	99.2			
Silicon	anr					
Silver	anr					
Sodium						
Strontium						
Sulfur						
Thallium	anr					
Tin	anr					
Titanium	anr					
Tungsten						
Vanadium	anr					
Zinc	5000	5210	104.2			

8.3.6
8

HIGH STANDARD CHECK SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 90 to 110 % Recovery Run ID: MA44691 Units: ug/l

Time:	13:42	13:46	
Sample ID:	HSTD1	HSTD2	
Metal	True	True	
Results	% Rec	Results	% Rec

Zirconium

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

8.3.6
 8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44691 Units: ug/l

Time:	13:25	14:12	19:15						
Sample ID:	CRI1	CRID2	CRID2	Results	% Rec	Results	% Rec	Results	% Rec
Metal	True	True	True						
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	anr					
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	201	100.5	4.00	100.0	206	103.0
Beryllium	2.0		1.0	2.10	105.0	1.00	100.0	2.10	105.0
Bismuth	20								
Boron	100		10	105	105.0			107	107.0
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Chromium	10		2.0	10.2	102.0	1.90	95.0	10.0	100.0
Cobalt	50		3.0	anr					
Copper	10		2.0	10.1	101.0			10.6	106.0
Iron	100	500		108	108.0			113	113.0
Lead	3.0	20	2.5	2.60	86.7			3.00	100.0
Lithium	50								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	15.6	104.0	3.00	100.0	16.1	107.3
Molybdenum	20			anr					
Nickel	10		4.0	9.40	94.0	3.20	80.0	9.50	95.0
Phosphorus	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	12.1	121.0			12.9	129.0
Silicon	200			anr					
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Strontium	10								
Sulfur	50								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10			anr					
Tungsten	50								
Vanadium	50		2.0	anr					
Zinc	20		10	20.8	104.0	8.20	82.0	19.9	99.5

8.3.7
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

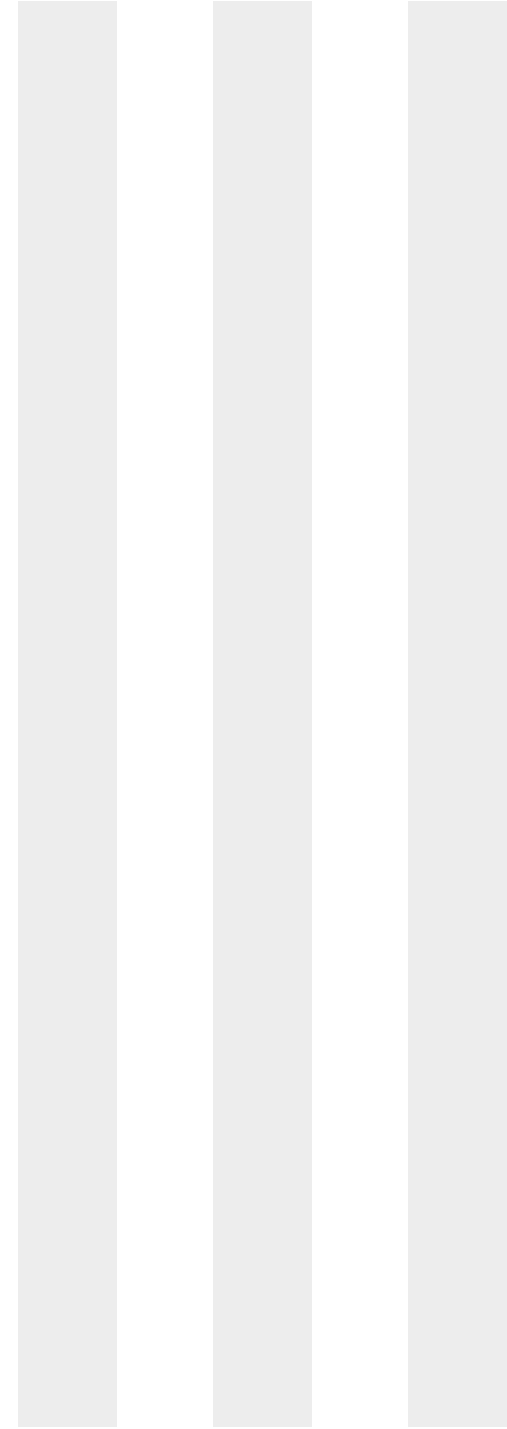
Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44691 Units: ug/l

Time:				13:25			14:12			19:15	
Sample ID:	CRI	CRIA	CRID	CRID1		CRID2		CRID3		CRID4	
Metal	True	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec

Zirconium 10

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



8.3.7
 8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 70 to 130 % Recovery Run ID: MA44691 Units: ug/l

Time:	Sample ID:	CRI	CRIA	CRID	19:19 CRID3	Results	% Rec
Metal	True	True	True	True	Results	% Rec	
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0				
Arsenic	8.0	20	3.0	anr			
Barium	200		4.0	4.20	105.0		
Beryllium	2.0		1.0	1.10	110.0		
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	anr			
Calcium	5000	2000	1000	anr			
Chromium	10		2.0	1.80	90.0		
Cobalt	50		3.0	anr			
Copper	10		2.0				
Iron	100	500					
Lead	3.0	20	2.5				
Lithium	50						
Magnesium	5000	2000	100	anr			
Manganese	15		3.0	3.10	103.3		
Molybdenum	20						
Nickel	10		4.0	3.40	85.0		
Phosphorus	50						
Potassium	5000		2000	anr			
Selenium	10	20	5.0	6.10	122.0		
Silicon	200						
Silver	5.0		2.0				
Sodium	5000		1000	anr			
Strontium	10						
Sulfur	50						
Thallium	10		2.0	anr			
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	anr			
Zinc	20		10	8.60	86.0		

8.3.7
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LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 70 to 130 % Recovery Run ID: MA44691 Units: ug/l

Time:	19:19				
Sample ID:	CRI	CRIA	CRID	CRID3	
Metal	True	True	True	Results	% Rec

Zirconium 10

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

8.3.7

8

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

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA44691 Units: ug/l

Metal	Time:		13:34		13:38		19:24		19:28	
	Sample ID:	ICSAB	ICSAL	% Rec	ICSAB1	% Rec	ICSA2	% Rec	ICSAB2	% Rec
Aluminum	500000	500000	535000	107.0	527000	105.4	550000	110.0	542000	108.4
Antimony		1000	-1.90		988	98.8	-1.80		1030	103.0
Arsenic		1000	0.00		1040	104.0	0.500		1070	107.0
Barium		500	0.200		497	99.4	0.00		512	102.4
Beryllium		500	0.300		487	97.4	0.300		497	99.4
Bismuth		500	7.70		504	100.8	9.90		520	104.0
Boron		500	-4.50		485	97.0	-5.00		501	100.2
Cadmium		1000	0.700		998	99.8	0.900		1030	103.0
Calcium	400000	400000	391000	97.8	400000	100.0	407000	101.8	415000	103.8
Chromium		500	-0.200		490	98.0	-0.600		508	101.6
Cobalt		500	-1.50		480	96.0	-1.50		495	99.0
Copper		500	1.70		506	101.2	1.00		521	104.2
Iron	200000	200000	195000	97.5	200000	100.0	198000	99.0	205000	102.5
Lead		1000	2.70		960	96.0	3.90		990	99.0
Lithium		500	6.30		514	102.8	6.10		527	105.4
Magnesium	500000	500000	520000	104.0	520000	104.0	528000	105.6	534000	106.8
Manganese		500	-2.30		499	99.8	-2.50		514	102.8
Molybdenum		500	-1.40		480	96.0	-1.30		493	98.6
Nickel		1000	1.50		962	96.2	1.50		996	99.6
Phosphorus		500	-4.00		488	97.6	-4.00		509	101.8
Potassium			-472		-465		-428		-441	
Selenium		1000	-2.20		992	99.2	-4.30		1030	103.0
Silicon		500	-12.2		485	97.0	-12.3		505	101.0
Silver		1000	2.00		1040	104.0	-0.200		1090	109.0
Sodium			42.1		48.1		55.4		59.1	
Strontium		500	4.50		510	102.0	4.30		524	104.8
Sulfur		500	-7.60		475	95.0	-11.1		492	98.4
Thallium		1000	0.400		998	99.8	-0.700		1020	102.0
Tin		500	-3.50		459	91.8	-3.80		471	94.2
Titanium		500	-0.900		501	100.2	-0.700		518	103.6
Tungsten		500	7.90		480	96.0	9.40		497	99.4
Vanadium		500	0.400		492	98.4	1.00		505	101.0
Zinc		1000	4.30		943	94.3	3.60		974	97.4

8.3.8
8

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

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: SE062118M1.ICP Date Analyzed: 06/21/18 Methods: EPA 200.7, SW846 6010C
 QC Limits: 80 to 120 % Recovery Run ID: MA44691 Units: ug/l

Time:			13:34			13:38			19:24			19:28
Sample ID:	ICSA	ICSAB	ICSAB1	% Rec	ICSAB1	% Rec	ICSAB2	% Rec	ICSAB2	% Rec		
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec		

Zirconium		500	-1.00		497	99.4	-0.900		512	102.4
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(*) Outside of QC limits
 (anr) Analyte not requested

8.3.8
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV
Analyst: ZC
Parameters: As,Tl

Date Analyzed: 06/21/18
Run ID: MA44694
Methods: SW846 6020A

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:16	MA44694-STD1	1		STDA
12:21	MA44694-STD2	1		STDA
12:26	MA44694-STD3	1		STDA
12:31	MA44694-STD4	1		STDA
12:36	MA44694-STD5	1		STDB
12:41	MA44694-STD6	1		STDC
12:46	MA44694-STD7	1		STDD
12:51	MA44694-STD8	1		STDE
12:56	MA44694-STD9	1		STDF
13:01	MA44694-STD10	1		STDG
13:07	MA44694-STD11	1		STDH
13:12	MA44694-STD12	1		STDI
13:17	MA44694-STD13	1		STDJ
13:37	MA44694-STD14	1		STDA
13:42	MA44694-STD15	1		STDE
13:47	MA44694-ICVA1	1		
13:53	MA44694-ICV1	1		
13:58	MA44694-ICB1	1		
14:03	MA44694-CCVA1	1		
14:08	MA44694-CCB1	1		
14:13	MA44694-CRI1	1		
14:18	MA44694-ICSA1	1		
14:23	MA44694-ICSAB1	1		
14:28	ZZZZZZ	1		
14:33	MA44694-CCVA2	1		
14:38	MA44694-CCB2	1		
14:43	MP7714A-MB1	2		
14:48	MP7714A-B2	2		
14:53	MP7714A-S3	2		
14:58	MP7714A-S4	2		
15:03	ZZZZZZ	2		
15:08	ZZZZZZ	10		
15:14	JC67951-2	2		(sample used for QC only; not part of login JC68071)

8.4
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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
Analyst: ZC Run ID: MA44694
Parameters: As,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:19	JC68071-1	2		
15:24	JC68071-2	2		
15:29	MA44694-CCVA3	1		
15:34	MA44694-CCB3	1		
15:39	MP7746-SD1	10		
15:44	ZZZZZZ	5		
15:49	ZZZZZZ	1		
15:54	MP7746-MB1	2		
15:59	MP7746-B1	2		
16:04	MP7746-S1	2		
16:09	ZZZZZZ	1		
16:15	ZZZZZZ	2		
16:20	ZZZZZZ	2		
16:25	MA44694-CCVA4	1		
16:30	MA44694-CCB4	1		
16:35	MP7746-S2	2		
16:40	JC68271-4	2		(sample used for QC only; not part of login JC68071)
16:45	ZZZZZZ	1		
16:50	ZZZZZZ	2		
16:55	MP7714A-SD1	10		
----->	Last reportable sample/prep for job JC68071			
17:00	ZZZZZZ	1		
17:05	MA44694-CRI2	1		
17:11	MA44694-CCVA5	1		
17:16	MA44694-CCB5	1		
----->	Last reportable CCB for job JC68071			
	Refer to raw data for calibration curve and standards.			

8.4
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REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 Analyst: ZC Run ID: MA44694
 Parameters: As,Tl

Time	Sample Description	Element: Dilution	A T s l
13:47	MA44694-ICVA1	1	X X
13:53	MA44694-ICV1	1	
13:58	MA44694-ICB1	1	X X
14:03	MA44694-CCVA1	1	X X
14:08	MA44694-CCB1	1	X X
14:13	MA44694-CRI1	1	X X
14:18	MA44694-ICSA1	1	X X
14:23	MA44694-ICSAB1	1	X X
14:28	ZZZZZZ	1	
14:33	MA44694-CCVA2	1	X X
14:38	MA44694-CCB2	1	X X
14:43	MP7714A-MB1	2	X X
14:48	MP7714A-B2	2	X X
14:53	MP7714A-S3	2	X X
14:58	MP7714A-S4	2	X X
15:03	ZZZZZZ	2	
15:08	ZZZZZZ	10	
15:14	JC67951-2	2	X X (a)
15:19	JC68071-1	2	X X
15:24	JC68071-2	2	X X
15:29	MA44694-CCVA3	1	X X
15:34	MA44694-CCB3	1	X X
15:39	MP7746-SD1	10	X
15:44	ZZZZZZ	5	
15:49	ZZZZZZ	1	
15:54	MP7746-MB1	2	X
15:59	MP7746-B1	2	X
16:04	MP7746-S1	2	X
16:09	ZZZZZZ	1	
16:15	ZZZZZZ	2	
16:20	ZZZZZZ	2	
16:25	MA44694-CCVA4	1	X X
16:30	MA44694-CCB4	1	X X
		Element: Dilution	A T s l

8.4.1
8

REPORTED ELEMENTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 Analyst: ZC Run ID: MA44694
 Parameters: As,Tl

Time	Sample Description	Element: Dilution	A T s l
16:35	MP7746-S2	2	X
16:40	JC68271-4	2	X (a)
16:45	ZZZZZZ	1	
16:50	ZZZZZZ	2	
16:55	MP7714A-SD1	10	X X
17:00	ZZZZZZ	1	
17:05	MA44694-CRI2	1	X X
17:11	MA44694-CCVA5	1	X X
17:16	MA44694-CCB5	1	X X

(a) Sample used for QC only; not part of login JC68071.

Element: A T
s l

8.4.1
8

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 Analyst: ZC Run ID: MA44694
 Parameters: As,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
12:16	MA44694-STD1	100	100	100	100	100	100	100	100
12:21	MA44694-STD2	100	100	100	100	100	100	100	100
12:26	MA44694-STD3	100	100	100	100	100	100	100	100
12:31	MA44694-STD4	100	100	100	100	100	100	100	100
12:36	MA44694-STD5	99.399	100.615	100.625	102.006	100.234	100.469	100.962	99.315
12:41	MA44694-STD6	99.731	100.916	100.106	101.303	101.2	100.852	100.142	100.383
12:46	MA44694-STD7	99.152	101.058	100.731	101.404	99.904	100.146	99.666	100.142
12:51	MA44694-STD8	98.017	100.253	99.189	101.03	99.38	98.705	99.892	98.562
12:56	MA44694-STD9	98.772	99.087	98.51	99.143	99.584	97.978	98.585	98.132
13:01	MA44694-STD10	96.97	97.629	97.034	97.825	97.593	96.509	96.664	96.507
13:07	MA44694-STD11	96.869	96.442	96.192	96.845	96.206	95.477	94.738	95.472
13:12	MA44694-STD12	96.361	96.54	96.193	96.596	95.927	96.112	95.357	93.992
13:17	MA44694-STD13	95.518	96.631	96.543	96.862	94.956	94.965	95.124	92.302
13:37	MA44694-STD14	100	100	100	100	100	100	100	100
13:42	MA44694-STD15	102.033	96.56	99.562	97.269	98.551	100.433	98.535	97.839
13:47	MA44694-ICVA1	97.424	94.769	98.121	98.052	96.789	97.945	96.934	93.71
13:53	MA44694-ICV1	98.443	95.091	98.373	98.624	97.777	98.446	97.222	96.096
13:58	MA44694-ICB1	99.475	96.314	98.842	96.554	98.029	98.535	96.923	96.974
14:03	MA44694-CCVA1	98.554	95.127	99.619	98.057	96.554	98.32	96.079	93.23
14:08	MA44694-CCB1	99.514	94.794	97.67	96.435	96.445	98.472	96.335	95.736
14:13	MA44694-CRI1	99.449	95.697	98.418	96.564	96.495	98.731	97.01	95.001
14:18	MA44694-ICSA1	86.032	87.803	92.936	91.969	86.93	90.647	90.311	79.744
14:23	MA44694-ICSAB1	83.685	88.66	91.447	93.152	88.356	89.935	92.092	80.535
14:28	ZZZZZZ	86.268	92.01	90.726	95.99	96.094	94.756	96.879	95.647
14:33	MA44694-CCVA2	88.087	92.823	93.815	95.988	96.377	95.799	95.929	93.605
14:38	MA44694-CCB2	90.289	92.942	93.897	95.512	96.528	96.096	96.248	95.03
14:43	MP7714A-MB1	86.673	89.86	87.701	91.144	93.426	90.849	93.473	92.983
14:48	MP7714A-B2	85.936	88.262	87.917	90.321	90.65	88.605	91.047	90.565
14:53	MP7714A-S3	84.235	86.291	84.649	89.633	89.479	86.798	92.806	85.786
14:58	MP7714A-S4	84.711	85.665	85.248	87.579	88.611	86.69	91.094	86.253
15:03	ZZZZZZ	84.886	85.616	84.732	86.977	88.853	86.458	89.873	85.543
15:08	ZZZZZZ	92.899	90.307	92.624	94.548	94.089	94.863	95.397	91.489
15:14	JC67951-2	84.045	83.372	82.802	86.295	87.193	85.357	88.067	85.239

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 Analyst: ZC Run ID: MA44694
 Parameters: As,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
15:19	JC68071-1	81.168	82.45	81.947	85.264	84.84	83.042	87.771	80.233
15:24	JC68071-2	81.74	83.245	82.686	85.882	85.842	83.587	88.407	82.59
15:29	MA44694-CCVA3	90.457	88.925	92.215	92.911	91.541	93.485	91.708	89.131
15:34	MA44694-CCB3	91.66	89.207	91.479	90.741	91.912	92.489	92.296	90.82
15:39	MP7746-SD1	92.316	90.097	92.778	93.093	92.656	94.275	92.916	90.381
15:44	ZZZZZZ	88.155	86.778	88.07	90.383	89.748	89.891	89.574	87.407
15:49	ZZZZZZ	91.113	87.9	90.967	91.499	90.707	92.13	91.208	90.558
15:54	MP7746-MB1	84.689	83.13	82.481	84.168	85.936	84.236	88.473	85.766
15:59	MP7746-B1	83.697	82.628	81.891	85.545	85.472	83.112	87.114	85.339
16:04	MP7746-S1	80.152	80.679	80.277	83.79	83.102	81.575	85.861	78.862
16:09	ZZZZZZ	89.84	86.827	88.931	90.246	89.593	90.046	90.491	89.111
16:15	ZZZZZZ	80.201	80.896	79.917	83.066	82.394	81.123	85.601	78.925
16:20	ZZZZZZ	79.255	80.838	79.77	82.535	82.387	80.169	85.496	78.533
16:25	MA44694-CCVA4	89.116	86.241	89.538	88.786	89.019	89.563	86.833	86.165
16:30	MA44694-CCB4	89.014	85.697	88.167	88.929	89.242	89.952	88.716	88.747
16:35	MP7746-S2	80.675	79.832	80.023	83.474	82.364	80.27	84.647	78.885
16:40	JC68271-4	78.85	78.301	78.882	81.564	81.84	79.937	84.113	78.084
16:45	ZZZZZZ	88.247	85.791	88.02	88.085	88.58	89.243	87.264	88.373
16:50	ZZZZZZ	78.723	78.561	77.481	80.716	80.612	78.707	82.729	77.918
16:55	MP7714A-SD1	86.776	83.151	84.532	85.972	86.484	87.924	85.95	84.906
17:00	ZZZZZZ	86.943	81.923	84.25	84.174	85.193	85.651	85.271	84.693
17:05	MA44694-CRI2	86.271	82.24	84.519	84.785	85.149	86.279	85.388	84.565
17:11	MA44694-CCVA5	85.047	81.037	83.953	84.341	84.796	84.737	83.61	82.044
17:16	MA44694-CCB5	85.407	80.759	82.173	84.093	83.804	84.223	83.569	83.665

! = Outside limits.

LEGEND:		CCV/CCB	
Istd#	Parameter	Limits	Limits
Istd#1	Lithium	70-130 %	70-130 %
Istd#2	Scandium (45-1)	70-130 %	70-130 %
Istd#3	Scandium (45-2)	70-130 %	70-130 %
Istd#4	Scandium (45-3)	70-130 %	70-130 %
Istd#5	Germanium (74-1)	70-130 %	70-130 %
Istd#6	Germanium (74-2)	70-130 %	70-130 %
Istd#7	Germanium (74-3)	70-130 %	70-130 %
Istd#8	Rhodium (103-1)	70-130 %	70-130 %

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 Analyst: ZC Run ID: MA44694
 Parameters: As,Tl

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
12:16	MA44694-STD1	100	100	100	100	100	100	100	100
12:21	MA44694-STD2	100	100	100	100	100	100	100	100
12:26	MA44694-STD3	100	100	100	100	100	100	100	100
12:31	MA44694-STD4	100	100	100	100	100	100	100	100
12:36	MA44694-STD5	99.216	100.462	100.448	100.803	100.041	100.225	100.849	100.487
12:41	MA44694-STD6	99.986	100.307	100.781	100.271	99.88	99.609	100.95	99.985
12:46	MA44694-STD7	99.52	100.964	98.899	99.589	99.04	99.673	101.621	99.262
12:51	MA44694-STD8	98.83	99.234	100.207	98.592	99.165	99.187	100.197	100.001
12:56	MA44694-STD9	97.256	97.539	98.594	97.051	98.35	97.941	98.675	99.631
13:01	MA44694-STD10	95.61	97.9	97.432	96.393	97.686	96.755	98.294	98.115
13:07	MA44694-STD11	95.154	95.066	95.958	95.829	97.437	96.127	96.779	97.819
13:12	MA44694-STD12	93.631	94.272	94.926	94.087	96.88	96.436	97.384	96.837
13:17	MA44694-STD13	92.52	92.575	94.387	94.443	97.153	96.786	95.922	98.243
13:37	MA44694-STD14	100	100	100	100	100	100	100	100
13:42	MA44694-STD15	100.317	96.76	98.393	98.318	97.753	99.224	97.779	97.511
13:47	MA44694-ICVA1	95.403	94.003	94.812	96.023	93.29	98.473	96.39	96.69
13:53	MA44694-ICV1	98.582	97.364	96.768	97.88	93.399	98.112	97.145	96.063
13:58	MA44694-ICB1	98.693	96.073	96.806	97.758	93.762	98.69	96.433	95.648
14:03	MA44694-CCVA1	95.788	94.314	94.272	95.838	95.292	97.327	96.436	95.022
14:08	MA44694-CCB1	98.077	95.982	95.684	96.95	92.336	96.892	96.065	95.509
14:13	MA44694-CRI1	97.998	95.548	96.292	97.76	93.356	98.071	96.379	95.867
14:18	MA44694-ICSA1	81.424	83.341	84.009	84.133	84.139	87.431	88.904	86.956
14:23	MA44694-ICSAB1	81.235	83.755	85.336	83.44	84.976	86.537	89.622	88.492
14:28	ZZZZZZ	95.067	96.372	97.117	93.12	93.942	94.499	96.837	96.916
14:33	MA44694-CCVA2	93.927	93.514	95.621	92.345	93.978	94.838	96.283	96.612
14:38	MA44694-CCB2	95.94	95.343	96.808	94.916	93.732	94.814	95.631	96.291
14:43	MP7714A-MB1	92.28	92.628	93.783	88.643	92.095	92.268	93.609	95.347
14:48	MP7714A-B2	90.491	89.668	92.15	88.141	91.025	92.167	91.603	94.472
14:53	MP7714A-S3	85.013	87.277	89.603	84.682	89.613	89.368	91.374	93.411
14:58	MP7714A-S4	85.294	85.921	89.303	84.901	90.058	89.98	90.448	93.431
15:03	ZZZZZZ	85.453	85.902	88.69	84.852	89.346	90.309	89.902	93.379
15:08	ZZZZZZ	93.002	93.141	94.276	93.363	91.836	94.538	95.137	95.149
15:14	JC67951-2	84.401	85.278	88.291	84.163	88.653	88.234	89.946	92.045

8.4.2
8

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 Analyst: ZC Run ID: MA44694
 Parameters: As,Tl

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
15:19	JC68071-1	80.19	82.007	84.1	81.088	86.035	86.223	87.847	89.683
15:24	JC68071-2	82.298	83.479	86.298	82.156	87.493	87.672	88.749	90.69
15:29	MA44694-CCVA3	90.785	90.193	90.341	91.07	90.682	93	92.497	93.4
15:34	MA44694-CCB3	91.841	90.853	92.103	91.868	90.502	92.369	91.744	92.451
15:39	MP7746-SD1	90.903	89.432	91.506	93.264	90.008	93.425	91.996	93.036
15:44	ZZZZZZ	87.515	87.229	89.356	88.499	88.77	90.771	90.016	91.759
15:49	ZZZZZZ	91.777	90.757	91.391	90.795	88.678	91.722	91.589	91.809
15:54	MP7746-MB1	85.995	85.049	86.891	83.681	87.447	87.731	86.962	89.916
15:59	MP7746-B1	84.457	85.009	86.751	83.083	86.997	87.624	87.613	90.291
16:04	MP7746-S1	79.154	80.961	83.138	79.868	84.493	84.714	86.767	88.337
16:09	ZZZZZZ	90.236	90.014	90.435	89.469	87.437	90.939	91	91.281
16:15	ZZZZZZ	79.134	80.058	81.993	79.309	84.494	85.214	85.875	87.527
16:20	ZZZZZZ	78.572	80.15	81.675	78.235	84.67	84.439	85.279	87.33
16:25	MA44694-CCVA4	87.946	85.976	87.857	87.787	88.124	90.556	88.772	90.673
16:30	MA44694-CCB4	89.214	88.28	89.201	89.386	86.765	89.81	88.896	90.283
16:35	MP7746-S2	78.358	79.322	82.603	78.834	83.551	84.341	85.141	87.365
16:40	JC68271-4	77.226	78.225	81.763	78.012	83.343	83.06	84.19	86.72
16:45	ZZZZZZ	88.435	86.695	88.468	88.415	86.922	89.013	88.481	89.919
16:50	ZZZZZZ	76.22	77.576	81.73	77.814	84.077	82.822	83.233	87.215
16:55	MP7714A-SD1	85.143	85.839	87.271	86.366	85.688	87.598	87.096	88.347
17:00	ZZZZZZ	85.877	84.583	85.895	85.411	83.704	86.797	85.688	86.832
17:05	MA44694-CRI2	85.28	84.946	85.907	85.481	84.583	86.347	86.837	86.842
17:11	MA44694-CCVA5	82.944	82.376	83.671	83.339	83.897	86.59	86.228	87.193
17:16	MA44694-CCB5	84.566	83.643	84.338	83.224	83.174	85.108	85.334	85.809

! = Outside limits.

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#9	Rhodium (103-2)	70-130 %	70-130 %
Istd#10	Rhodium (103-3)	70-130 %	70-130 %
Istd#11	Indium (115-1)	70-130 %	70-130 %
Istd#12	Indium (115-2)	70-130 %	70-130 %
Istd#13	Terbium (159-1)	70-130 %	70-130 %
Istd#14	Terbium (159-2)	70-130 %	70-130 %
Istd#15	Terbium (159-3)	70-130 %	70-130 %
Istd#16	Holmium (165-1)	70-130 %	70-130 %

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 Analyst: ZC Run ID: MA44694
 Parameters: As,Tl

Time	Sample Description	Istd#17	Istd#18	Istd#19
12:16	MA44694-STD1	100	100	100
12:21	MA44694-STD2	100	100	100
12:26	MA44694-STD3	100	100	100
12:31	MA44694-STD4	100	100	100
12:36	MA44694-STD5	100.131	99.809	99.016
12:41	MA44694-STD6	100.174	99.294	99.084
12:46	MA44694-STD7	98.993	100.756	99.019
12:51	MA44694-STD8	98.331	99.466	98.493
12:56	MA44694-STD9	97.476	99.873	97.154
13:01	MA44694-STD10	96.401	98.184	95.697
13:07	MA44694-STD11	95.4	95.938	94.488
13:12	MA44694-STD12	96.28	95.006	93.15
13:17	MA44694-STD13	96.555	93.636	91.328
13:37	MA44694-STD14	100	100	100
13:42	MA44694-STD15	98.986	101.032	99.003
13:47	MA44694-ICVA1	98.776	96.363	94.863
13:53	MA44694-ICV1	98.532	100.055	98.943
13:58	MA44694-ICB1	98.149	99.453	98.212
14:03	MA44694-CCVA1	97.432	95.484	94.785
14:08	MA44694-CCB1	97.269	97.601	97.847
14:13	MA44694-CRI1	98.174	98.756	98.082
14:18	MA44694-ICSA1	88.087	81.29	79.505
14:23	MA44694-ICSAB1	87.121	81.336	78.341
14:28	ZZZZZZ	94.831	100.413	94.691
14:33	MA44694-CCVA2	95.585	96.125	92.891
14:38	MA44694-CCB2	95.726	97.484	95.476
14:43	MP7714A-MB1	92.37	96.85	91.612
14:48	MP7714A-B2	92.238	94.613	90.046
14:53	MP7714A-S3	90.588	90.681	85.156
14:58	MP7714A-S4	90.454	89.884	85.998
15:03	ZZZZZZ	91.161	90.617	86.002
15:08	ZZZZZZ	94.697	97.371	93.339
15:14	JC67951-2	88.71	89.72	84.709

8.4.2
8

INTERNAL STANDARD SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 Analyst: ZC Run ID: MA44694
 Parameters: As,Tl

Time	Sample Description	Istd#17	Istd#18	Istd#19
15:19	JC68071-1	86.76	84.674	79.701
15:24	JC68071-2	89.063	87.235	82.818
15:29	MA44694-CCVA3	93.599	93.293	90.924
15:34	MA44694-CCB3	92.855	94.839	93.187
15:39	MP7746-SD1	93.759	94.28	92.604
15:44	ZZZZZZ	91.104	91.992	89.179
15:49	ZZZZZZ	91.643	94.624	91.756
15:54	MP7746-MB1	88.611	92.28	87.918
15:59	MP7746-B1	87.825	91.474	86.178
16:04	MP7746-S1	85.74	84.757	79.54
16:09	ZZZZZZ	91.141	93.698	91.387
16:15	ZZZZZZ	85.537	84.235	79.779
16:20	ZZZZZZ	84.747	84.84	79.074
16:25	MA44694-CCVA4	90.671	91.421	88.085
16:30	MA44694-CCB4	90.389	93.829	90.096
16:35	MP7746-S2	85.359	83.997	78.98
16:40	JC68271-4	83.649	83.243	78.095
16:45	ZZZZZZ	89.244	92.99	89.301
16:50	ZZZZZZ	82.869	84.775	78.271
16:55	MP7714A-SD1	87.418	91.908	87.772
17:00	ZZZZZZ	87.043	90.686	87.517
17:05	MA44694-CRI2	86.163	90.223	86.66
17:11	MA44694-CCVA5	87.36	88.052	84.529
17:16	MA44694-CCB5	85.452	89.94	86.037

! = Outside limits.

LEGEND:		CCV/CCB	
Istd#	Parameter	Limits	Limits
Istd#17	Holmium (165-2)	70-130 %	70-130 %
Istd#18	Bismuth (209-1)	70-130 %	70-130 %
Istd#19	Bismuth (209-2)	70-130 %	70-130 %

8.4.2
8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 QC Limits: result < RL Run ID: MA44694 Units: ug/l

Metal	Time:		13:58		14:08		14:38		15:34		
	Sample ID:	RL	IDL	ICB1	final	CCB1	final	CCB2	final	CCB3	final
Aluminum	25	.51	anr								
Antimony	2.0	.013									
Arsenic	0.50	.008	-0.00197	<0.50	0.00201	<0.50	0.00367	<0.50	0.00320	<0.50	
Barium	1.0	.006	anr								
Beryllium	0.50	.002									
Boron	25	.71									
Cadmium	0.50	.004									
Calcium	250	.82	anr								
Chromium	1.0	.011									
Cobalt	0.50	.003	anr								
Copper	2.0	.012									
Iron	25	.38	anr								
Lead	0.50	.003									
Magnesium	250	.41	anr								
Manganese	1.0	.005	anr								
Molybdenum	1.0	.023									
Nickel	1.0	.007									
Potassium	250	1.1	anr								
Selenium	0.50	.062	anr								
Silver	0.50	.002									
Sodium	250	.85	anr								
Strontium	5.0	.01									
Thallium	0.50	.006	0.00524	<0.50	0.0124	<0.50	0.00923	<0.50	0.0110	<0.50	
Tin	5.0	.025									
Titanium	1.0	.042									
Vanadium	1.0	.018	anr								
Zinc	5.0	.058									

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

8.4.3
 8

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 QC Limits: result < RL Run ID: MA44694 Units: ug/l

Metal	Time:		16:30		17:16	
	Sample ID:	RL	IDL	CCB4	CCB5	final
Aluminum	25	.51	anr			
Antimony	2.0	.013				
Arsenic	0.50	.008	0.00384	<0.50	-0.00196	<0.50
Barium	1.0	.006	anr			
Beryllium	0.50	.002				
Boron	25	.71				
Cadmium	0.50	.004				
Calcium	250	.82	anr			
Chromium	1.0	.011				
Cobalt	0.50	.003	anr			
Copper	2.0	.012				
Iron	25	.38	anr			
Lead	0.50	.003				
Magnesium	250	.41	anr			
Manganese	1.0	.005	anr			
Molybdenum	1.0	.023				
Nickel	1.0	.007				
Potassium	250	1.1	anr			
Selenium	0.50	.062	anr			
Silver	0.50	.002				
Sodium	250	.85	anr			
Strontium	5.0	.01				
Thallium	0.50	.006	0.0150	<0.50	0.0101	<0.50
Tin	5.0	.025				
Titanium	1.0	.042				
Vanadium	1.0	.018	anr			
Zinc	5.0	.058				

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

8.4.3
 8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA44694 Units: ug/l

Metal	Sample ID:	Time:	13:47	% Rec	ICV	13:53	% Rec	CCVA	14:03	% Rec
		ICVA	ICVAL		ICV1	CCVAL				
Aluminum	anr									
Antimony										
Arsenic	60	60.2	100.3					50	49.1	98.2
Barium	anr									
Beryllium										
Boron										
Cadmium										
Calcium	anr									
Chromium										
Cobalt	anr									
Copper										
Iron	anr									
Lead										
Magnesium	anr									
Manganese	anr									
Molybdenum										
Nickel										
Potassium	anr									
Selenium	anr									
Silver										
Sodium	anr									
Strontium										
Thallium	60	62.4	104.0					50	50.1	100.2
Tin										
Titanium										
Vanadium	anr									
Zinc										

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

8.4.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA44694 Units: ug/l

Metal	Sample ID: CCVA	14:33		CCVA	15:29		CCVA	16:25	
		CCVA2	Results		CCVA3	Results		CCVA4	Results
	True		% Rec	True		% Rec	True		% Rec
Aluminum	anr								
Antimony									
Arsenic	50	50.6	101.2	50	49.7	99.4	50	49.7	99.4
Barium	anr								
Beryllium									
Boron									
Cadmium									
Calcium	anr								
Chromium									
Cobalt	anr								
Copper									
Iron	anr								
Lead									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel									
Potassium	anr								
Selenium	anr								
Silver									
Sodium	anr								
Strontium									
Thallium	50	50.4	100.8	50	50.4	100.8	50	50.4	100.8
Tin									
Titanium									
Vanadium	anr								
Zinc									

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

8.4.4
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA44694 Units: ug/l

Time:	17:11		
Sample ID:	CCVA CCVA5		
Metal	True	Results	% Rec
Aluminum	anr		
Antimony			
Arsenic	50	48.8	97.6
Barium	anr		
Beryllium			
Boron			
Cadmium			
Calcium	anr		
Chromium			
Cobalt	anr		
Copper			
Iron	anr		
Lead			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel			
Potassium	anr		
Selenium	anr		
Silver			
Sodium	anr		
Strontium			
Thallium	50	49.8	99.6
Tin			
Titanium			
Vanadium	anr		
Zinc			

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

8.4.4
8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
 QC Limits: 70 to 130 % Recovery Run ID: MA44694 Units: ug/l

Metal	Time:		14:13		17:05		
	Sample ID:	CRI	CRIA	CRI1	CRI2	Results	% Rec
Aluminum	25	25	anr				
Antimony	2.0	0.25					
Arsenic	0.50	0.50	0.508	101.6	0.486	97.2	
Barium	1.0	0.50	anr				
Beryllium	0.50	0.25					
Boron	25	2.5					
Cadmium	0.50	0.25					
Calcium	250	125	anr				
Chromium	1.0	2.0					
Cobalt	0.50	0.25	anr				
Copper	2.0	2.0					
Iron	25	25	anr				
Lead	0.50	0.25					
Magnesium	250	125	anr				
Manganese	1.0	0.25	anr				
Molybdenum	1.0	0.50					
Nickel	1.0	2.0					
Potassium	250	125	anr				
Selenium	0.50	0.50	anr				
Silver	0.50	1.0					
Sodium	250	125	anr				
Strontium	5.0	0.50					
Thallium	0.50	0.25	0.495	99.0	0.475	95.0	
Tin	5.0	0.50					
Titanium	1.0	0.50					
Vanadium	1.0	2.0	anr				
Zinc	5.0	2.0					

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

8.4.5
 8

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

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: XB062118M1.CSV Date Analyzed: 06/21/18 Methods: SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA44694 Units: ug/l

Metal	Time:		14:18		14:23	
	Sample ID:	ICSAB	ICSAL	% Rec	ICSAB1	% Rec
Aluminum	100000	100000	95700	95.7	95500	95.5
Antimony			0.112		0.104	
Arsenic		20	0.0788		19.1	95.5
Barium			0.127		0.128	
Beryllium			0.00314		0.00422	
Boron			7.71		55.6	
Cadmium		20	0.108		18.5	92.5
Calcium	100000	100000	97000	97.0	96300	96.3
Chromium		20	0.199		19.5	97.5
Cobalt		20	0.0894		18.7	93.5
Copper		20	0.215		17.6	88.0
Iron	100000	100000	90300	90.3	91200	91.2
Lead			0.0988		0.101	
Magnesium	100000	100000	93000	93.0	93900	93.9
Manganese		20	0.337		19.5	97.5
Molybdenum	2000	2000	2140	107.0	2150	107.5
Nickel		20	0.655		18.5	92.5
Potassium	100000	100000	99400	99.4	99800	99.8
Selenium		20	0.0281		18.9	94.5
Silver		20	0.0338		17.9	89.5
Sodium	100000	100000	93700	93.7	94200	94.2
Strontium	2000	2000	2230	111.5	2260	113.0
Thallium			0.0288		0.0237	
Tin	2000	2000	2000	100.0	2030	101.5
Titanium	2000	2000	1840	92.0	1850	92.5
Vanadium		20	0.0699		20.5	102.5
Zinc		20	0.136		17.8	89.0

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

8.4.6
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7682
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/16/18

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.20	.052	.13	-0.056	<0.20

Associated samples MP7682: JC68071-1, JC68071-2

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: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7682
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 06/16/18

Metal	JC68089-1 Original MS	Spike lot HGPW3	% Rec	QC Limits
Mercury	0.0	55.8	60	93.0 75-125

Associated samples MP7682: JC68071-1, JC68071-2

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

8.5.2
 8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7682
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 06/16/18 06/16/18

Metal	JC68089-1 Original MSD	SpikeLot HGPW3	% Rec	MSD RPD	QC Limit	JC68089-1 Original DUP	RPD	QC Limits	
Mercury	0.0	55.8	60	93.0	0.0	20	0.0	0.0 (a) NC	0-20

Associated samples MP7682: JC68071-1, JC68071-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Elevated sample detection limit due to difficult sample matrix.

8.5.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7682
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 06/16/18 06/16/18

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits	BSD Result	Spikelot HGPW3	% Rec	BSD RPD	QC Limit
Mercury	2.0	2	100.0	80-120	2.0	2	100.0	0.0	

Associated samples MP7682: JC68071-1, JC68071-2

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

8.5.3
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/19/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	12	33		
Antimony	6.0	1.6	4.3		
Arsenic	3.0	1.5	2.7		
Barium	200	.4	1.3	0.30	<200
Beryllium	1.0	.1	.4	-0.10	<1.0
Bismuth	20	1.4	5		
Boron	100	1.1	13	0.70	<100
Cadmium	3.0	.3	.7		
Calcium	5000	2.7	29		
Chromium	10	.5	.85	0.0	<10
Cobalt	50	.2	.72		
Copper	10	.6	3.2	0.40	<10
Iron	100	4	32	1.6	<100
Lead	3.0	1.6	2.6	-0.20	<3.0
Lithium	50	2.5	15		
Magnesium	5000	26	64		
Manganese	15	.1	.42	0.10	<15
Molybdenum	20	.4	1.4		
Nickel	10	.4	1.3	0.80	<10
Phosphorus	50	2.5	13		
Potassium	10000	29	230		
Selenium	10	2.3	6.6	-1.0	<10
Silicon	200	1.5	45		
Silver	10	.6	3.1		
Sodium	10000	12	130		
Strontium	10	.1	.3		
Sulfur	50	2.9	15		
Thallium	2.0	.9	1.6		
Tin	10	.6	2.4		
Titanium	10	.4	1.8		
Tungsten	50	1.1	14		
Vanadium	50	.6	1.3		
Zinc	20	.2	4	5.9	<20

8.6.1
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/19/18

Metal	RL	IDL	MDL	MB raw	final
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Zirconium 10 .4 2

Associated samples MP7714: JC68071-1, JC68071-2

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

8.6.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/19/18

Metal	JC67951-1 Original MS		SpikeLot MPSPK2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium	37.8	2060	2000	101.1	75-125
Beryllium	0.0	2060	2000	103.0	75-125
Bismuth					
Boron	143	2120	2000	98.9	75-125
Cadmium					
Calcium					
Chromium	0.70	2050	2000	102.3	75-125
Cobalt					
Copper	64.3	2080	2000	103.9	75-125
Iron	3230	27500	25000	97.1	75-125
Lead	2.2	2080	2000	103.9	75-125
Lithium					
Magnesium					
Manganese	179	2090	2000	95.6	75-125
Molybdenum					
Nickel	6.5	2070	2000	103.5	75-125
Phosphorus					
Potassium					
Selenium	0.0	2060	2000	103.0	75-125
Silicon					
Silver					
Sodium					
Strontium					
Sulfur					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	3.9	2100	2000	104.8	75-125

8.6.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/19/18

Metal	JC67951-1 Original MS	SpikeLot MPSPK2	% Rec	QC Limits
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Zirconium

Associated samples MP7714: JC68071-1, JC68071-2

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

8.6.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/19/18

Metal	JC67951-1 Original MSD	SpikeLot MPSPK2	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic						
Barium	37.8	2070	2000	101.6	0.5	20
Beryllium	0.0	2060	2000	103.0	0.0	20
Bismuth						
Boron	143	2130	2000	99.4	0.5	20
Cadmium						
Calcium						
Chromium	0.70	2080	2000	103.8	1.5	20
Cobalt						
Copper	64.3	2100	2000	104.9	1.0	20
Iron	3230	27300	25000	96.3	0.7	20
Lead	2.2	2100	2000	104.9	1.0	20
Lithium						
Magnesium						
Manganese	179	2100	2000	96.1	0.5	20
Molybdenum						
Nickel	6.5	2080	2000	104.0	0.5	20
Phosphorus						
Potassium						
Selenium	0.0	2050	2000	102.5	0.5	20
Silicon						
Silver						
Sodium						
Strontium						
Sulfur						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc	3.9	2120	2000	105.8	0.9	20

8.6.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

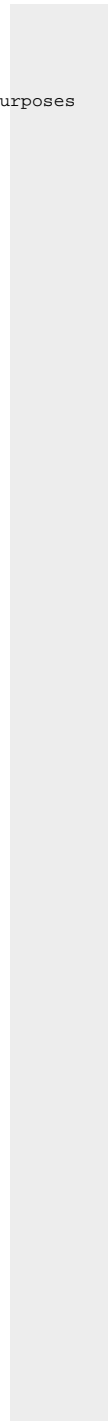
Prep Date: 06/19/18

Metal	JC67951-1 Original MSD	SpikeLot MPSPK2	% Rec	MSD RPD	QC Limit
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Zirconium

Associated samples MP7714: JC68071-1, JC68071-2

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



8.6.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/19/18

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	2000	2000	100.0	80-120
Beryllium	2000	2000	100.0	80-120
Bismuth				
Boron	2050	2000	102.5	80-120
Cadmium				
Calcium				
Chromium	2010	2000	100.5	80-120
Cobalt				
Copper	1960	2000	98.0	80-120
Iron	26000	25000	104.0	80-120
Lead	2030	2000	101.5	80-120
Lithium				
Magnesium				
Manganese	2040	2000	102.0	80-120
Molybdenum				
Nickel	2000	2000	100.0	80-120
Phosphorus				
Potassium				
Selenium	1990	2000	99.5	80-120
Silicon				
Silver				
Sodium				
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	2030	2000	101.5	80-120

8.6.3
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/19/18

Metal	BSP Result	Spikelot MPSPK2	QC % Rec	QC Limits
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Zirconium

Associated samples MP7714: JC68071-1, JC68071-2

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

8.6.3
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 06/19/18

Metal	JC67951-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	9.50	10.1	6.3	0-10
Beryllium	0.00	0.00	NC	0-10
Bismuth				
Boron	28.1	27.4	2.5	0-10
Cadmium				
Calcium				
Chromium	0.700	0.00	100.0(a)	0-10
Cobalt				
Copper	64.3	66.2	3.0	0-10
Iron	94.1	89.6	4.8	0-10
Lead	0.00	0.00	NC	0-10
Lithium				
Magnesium				
Manganese	12.8	12.4	3.1	0-10
Molybdenum				
Nickel	6.50	2.70	58.5 (a)	0-10
Phosphorus				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver				
Sodium				
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	33.0	27.2	17.6*(b)	0-10

8.6.4
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/19/18

Metal	JC67951-2	QC
	Original SDL 1:5 %DIF	Limits

Zirconium

Associated samples MP7714: JC68071-1, JC68071-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

8.6.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714A
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 06/20/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	1	16		
Antimony	4.0	.026	1.8		
Arsenic	1.0	.016	.33	0.058	<1.0
Barium	2.0	.012	.54		
Beryllium	1.0	.004	.024		
Boron	50	1.4	17		
Cadmium	1.0	.008	.073		
Calcium	500	1.6	91		
Chromium	2.0	.022	.59		
Cobalt	1.0	.006	.068		
Copper	4.0	.024	2.8		
Iron	50	.76	15		
Lead	1.0	.006	.53		
Magnesium	500	.81	5.1		
Manganese	2.0	.01	.67		
Molybdenum	2.0	.046	.23		
Nickel	2.0	.014	.56		
Potassium	500	2.3	68		
Selenium	1.0	.12	.34		
Silver	1.0	.004	.34		
Sodium	500	1.7	15		
Strontium	10	.02	3.2		
Thallium	1.0	.012	.047	0.0039	<1.0
Tin	10	.05	3.7		
Titanium	2.0	.084	.71		
Vanadium	2.0	.036	1.4		
Zinc	10	.12	9.3		

Associated samples MP7714A: JC68071-1, JC68071-2

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

8.7.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714A
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 06/20/18

Metal	JC67951-2 Original MS		Spike/lot MP6020AQ1% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	0.46	83.0	80	103.2 75-125
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium	0.038	84.3	80	105.3 75-125
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP7714A: JC68071-1, JC68071-2

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

8.7.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714A
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 06/20/18

Metal	JC67951-2 Original MSD		Spike/lot MP6020AQ1% Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.46	82.2	80	102.2	1.0	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium	0.038	86.1	80	107.6	2.1	20
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP7714A: JC68071-1, JC68071-2

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

8.7.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714A
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 06/20/18

Metal	BSP Result	Spikelot MP6020AQ1% Rec	QC Limits
Aluminum			
Antimony			
Arsenic	80.0	80	100.0 80-120
Barium			
Beryllium			
Boron			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Molybdenum			
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Strontium			
Thallium	81.1	80	101.4 80-120
Tin			
Titanium			
Vanadium			
Zinc			

Associated samples MP7714A: JC68071-1, JC68071-2

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

8.7.3
 8

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC68071
 Account: ILINY - Parsons Engineering Science for ILI
 Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

QC Batch ID: MP7714A
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 06/20/18

Metal	JC67951-2		QC	
	Original	SDL 2:10	%DIF	Limits
Aluminum				
Antimony				
Arsenic	0.464	0.491	5.9	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium	0.0377	2.35	6138.9(a)	0-10
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP7714A: JC68071-1, JC68071-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.7.4
8

Instrument Detection Limits

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: AGICPMS2	Effective Date: 06/06/18
--------------------------------	---------------------------------

Analyte	IDL ug/l
Aluminum	.287
Aluminum	.511
Antimony	.013
Arsenic	.901
Arsenic	.008
Barium	.006
Beryllium	.002
Boron	.708
Cadmium	.012
Cadmium	.004
Calcium	.822
Chromium	.059
Chromium	.011
Cobalt	.005
Cobalt	.003
Copper	.141
Copper	.012
Iron	2.742
Iron	.378
Lead	.003
Magnesium	.108
Magnesium	.407
Manganese	.024
Manganese	.005
Molybdenum	.023
Nickel	.171
Nickel	.007
Potassium	2.294
Potassium	1.13
Selenium	1.012
Selenium	.062
Silver	.002
Sodium	.658
Sodium	.851
Strontium	.01
Thallium	.006
Tin	.035
Tin	.025
Titanium	.026
Titanium	.042
Vanadium	.192
Vanadium	.018
Zinc	.111
Zinc	.058



Instrument Detection Limits

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: AGICPMS2	Effective Date: 06/06/18
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Analyte	IDL ug/l

The above applies to the following instrument runs:
MA44694



Instrument Detection Limits

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: LEEMANHG9	Effective Date: 05/30/18
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Analyte	IDL ug/l
Mercury	.0521

The above applies to the following instrument runs:
MA44661



Instrument Detection Limits

Job Number: JC68071
Account: ILINY Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: SSTRACE5	Effective Date: 05/29/18
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Analyte	IDL ug/l
Aluminum	11.6
Antimony	1.6
Arsenic	1.5
Barium	.4
Beryllium	.1
Bismuth	1.4
Boron	1.1
Cadmium	.3
Calcium	2.7
Chromium	.5
Cobalt	.2
Copper	.6
Iron	4
Lead	1.6
Lithium	2.5
Magnesium	25.6
Manganese	.1
Molybdenum	.4
Nickel	.4
Phosphorus	2.5
Potassium	29.1
Selenium	2.3
Silicon	1.5
Silver	.6
Sodium	11.9
Sulfur	2.9
Strontium	.1
Thallium	.9
Tin	.6
Titanium	.4
Tungsten	1.1
Vanadium	.6
Zinc	.2
Zirconium	.4

The above applies to the following instrument runs:
MA44684, MA44691



Instrument Linear Ranges

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: AGICPMS2

Effective Date: 09/28/17

Analyte	Linear Range ug/l
Aluminum	100000
Aluminum	100000
Antimony	500
Arsenic	500
Arsenic	500
Barium	500
Beryllium	500
Boron	500
Cadmium	500
Cadmium	500
Calcium	100000
Chromium	500
Chromium	500
Cobalt	500
Cobalt	500
Copper	500
Copper	500
Iron	100000
Iron	100000
Lithium	100
Lead	500
Magnesium	100000
Magnesium	100000
Manganese	500
Manganese	500
Molybdenum	500
Nickel	500
Nickel	500
Potassium	100000
Potassium	100000
Selenium	250
Selenium	250
Silver	100
Sodium	100000
Sodium	100000
Strontium	500
Thallium	500
Tin	500
Tin	500
Titanium	500
Titanium	500
Tungsten	100
Uranium	100
Vanadium	500
Vanadium	500
Zinc	500



Instrument Linear Ranges

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: AGICPMS2	Effective Date: 09/28/17
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Analyte	Linear Range ug/l
Zinc	500

The above applies to the following instrument runs:
MA44694



Instrument Linear Ranges

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: LEEMANHG9	Effective Date: 02/26/18
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Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA44661



Instrument Linear Ranges

Job Number: JC68071

Account: ILINY Parsons Engineering Science for ILI

Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Instrument ID: SSTRACE5

Effective Date: 11/30/17

Analyte	Linear Range ug/l
Aluminum	600000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Bismuth	10000
Boron	10000
Cadmium	10000
Calcium	300000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	300000
Lead	10000
Lithium	10000
Magnesium	600000
Manganese	10000
Molybdenum	10000
Nickel	10000
Palladium	10000
Phosphorus	50000
Potassium	300000
Selenium	10000
Silicon	50000
Silver	1250
Sodium	300000
Sulfur	100000
Strontium	10000
Thallium	10000
Tin	10000
Titanium	10000
Tungsten	10000
Vanadium	10000
Zinc	10000
Zirconium	10000

The above applies to the following instrument runs:
MA44684, MA44691



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: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN81698	5.0	0.0	mg/l	250	235	94.0	90-110%
Alkalinity, Total as CaCO3	GN81698			mg/l	50.00	47.2	94.3	90-110%
Bromide	GP14066/GN82087	0.50	0.0	mg/l	1	0.954	95.4	90-110%
Bromide	GP14066/GN82225	0.50	0.0	mg/l	1	0.938	93.8	90-110%
Chemical Oxygen Demand	GP13794/GN81429	20	0.0	mg/l				
Chemical Oxygen Demand	GP13794/GN81429	20	0.0	mg/l	50.00	47.5	95.0	90-110%
Chloride	GP14066/GN82087	2.0	0.0	mg/l	10	9.05	90.5	90-110%
Chloride	GP14066/GN82225	2.0	0.0	mg/l	10	9.04	90.4	90-110%
Fluoride	GP14066/GN82087	0.20	0.0	mg/l	1	1.08	108.0	90-110%
Hardness, Total as CaCO3	GN81587	4.0	0.0	mg/l	80	81.5	101.9	80-120%
Hardness, Total as CaCO3	GN81587			mg/l	160	163	101.9	80-120%
Hardness, Total as CaCO3	GN81587			mg/l	80	81.5	101.9	80-120%
Hardness, Total as CaCO3	GN81587			mg/l	160	159	99.4	80-120%
Nitrogen, Ammonia	GP13874/GN81612	0.20	0.0	mg/l	1	1.02	102.0	80-120%
Solids, Total Dissolved	GN81547	10	2.0	mg/l				
Sulfate	GP14066/GN82087	2.0	0.0	mg/l	10	9.81	98.1	90-110%
Sulfate	GP14066/GN82225	2.0	0.0	mg/l	10	10.5	105.0	90-110%
Total Organic Carbon	GP13839/GN81526	1.0	0.0	mg/l	10	9.98	99.8	90-110%

Associated Samples:

Batch GN81547: JC68071-1, JC68071-2
Batch GN81587: JC68071-1, JC68071-2
Batch GN81698: JC68071-1, JC68071-2
Batch GP13794: JC68071-1, JC68071-2
Batch GP13839: JC68071-1, JC68071-2
Batch GP13874: JC68071-1, JC68071-2
Batch GP14066: JC68071-1, JC68071-2
(*) Outside of QC limits

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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN81698	JC67999-1	mg/l	298	295	-1.0	0-10%
Bromide	GP14066/GN82225	JC67877-1	mg/l	0.39	0.35	200.0(a)	0-20%
Bromide	GP14066/GN82225	JC67877-1	mg/l	0.0	0.35	200.0(a)	0-20%
Chemical Oxygen Demand	GP13794/GN81429	JC67951-2	mg/l	5.0	0.0	0.0	0-25%
Chloride	GP14066/GN82225	JC67877-1	mg/l	139	147	5.6	0-20%
Fluoride	GP14066/GN82087	JC67877-1	mg/l	0.16	0.33	69.4(a)	0-20%
Fluoride	GP14066/GN82087	JC67877-1	mg/l	0.0	0.33	69.4(a)	0-20%
Fluoride	GP14066/GN82087	JC67877-1	mg/l	0.0	0.33	69.4(a)	0-20%
Hardness, Total as CaCO3	GN81587	JC67951-2	mg/l	67.9	66.0	2.8	0-10%
Nitrogen, Ammonia	GP13874/GN81612	JC67995-1	mg/l	3.3	3.4	3.0	0-33%
Solids, Total Dissolved	GN81547	JC68073-5	mg/l	3.0	3.0	0.0	0-16%
Sulfate	GP14066/GN82225	JC67877-1	mg/l	61.0	60.8	0.3	0-20%

Associated Samples:

Batch GN81547: JC68071-1, JC68071-2
Batch GN81587: JC68071-1, JC68071-2
Batch GN81698: JC68071-1, JC68071-2
Batch GP13794: JC68071-1, JC68071-2
Batch GP13874: JC68071-1, JC68071-2
Batch GP14066: JC68071-1, JC68071-2

(*) Outside of QC limits

(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP14066/GN82225	JC67877-1	mg/l	0.39	20	18.7	94.0	80-120%
Bromide	GP14066/GN82225	JC67877-1	mg/l	0.0	20	18.7	94.0	80-120%
Chemical Oxygen Demand	GP13794/GN81429	JC67951-2	mg/l	5.0	50.00	62.5	125.0	55-133%
Chloride	GP14066/GN82225	JC67877-1	mg/l	139	200	323	92.0	80-120%
Fluoride	GP14066/GN82087	JC67877-1	mg/l	0.16	1	1.0	84.0	80-120%
Fluoride	GP14066/GN82087	JC67877-1	mg/l	0.0	1	1.0	84.0	80-120%
Fluoride	GP14066/GN82087	JC67877-1	mg/l	0.0	1	1.0	84.0	80-120%
Hardness, Total as CaCO3	GN81587	JC67951-2	mg/l	67.9	160	225	98.2	67-130%
Nitrogen, Ammonia	GP13874/GN81612	JC67995-1	mg/l	3.3	1	4.4	110.0	75-131%
Sulfate	GP14066/GN82225	JC67877-1	mg/l	61.0	100	162	101.0	80-120%
Total Organic Carbon	GP13839/GN81526	JC68071-1	mg/l	7.7	10	18.7	110.0	50-150%

Associated Samples:

Batch GN81587: JC68071-1, JC68071-2
Batch GP13794: JC68071-1, JC68071-2
Batch GP13839: JC68071-1, JC68071-2
Batch GP13874: JC68071-1, JC68071-2
Batch GP14066: JC68071-1, JC68071-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

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MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Ammonia	GP13874/GN81612	JC67995-1	mg/l	3.3	1	4.3	2.3	14%
Total Organic Carbon	GP13839/GN81526	JC68071-1	mg/l	7.7	10	19.1	2.1	11%

Associated Samples:

Batch GP13839: JC68071-1, JC68071-2

Batch GP13874: JC68071-1, JC68071-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: E80618W1.TXT Date Analyzed: 06/18/18 Methods: SW846 9060A
Analyst: CD Run ID: GN81526
Parameters: Total Organic Carbon

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:19	GN81526-STD1	1		STDA
13:41	GN81526-STD2	1		STDB
13:55	GN81526-STD3	1		STDC
14:07	GN81526-STD4	1		STDD
14:24	GN81526-STD5	1		STDE
14:37	GN81526-STD6	1		STDF
14:50	GN81526-STD7	1		STDG
15:04	GN81526-STD8	1		STDH
08:48	ZZZZZZ	1		
09:07	GN81526-CRI1	1		
09:19	GN81526-HSTD1	1		
09:33	GN81526-ICV1	1		
09:52	GN81526-ICB1	1		
10:09	GN81526-CCV1	1		
10:25	GN81526-CCB1	1		
10:47	ZZZZZZ	1		
11:15	GP13839-MB1	1		
11:15	GP13783-MB2	1		
11:48	GP13839-B1	1		
11:48	GP13783-B2	1		
12:04	ZZZZZZ	1		
12:18	JC68071-1	1		
12:30	GP13839-S1	1		
12:43	GP13839-MSD1	1		
12:56	JC68071-2	1		
13:09	ZZZZZZ	100		
13:23	GN81526-CCVA1	1		
13:41	GN81526-CCB2	1		
14:00	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

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Instrument QC Summary
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: E80618W1.TXT

Date Analyzed: 06/18/18
Run ID: GN81526

Methods: SW846 9060A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN81526-CRI1	Total Organic Carbon	0.879	1.0	0.60	1	87.9	70-130
GN81526-HSTD1	Total Organic Carbon	50.1	1.0	0.60	50	100.2	90-110
GN81526-ICV1	Total Organic Carbon	19.2	1.0	0.60	20	96.0	90-110
GN81526-ICB1	Total Organic Carbon	0.60 U	1.0	0.60			
GN81526-CCV1	Total Organic Carbon	24.1	1.0	0.60	25	96.4	90-110
GN81526-CCB1	Total Organic Carbon	0.60 U	1.0	0.60			
GN81526-CCVA1	Total Organic Carbon	50.4	1.0	0.60	50	100.8	
GN81526-CCB2	Total Organic Carbon	0.60 U	1.0	0.60			

(!) Outside of QC limits

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061918W1.AMN

Date Analyzed: 06/19/18

Methods: SM4500NH3 H-11LACHAT

Analyst: BM

Run ID: GN81612

Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:06	GN81612-STD1	1		STDA
12:07	GN81612-STD2	1		STDB
12:08	GN81612-STD3	1		STDC
12:10	GN81612-STD4	1		STDD
12:11	GN81612-STD5	1		STDE
12:13	GN81612-STD6	1		STDF
12:14	GN81612-STD7	1		STDG
12:16	GN81612-ICV1	1		
12:17	GN81612-ICB1	1		
12:18	GN81612-CCV1	1		
12:20	GN81612-CCB1	1		
12:21	GP13873-MB1	1		
12:23	GP13873-B1	1		
12:24	GP13873-S1	1		
12:26	GP13873-MSD1	1		
12:27	GP13873-D1	1		
12:28	ZZZZZZ	1		
12:30	ZZZZZZ	1		
12:31	ZZZZZZ	1		
12:33	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:36	GN81612-CCVA1	1		
12:37	GN81612-CCB2	1		
12:38	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:43	ZZZZZZ	1		
12:44	ZZZZZZ	1		
12:46	JC67830-1	1		(sample used for QC only; not part of login JC68071)
12:47	ZZZZZZ	1		
12:48	ZZZZZZ	1		
12:50	ZZZZZZ	1		
12:51	ZZZZZZ	1		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061918W1.AMN

Date Analyzed: 06/19/18

Methods: SM4500NH3 H-11LACHAT

Analyst: BM

Run ID: GN81612

Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:53	GN81612-CCV2	1		
12:54	GN81612-CCB3	1		
12:56	ZZZZZZ	1		
12:57	ZZZZZZ	1		
12:59	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:03	GP13874-MB1	1		
13:04	GP13874-B1	1		
13:06	GP13874-S1	1		Over calibration curve. See rerun at dilution.
13:07	GP13874-MSD1	1		Over calibration curve. See rerun at dilution.
13:09	GP13874-D1	1		Over calibration curve. See rerun at dilution.
13:10	GN81612-CCVA2	1		
13:12	GN81612-CCB4	1		
13:13	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:16	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:19	JC67995-1	1		(sample used for QC only; not part of login JC68071)
13:20	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:23	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:27	GN81612-CCV3	1		
13:29	GN81612-CCB5	1		
13:30	ZZZZZZ	1		
13:32	JC68071-1	1		Over calibration curve. See rerun at dilution.
13:33	JC68071-2	1		Over calibration curve. See rerun at dilution.
13:35	ZZZZZZ	2000		
13:36	ZZZZZZ	4000		
13:38	ZZZZZZ	2000		
13:39	ZZZZZZ	4000		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061918W1.AMN

Date Analyzed: 06/19/18

Methods: SM4500NH3 H-11LACHAT

Analyst: BM

Run ID: GN81612

Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:40	ZZZZZZ	1		
13:42	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:45	GN81612-CCVA3	1		
13:46	GN81612-CCB6	1		
13:48	ZZZZZZ	5		
13:49	ZZZZZZ	4		
13:50	ZZZZZZ	2		
13:52	ZZZZZZ	2		
13:53	GP13874-S1	3		1:3 dilution.
13:55	GP13874-MSD1	3		1:3 dilution.
13:56	GP13874-D1	2		1:2 dilution.
13:58	JC67995-1	2		(sample used for QC only; not part of login JC68071)
13:59	ZZZZZZ	3		
14:00	ZZZZZZ	100		
14:02	GN81612-CCV4	1		
14:03	GN81612-CCB7	1		
14:05	ZZZZZZ	200		
14:06	ZZZZZZ	40		
14:08	ZZZZZZ	80		
14:09	ZZZZZZ	30		
14:10	ZZZZZZ	60		
14:12	ZZZZZZ	20		
14:13	ZZZZZZ	40		
14:15	ZZZZZZ	20		
14:16	ZZZZZZ	40		
14:18	ZZZZZZ	40		
14:19	GN81612-CCVA4	1		
14:20	GN81612-CCB8	1		
14:22	ZZZZZZ	80		
14:23	ZZZZZZ	20		
14:25	ZZZZZZ	40		
14:26	JC68071-1	10		1:10 dilution.

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061918W1.AMN

Date Analyzed: 06/19/18

Methods: SM4500NH3 H-11LCHAT

Analyst: BM

Run ID: GN81612

Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:28	JC68071-1	20		1:20 dilution.
14:29	JC68071-2	20		1:20 dilution.
14:30	JC68071-2	40		1:40 dilution.
14:32	ZZZZZ	2		
14:37	GN81612-CCV5	1		
14:38	GN81612-CCB9	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: D061918W1.AMN

Date Analyzed: 06/19/18
Run ID: GN81612

Methods: SM4500NH3 H-11LACHAT
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN81612-ICV1	Nitrogen, Ammonia	1.50	0.20	0.14	1.5	100.0	90-110
GN81612-ICB1	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCV1	Nitrogen, Ammonia	1.51	0.20	0.14	1.5	100.7	90-110
GN81612-CCB1	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCVA1	Nitrogen, Ammonia	3.00	0.20	0.14	3	100.0	
GN81612-CCB2	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCV2	Nitrogen, Ammonia	1.36	0.20	0.14	1.5	90.7	90-110
GN81612-CCB3	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCVA2	Nitrogen, Ammonia	2.96	0.20	0.14	3	98.7	
GN81612-CCB4	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCV3	Nitrogen, Ammonia	1.43	0.20	0.14	1.5	95.3	90-110
GN81612-CCB5	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCVA3	Nitrogen, Ammonia	2.98	0.20	0.14	3	99.3	
GN81612-CCB6	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCV4	Nitrogen, Ammonia	1.48	0.20	0.14	1.5	98.7	90-110
GN81612-CCB7	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCVA4	Nitrogen, Ammonia	2.94	0.20	0.14	3	98.0	
GN81612-CCB8	Nitrogen, Ammonia	0.14 U	0.20	0.14			
GN81612-CCV5	Nitrogen, Ammonia	1.48	0.20	0.14	1.5	98.7	90-110
GN81612-CCB9	Nitrogen, Ammonia	0.14 U	0.20	0.14			

(!) Outside of QC limits

9.6
6

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118062801.TXT

Date Analyzed: 06/28/18

Methods: EPA 300/SW846 9056A

Analyst: NV

Run ID: GN82087

Parameters: Bromide,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:33	GN82087-STD1	1		Manually integrated chrom. peaks reviewed and verified to comply with criteria of Accutest SOP EQA044.
18:05	GN82087-STD2	1		STDB
18:32	GN82087-STD3	1		STDC
19:00	GN82087-STD4	1		STDD
19:28	GN82087-STD5	1		STDE
19:56	GN82087-STD6	1		STDF
08:50	GN82087-ICV1	1		
09:18	GN82087-CCV1	1		
09:46	GN82087-CCB1	1		
10:14	GP14066-MB1	1		
10:14	GP14027-MB4	1		
11:18	GP14066-B1	1		
11:18	GP14027-B4	1		
11:45	GP14027-S2	2		
12:13	GP14066-S2	1		Over calibration curve. See rerun at dilution for bro,chl,so4
12:41	JC67865-1	1		(sample used for QC only; not part of login JC68071)
13:09	ZZZZZZ	1		
13:37	ZZZZZZ	1		
14:05	GP14066-S1	1		Over calibration curve. See rerun at dilution for chl,so4. reporting for bro,f.
14:33	GP14066-D1	1		Over calibration curve. See rerun at dilution for chl,so4. reporting for bro,f.
15:01	JC67877-1	1		(sample used for QC only; not part of login JC68071)
15:48	GN82087-CCV2	1		
16:15	GN82087-CCB2	1		
16:43	ZZZZZZ	1		
17:11	ZZZZZZ	1		
17:39	ZZZZZZ	1		
18:07	ZZZZZZ	1		
18:35	ZZZZZZ	1		
19:03	ZZZZZZ	1		
19:31	ZZZZZZ	1		
19:58	JC68071-1	1		Over calibration curve. See rerun at dilution for chl. ccv failed for chl. reporting for bro,so4.
20:26	JC68071-2	1		Over calibration curve. See rerun at dilution for chl. ccv failed for chl. reporting for bro,so4.
20:54	GN82087-CCV3	1		ccv failed for chl.

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071
Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118062801.TXT Date Analyzed: 06/28/18 Methods: EPA 300/SW846 9056A
Analyst: NV Run ID: GN82087
Parameters: Bromide,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:22	GN82087-CCB3	1		
21:50	GP14120-MB1	1		CCV out for Chl
22:18	GP14120-B1	1		CCV out for Chl
22:46	GP14120-S2	1		ccv failed for chl, see rerun for chl. reporting for bro,so4.
23:14	JC68250-1	1		(sample used for QC only; not part of login JC68071)
23:42	GP14120-S1	1		ccv failed for chl, see rerun for chl. reporting for bro,so4.
00:10	GP14120-D1	1		ccv failed for chl, see rerun for chl. reporting for bro,so4.
00:38	JC68250-2	1		(sample used for QC only; not part of login JC68071)
01:06	ZZZZZZ	1		
01:34	ZZZZZZ	1		
02:01	ZZZZZZ	1		
02:29	GN82087-CCV4	1		
02:57	GN82087-CCB4	1		
03:25	ZZZZZZ	1		
03:53	ZZZZZZ	1		
04:21	ZZZZZZ	1		
04:49	ZZZZZZ	1		
05:17	ZZZZZZ	1		
05:45	ZZZZZZ	1		
06:13	ZZZZZZ	1		
06:41	ZZZZZZ	1		
07:09	ZZZZZZ	1		
07:37	ZZZZZZ	1		
08:04	GN82087-CCV5	1		
08:32	GN82087-CCB5	1		
09:00	ZZZZZZ	1		
09:28	ZZZZZZ	1		
09:56	GN82087-CCV6	1		
10:24	GN82087-CCB6	1		

Refer to raw data for calibration curve and standards.

9.7
9

Instrument QC Summary
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118062801.TXT

Date Analyzed: 06/28/18
Run ID: GN82087

Methods: EPA 300/SW846 9056A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN82087-ICV1	Bromide	1.04	0.50	0.060	1	104.0	90-110
GN82087-ICV1	Sulfate	10.2	2.0	0.53	10	102.0	90-110
GN82087-CCV1	Bromide	2.58	0.50	0.060	2.5	103.2	90-110
GN82087-CCV1	Sulfate	12.6	2.0	0.53	12.5	100.8	90-110
GN82087-CCB1	Bromide	0.060 U	0.50	0.060			
GN82087-CCB1	Sulfate	0.53 U	2.0	0.53			
GN82087-CCV2	Bromide	2.45	0.50	0.060	2.5	98.0	90-110
GN82087-CCV2	Sulfate	12.3	2.0	0.53	12.5	98.4	90-110
GN82087-CCB2	Bromide	0.060 U	0.50	0.060			
GN82087-CCB2	Sulfate	0.53 U	2.0	0.53			
GN82087-CCV3	Bromide	2.39	0.50	0.060	2.5	95.6	90-110
GN82087-CCV3	Sulfate	11.3	2.0	0.53	12.5	90.4	90-110
GN82087-CCB3	Bromide	0.060 U	0.50	0.060			
GN82087-CCB3	Sulfate	0.53 U	2.0	0.53			
GN82087-CCV4	Bromide	2.51	0.50	0.060	2.5	100.4	90-110
GN82087-CCV4	Sulfate	11.9	2.0	0.53	12.5	95.2	90-110
GN82087-CCB4	Bromide	0.060 U	0.50	0.060			
GN82087-CCB4	Sulfate	0.53 U	2.0	0.53			
GN82087-CCV5	Bromide	2.60	0.50	0.060	2.5	104.0	90-110
GN82087-CCV5	Sulfate	12.1	2.0	0.53	12.5	96.8	90-110
GN82087-CCB5	Bromide	0.060 U	0.50	0.060			
GN82087-CCB5	Sulfate	0.53 U	2.0	0.53			
GN82087-CCV6	Bromide	2.52	0.50	0.060	2.5	100.8	90-110
GN82087-CCV6	Sulfate	12.2	2.0	0.53	12.5	97.6	90-110
GN82087-CCB6	Bromide	0.060 U	0.50	0.060			
GN82087-CCB6	Sulfate	0.53 U	2.0	0.53			

(!) Outside of QC limits

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118063002.TXT Date Analyzed: 06/30/18 Methods: EPA 300/SW846 9056A
Analyst: NV Run ID: GN82225
Parameters: Bromide,Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:33	GN82225-STD1	1		Manually integrated chrom. peaks reviewed and verified to comply with criteria of Accutest SOP EQA044.
18:05	GN82225-STD2	1		Retention time: F=4.276 min Chl=6.106 min Bro= 8.57 min So4=16.894 min
18:32	GN82225-STD3	1		STDC
19:00	GN82225-STD4	1		STDD
19:28	GN82225-STD5	1		STDE
19:56	GN82225-STD6	1		STDF
12:19	GN82225-ICV1	1		
12:46	GN82225-CCV1	1		
13:14	GN82225-CCB1	1		
13:42	GP14066-MB2	1		
14:10	GP14066-B2	1		
14:38	JC67865-1	5		(sample used for QC only; not part of login JC68071)
15:06	JC67865-1	200		(sample used for QC only; not part of login JC68071)
15:34	JC67865-1	10		(sample used for QC only; not part of login JC68071)
16:02	GP14066-S2	10		
16:30	GP14066-S2	400		
16:58	GP14066-S2	20		
17:26	ZZZZZZ	20		
17:53	ZZZZZZ	500		
18:21	ZZZZZZ	100		
18:49	ZZZZZZ	10		
19:17	GN82225-CCV2	1		
19:45	GN82225-CCB2	1		
20:13	ZZZZZZ	200		
20:41	ZZZZZZ	40		
21:09	JC67877-1	10		(sample used for QC only; not part of login JC68071)
21:37	JC67877-1	5		(sample used for QC only; not part of login JC68071)
22:05	GP14066-D1	10		
22:33	GP14066-D1	5		
23:01	GP14066-S1	20		
23:28	GP14066-S1	10		
23:56	ZZZZZZ	2		
00:24	ZZZZZZ	5		

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SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118063002.TXT Date Analyzed: 06/30/18 Methods: EPA 300/SW846 9056A
Analyst: NV Run ID: GN82225
Parameters: Bromide,Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
00:52	GN82225-CCV3	1		
01:20	GN82225-CCB3	1		
01:48	ZZZZZZ	8		
02:16	ZZZZZZ	20		
02:44	ZZZZZZ	20		
03:12	ZZZZZZ	30		
03:40	ZZZZZZ	20		
04:08	JC68071-1	10		
04:36	JC68071-2	10		
05:03	ZZZZZZ	40		
05:31	ZZZZZZ	10		
05:59	ZZZZZZ	20		
06:27	GN82225-CCV4	1		
06:55	GN82225-CCB4	1		
07:23	ZZZZZZ	2		
07:51	ZZZZZZ	20		
08:19	ZZZZZZ	20		
08:47	ZZZZZZ	30		
09:47	ZZZZZZ	1		
10:14	GN82225-CCV5	1		
10:42	GN82225-CCB5	1		
11:23	GP14120-MB2	1		
11:51	GP14120-B2	1		
12:26	GN82225-CCV6	1		
12:53	GN82225-CCB6	1		
13:21	ZZZZZZ	2		
13:49	ZZZZZZ	1		
14:17	GP14120-S2	1		
14:45	JC68250-1	1		(sample used for QC only; not part of login JC68071)
15:13	GP14120-S1	1		Over calibration curve. See rerun at dilution.
15:41	GP14120-D1	1		
16:09	JC68250-2	1		(sample used for QC only; not part of login JC68071)
16:37	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118063002.TXT Date Analyzed: 06/30/18 Methods: EPA 300/SW846 9056A
Analyst: NV Run ID: GN82225
Parameters: Bromide,Chloride,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:05	ZZZZZZ	5		
17:32	GP14120-S1	2		
18:00	GN82225-CCV7	1		
18:28	GN82225-CCB7	1		
18:56	ZZZZZZ	100		
19:24	ZZZZZZ	10		
19:52	GN82225-CCV8	1		
20:20	GN82225-CCB8	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118063002.TXT

Date Analyzed: 06/30/18
Run ID: GN82225

Methods: EPA 300/SW846 9056A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN82225-ICV1	Chloride	10.4	2.0	0.070	10	104.0	90-110
GN82225-ICV1	Bromide	1.06	0.50	0.060	1	106.0	90-110
GN82225-ICV1	Sulfate	10.5	2.0	0.53	10	105.0	90-110
GN82225-CCV1	Chloride	12.3	2.0	0.070	12.5	98.4	90-110
GN82225-CCV1	Bromide	2.29	0.50	0.060	2.5	91.6	90-110
GN82225-CCV1	Sulfate	12.4	2.0	0.53	12.5	99.2	90-110
GN82225-CCB1	Chloride	0.070 U	2.0	0.070			
GN82225-CCB1	Bromide	0.060 U	0.50	0.060			
GN82225-CCB1	Sulfate	0.53 U	2.0	0.53			
GN82225-CCV2	Chloride	12.3	2.0	0.070	12.5	98.4	90-110
GN82225-CCV2	Bromide	2.34	0.50	0.060	2.5	93.6	90-110
GN82225-CCV2	Sulfate	12.5	2.0	0.53	12.5	100.0	90-110
GN82225-CCB2	Chloride	0.070 U	2.0	0.070			
GN82225-CCB2	Bromide	0.060 U	0.50	0.060			
GN82225-CCB2	Sulfate	0.53 U	2.0	0.53			
GN82225-CCV3	Chloride	12.7	2.0	0.070	12.5	101.6	90-110
GN82225-CCV3	Bromide	2.44	0.50	0.060	2.5	97.6	90-110
GN82225-CCV3	Sulfate	12.5	2.0	0.53	12.5	100.0	90-110
GN82225-CCB3	Chloride	0.070 U	2.0	0.070			
GN82225-CCB3	Bromide	0.060 U	0.50	0.060			
GN82225-CCB3	Sulfate	0.53 U	2.0	0.53			
GN82225-CCV4	Chloride	12.4	2.0	0.070	12.5	99.2	90-110
GN82225-CCV4	Bromide	2.25	0.50	0.060	2.5	90.0	90-110
GN82225-CCV4	Sulfate	12.4	2.0	0.53	12.5	99.2	90-110
GN82225-CCB4	Chloride	0.070 U	2.0	0.070			
GN82225-CCB4	Bromide	0.060 U	0.50	0.060			
GN82225-CCB4	Sulfate	0.53 U	2.0	0.53			
GN82225-CCV5	Chloride	12.5	2.0	0.070	12.5	100.0	90-110
GN82225-CCV5	Bromide	2.32	0.50	0.060	2.5	92.8	90-110
GN82225-CCV5	Sulfate	12.5	2.0	0.53	12.5	100.0	90-110
GN82225-CCB5	Chloride	0.070 U	2.0	0.070			
GN82225-CCB5	Bromide	0.060 U	0.50	0.060			
GN82225-CCB5	Sulfate	0.53 U	2.0	0.53			
GN82225-CCV6	Chloride	13.1	2.0	0.070	12.5	104.8	90-110
GN82225-CCV6	Bromide	2.32	0.50	0.060	2.5	92.8	90-110
GN82225-CCV6	Sulfate	12.4	2.0	0.53	12.5	99.2	90-110
GN82225-CCB6	Chloride	0.070 U	2.0	0.070			
GN82225-CCB6	Bromide	0.060 U	0.50	0.060			
GN82225-CCB6	Sulfate	0.53 U	2.0	0.53			
GN82225-CCV7	Chloride	13.1	2.0	0.070	12.5	104.8	90-110
GN82225-CCV7	Bromide	2.30	0.50	0.060	2.5	92.0	90-110
GN82225-CCV7	Sulfate	12.4	2.0	0.53	12.5	99.2	90-110
GN82225-CCB7	Chloride	0.070 U	2.0	0.070			
GN82225-CCB7	Bromide	0.060 U	0.50	0.060			
GN82225-CCB7	Sulfate	0.53 U	2.0	0.53			
GN82225-CCV8	Chloride	13.2	2.0	0.070	12.5	105.6	90-110
GN82225-CCV8	Bromide	2.32	0.50	0.060	2.5	92.8	90-110
GN82225-CCV8	Sulfate	12.5	2.0	0.53	12.5	100.0	90-110
GN82225-CCB8	Chloride	0.070 U	2.0	0.070			
GN82225-CCB8	Bromide	0.060 U	0.50	0.060			
GN82225-CCB8	Sulfate	0.53 U	2.0	0.53			

Instrument QC Summary
Inorganics Analyses

Login Number: JC68071

Account: ILINY - Parsons Engineering Science for ILI
Project: OBGNYA: ILI - Region 1, Denton Avenue Landfill

File ID: 1118063002.TXT

Date Analyzed: 06/30/18
Run ID: GN82225

Methods: EPA 300/SW846 9056A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
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(!) Outside of QC limits

Misc. Forms

Custody Documents and Other Forms

(SGS Orlando, FL)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle

SGS Sample Receipt Summary

Job Number: JC68071

Client: SGS-NJ

Project: JC68071

Date / Time Received: 6/16/2018 9:30:00 AM

Delivery Method: FED EX

Airbill #'s: _____

Therm ID: IR 1;

Therm CF: 0.4;

of Coolers: 1

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

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

Cooler Information

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Temp criteria achieved	<input checked="" type="checkbox"/>		<input type="checkbox"/>
4. Cooler temp verification	<u>IR Gun</u>		
5. Cooler media	<u>Ice (Bag)</u>		

Trip Blank Information

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>W</u>	<u>or</u>	<u>S</u>	<u>N/A</u>
3. Type Of TB Received	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sample Information

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Sample labels present on bottles	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Samples preserved properly	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Sufficient volume/containers recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Condition of sample	<u>Intact</u>			
5. Sample recvd within HT	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
6. Dates/Times/IDs on COC match Sample Label	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
7. VOCs have headspace	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
9. Compositing instructions clear	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Voa Soil Kits/Jars received past 48hrs?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. % Solids Jar received?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Residual Chlorine Present?	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____
 Test Strip Lot #s: pH 0-3 230315
 Residual Chlorine Test Strip Lot #: _____

Number of 5035 Field Kits: _____
 pH 10-12 219813A

Number of Lab Filtered Metals: _____
 Other: (Specify) _____

Comments

SM001
 Rev. Date 05/24/17

Technician: HEATHERW

Date: 6/16/2018 9:30:00 AM

Reviewer: _____

Date: _____

JC68071: Chain of Custody

Page 2 of 2

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Internal Sample Tracking Chronicle

SGS Dayton, NJ

Job No: JC68071

ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill
 Project No: 1-NAS-002-003

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC68071-1 Collected: 13-JUN-18 09:55 By: ST Received: 14-JUN-18 By: HW 1-NAS-002-003-01						
JC68071-1	EPA 537M BY ID	21-JUN-18 00:03	NG	18-JUN-18 MB		LCID537NY21
JC68071-1	EPA 537M BY ID	27-JUN-18 20:22	NG	22-JUN-18 MB		LCID537NY21
JC68071-2 Collected: 13-JUN-18 12:40 By: ST Received: 14-JUN-18 By: HW 1-NAS-002-003-02						
JC68071-2	EPA 537M BY ID	21-JUN-18 00:23	NG	18-JUN-18 MB		LCID537NY21
JC68071-2	EPA 537M BY ID	27-JUN-18 20:40	NG	22-JUN-18 MB		LCID537NY21
JC68071-3 Collected: 13-JUN-18 10:05 By: ST Received: 14-JUN-18 By: HW 1-NAS-002-003-03						
JC68071-3	EPA 537M BY ID	21-JUN-18 00:43	NG	18-JUN-18 MB		LCID537NY21
JC68071-4 Collected: 13-JUN-18 10:30 By: ST Received: 14-JUN-18 By: HW 1-NAS-002-003-04						
JC68071-4	EPA 537M BY ID	21-JUN-18 01:04	NG	18-JUN-18 MB		LCID537NY21

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MS Semi-volatiles

QC Data Summaries

(SGS Orlando, FL)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Isotope Dilution Standard Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70531-MB	2Q15735.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-3, JC68071-4

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0077	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0038	0.0014	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0038	0.00096	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0038	0.00096	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0038	0.00096	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0038	0.00096	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0038	0.00096	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0038	0.00096	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0038	0.0014	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0038	0.00096	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0038	0.00096	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0038	0.00096	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0038	0.00096	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0038	0.00096	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0038	0.0014	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0038	0.00096	ug/l	
754-91-6	PFOSA	ND	0.0038	0.00096	ug/l	
2355-31-9	MeFOSAA	ND	0.019	0.0038	ug/l	
2991-50-6	EtFOSAA	ND	0.019	0.0038	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0077	0.0019	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0077	0.0019	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	87% 30-140%
	13C5-PFPeA	87% 40-140%
	13C5-PFHxA	90% 50-150%
	13C4-PFHpA	98% 50-150%
	13C8-PFOA	110% 50-150%
	13C9-PFNA	88% 50-150%
	13C6-PFDA	78% 50-150%
	13C7-PFUnDA	78% 50-150%
	13C2-PFDoDA	78% 50-150%
	13C2-PFTeDA	79% 40-150%
	13C3-PFBS	88% 50-150%

11.11
11

Method Blank Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70531-MB	2Q15735.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-3, JC68071-4

CAS No.	ID Standard Recoveries	Limits
	13C3-PFHxS	86% 50-150%
	13C8-PFOS	75% 50-150%
	13C8-FOSA	88% 30-140%
	d3-MeFOSAA	85% 50-150%
	13C2-6:2FTS	97% 50-150%
	13C2-8:2FTS	71% 50-150%

Method Blank Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70608-MB	2Q16102.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-1, JC68071-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0077	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0038	0.0014	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0038	0.00096	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0038	0.00096	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0038	0.00096	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0038	0.00096	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0038	0.00096	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0038	0.00096	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0038	0.0014	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0038	0.00096	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0038	0.00096	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0038	0.00096	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0038	0.00096	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0038	0.00096	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0038	0.0014	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0038	0.00096	ug/l	
754-91-6	PFOSA	ND	0.0038	0.00096	ug/l	
2355-31-9	MeFOSAA	ND	0.019	0.0038	ug/l	
2991-50-6	EtFOSAA	ND	0.019	0.0038	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0077	0.0019	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0077	0.0019	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	100% 30-140%
	13C5-PFPeA	102% 40-140%
	13C5-PFHxA	104% 50-150%
	13C4-PFHpA	104% 50-150%
	13C8-PFOA	107% 50-150%
	13C9-PFNA	106% 50-150%
	13C6-PFDA	101% 50-150%
	13C7-PFUnDA	106% 50-150%
	13C2-PFDoDA	106% 50-150%
	13C2-PFTeDA	101% 40-150%
	13C3-PFBS	99% 50-150%

11.12
11

Method Blank Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70608-MB	2Q16102.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-1, JC68071-2

CAS No.	ID Standard Recoveries	Limits
	13C3-PFHxS	104% 50-150%
	13C8-PFOS	102% 50-150%
	13C8-FOSA	76% 30-140%
	d3-MeFOSAA	82% 50-150%
	13C2-6:2FTS	104% 50-150%
	13C2-8:2FTS	91% 50-150%

11.1.2
11

Instrument Blank

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q278-IBLK	2Q15717.D	1	06/20/18	NG	n/a	n/a	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M QSM5.1 B-15

JC68071-3, JC68071-4

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.015	0.0038	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0077	0.0029	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0077	0.0019	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0077	0.0019	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0077	0.0019	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0077	0.0019	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0077	0.0019	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0077	0.0019	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0077	0.0029	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0077	0.0019	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0077	0.0019	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0077	0.0019	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0077	0.0019	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0077	0.0019	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.015	0.0038	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0077	0.0019	ug/l	
754-91-6	PFOSA	ND	0.0077	0.0019	ug/l	
2355-31-9	MeFOSAA	ND	0.038	0.0077	ug/l	
2991-50-6	EtFOSAA	ND	0.038	0.0077	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.015	0.0038	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.015	0.0038	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	93% 50-150%
	13C5-PFPeA	92% 50-150%
	13C5-PFHxA	94% 50-150%
	13C4-PFHpA	92% 50-150%
	13C8-PFOA	96% 50-150%
	13C9-PFNA	93% 50-150%
	13C6-PFDA	93% 50-150%
	13C7-PFUnDA	88% 50-150%
	13C2-PFDoDA	84% 50-150%
	13C2-PFTeDA	84% 50-150%
	13C3-PFBS	91% 50-150%

11.1.3
11

Instrument Blank

Job Number: JC68071

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S2Q278-IBLK	2Q15717.D	1	06/20/18	NG	n/a	n/a	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M QSM5.1 B-15

JC68071-3, JC68071-4

CAS No.	ID Standard Recoveries	Limits
	13C3-PFHxS	94% 50-150%
	13C8-PFOS	92% 50-150%
	13C8-FOSA	96% 50-150%
	d3-MeFOSAA	100% 50-150%
	13C2-4:2FTS	88% 50-150%
	13C2-6:2FTS	92% 50-150%
	13C2-8:2FTS	86% 50-150%

Blank Spike Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70531-BS	2Q15734.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-3, JC68071-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.0769	0.0762	99	70-130
2706-90-3	Perfluoropentanoic acid	0.0769	0.0833	108	70-130
307-24-4	Perfluorohexanoic acid	0.0769	0.0761	99	70-130
375-85-9	Perfluoroheptanoic acid	0.0769	0.0808	105	71-130
335-67-1	Perfluorooctanoic acid	0.0769	0.0773	100	74-130
375-95-1	Perfluorononanoic acid	0.0769	0.0734	95	76-130
335-76-2	Perfluorodecanoic acid	0.0769	0.0706	92	70-130
2058-94-8	Perfluoroundecanoic acid	0.0769	0.0855	111	70-130
307-55-1	Perfluorododecanoic acid	0.0769	0.0861	112	70-130
72629-94-8	Perfluorotridecanoic acid	0.0769	0.0833	108	70-139
376-06-7	Perfluorotetradecanoic acid	0.0769	0.0815	106	70-130
375-73-5	Perfluorobutanesulfonic acid	0.0681	0.0671	99	73-130
355-46-4	Perfluorohexanesulfonic acid	0.07	0.0739	106	74-130
375-92-8	Perfluoroheptanesulfonic acid	0.0731	0.0712	97	74-130
1763-23-1	Perfluorooctanesulfonic acid	0.0712	0.0787	111	70-130
335-77-3	Perfluorodecanesulfonic acid	0.0742	0.0688	93	70-130
754-91-6	PFOSA	0.0769	0.0913	119	70-131
2355-31-9	MeFOSAA	0.0769	0.0877	114	70-130
2991-50-6	EtFOSAA	0.0769	0.0830	108	70-130
27619-97-2	6:2 Fluorotelomer sulfonate	0.0731	0.0865	118	70-133
39108-34-4	8:2 Fluorotelomer sulfonate	0.0738	0.0809	110	70-130

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	86%	30-140%
	13C5-PFPeA	86%	40-140%
	13C5-PFHxA	89%	50-150%
	13C4-PFHpA	89%	50-150%
	13C8-PFOA	91%	50-150%
	13C9-PFNA	90%	50-150%
	13C6-PFDA	87%	50-150%
	13C7-PFUnDA	84%	50-150%
	13C2-PFDoDA	79%	50-150%
	13C2-PFTeDA	77%	40-150%
	13C3-PFBS	92%	50-150%

* = Outside of Control Limits.

11.21
11

Blank Spike Summary

Job Number: JC68071

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70531-BS	2Q15734.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-3, JC68071-4

CAS No.	ID Standard Recoveries	BSP	Limits
	13C3-PFHxS	94%	50-150%
	13C8-PFOS	94%	50-150%
	13C8-FOSA	80%	30-140%
	d3-MeFOSAA	88%	50-150%
	13C2-6:2FTS	95%	50-150%
	13C2-8:2FTS	93%	50-150%

11.2.1
11

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70608-BS	2Q16101.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-1, JC68071-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.0769	0.0865	112	70-130
2706-90-3	Perfluoropentanoic acid	0.0769	0.0863	112	70-130
307-24-4	Perfluorohexanoic acid	0.0769	0.0811	105	70-130
375-85-9	Perfluoroheptanoic acid	0.0769	0.0897	117	71-130
335-67-1	Perfluorooctanoic acid	0.0769	0.0907	118	74-130
375-95-1	Perfluorononanoic acid	0.0769	0.0794	103	76-130
335-76-2	Perfluorodecanoic acid	0.0769	0.0840	109	70-130
2058-94-8	Perfluoroundecanoic acid	0.0769	0.0906	118	70-130
307-55-1	Perfluorododecanoic acid	0.0769	0.0917	119	70-130
72629-94-8	Perfluorotridecanoic acid	0.0769	0.0821	107	70-139
376-06-7	Perfluorotetradecanoic acid	0.0769	0.0786	102	70-130
375-73-5	Perfluorobutanesulfonic acid	0.0681	0.0763	112	73-130
355-46-4	Perfluorohexanesulfonic acid	0.07	0.0772	110	74-130
375-92-8	Perfluoroheptanesulfonic acid	0.0731	0.0858	117	74-130
1763-23-1	Perfluorooctanesulfonic acid	0.0712	0.0920	129	70-130
335-77-3	Perfluorodecanesulfonic acid	0.0742	0.0750	101	70-130
754-91-6	PFOSA	0.0769	0.0906	118	70-131
2355-31-9	MeFOSAA	0.0769	0.0877	114	70-130
2991-50-6	EtFOSAA	0.0769	0.0929	121	70-130
27619-97-2	6:2 Fluorotelomer sulfonate	0.0731	0.0867	119	70-133
39108-34-4	8:2 Fluorotelomer sulfonate	0.0738	0.0834	113	70-130

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	107%	30-140%
	13C5-PFPeA	110%	40-140%
	13C5-PFHxA	111%	50-150%
	13C4-PFHpA	112%	50-150%
	13C8-PFOA	116%	50-150%
	13C9-PFNA	117%	50-150%
	13C6-PFDA	110%	50-150%
	13C7-PFUnDA	120%	50-150%
	13C2-PFDoDA	126%	50-150%
	13C2-PFTeDA	117%	40-150%
	13C3-PFBS	108%	50-150%

* = Outside of Control Limits.

11.22
11

Blank Spike Summary

Job Number: JC68071

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70608-BS	2Q16101.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-1, JC68071-2

CAS No.	ID Standard Recoveries	BSP	Limits
	13C3-PFHxS	113%	50-150%
	13C8-PFOS	112%	50-150%
	13C8-FOSA	95%	30-140%
	d3-MeFOSAA	95%	50-150%
	13C2-6:2FTS	115%	50-150%
	13C2-8:2FTS	105%	50-150%

11.2.2
11

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70608-MS	2Q16106.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286
JC67672-2	2Q16105.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-1, JC68071-2

CAS No.	Compound	JC67672-2 ug/l	Spike Q	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.0229	0.0769	0.105	107	70-130
2706-90-3	Perfluoropentanoic acid	0.0565	0.0769	0.135	102	70-130
307-24-4	Perfluorohexanoic acid	0.0464	0.0769	0.121	97	70-130
375-85-9	Perfluoroheptanoic acid	0.0234	0.0769	0.110	113	71-130
335-67-1	Perfluorooctanoic acid	0.0536	0.0769	0.139	111	74-130
375-95-1	Perfluorononanoic acid	0.00386	0.0769	0.0776	96	76-130
335-76-2	Perfluorodecanoic acid	ND	0.0769	0.0804	105	70-130
2058-94-8	Perfluoroundecanoic acid	ND	0.0769	0.0869	113	70-130
307-55-1	Perfluorododecanoic acid	ND	0.0769	0.0895	116	70-130
72629-94-8	Perfluorotridecanoic acid	ND	0.0769	0.0824	107	70-139
376-06-7	Perfluorotetradecanoic acid	ND	0.0769	0.0764	99	70-130
375-73-5	Perfluorobutanesulfonic acid	0.00994	0.0681	0.0828	107	73-130
355-46-4	Perfluorohexanesulfonic acid	0.00511	0.07	0.0803	107	74-130
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0731	0.0892	122	74-130
1763-23-1	Perfluorooctanesulfonic acid	0.0318	0.0712	0.114	116	70-130
335-77-3	Perfluorodecanesulfonic acid	ND	0.0742	0.0728	98	70-130
754-91-6	PFOSA	ND	0.0769	0.0892	116	70-131
2355-31-9	MeFOSAA	ND	0.0769	0.0862	112	70-130
2991-50-6	EtFOSAA	0.00509 J	0.0769	0.0918	113	70-130
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0731	0.0850	116	70-133
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0738	0.0793	107	70-130

CAS No.	ID Standard Recoveries	MS	JC67672-2	Limits
	13C4-PFBA	76%	81%	30-140%
	13C5-PFPeA	75%	80%	40-140%
	13C5-PFHxA	75%	81%	50-150%
	13C4-PFHpA	76%	80%	50-150%
	13C8-PFOA	80%	89%	50-150%
	13C9-PFNA	90%	105%	50-150%
	13C6-PFDA	94%	96%	50-150%
	13C7-PFUnDA	96%	95%	50-150%
	13C2-PFDoDA	96%	103%	50-150%
	13C2-PFTeDA	88%	93%	40-150%
	13C3-PFBS	80%	85%	50-150%

* = Outside of Control Limits.

11.3.1
11

Matrix Spike Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70608-MS	2Q16106.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286
JC67672-2	2Q16105.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-1, JC68071-2

CAS No.	ID Standard Recoveries	MS	JC67672-2	Limits
	13C3-PFHxS	78%	82%	50-150%
	13C8-PFOS	91%	91%	50-150%
	13C8-FOSA	20% * b	15% * a	30-140%
	d3-MeFOSAA	74%	77%	50-150%
	13C2-6:2FTS	84%	95%	50-150%
	13C2-8:2FTS	92%	96%	50-150%

(a) Outside control limits due to matrix interference. Confirmed by MS/MSD.

(b) Outside control limits.

11.3.1

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70531-MS	2Q15738.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278
OP70531-MSD	2Q15739.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278
JC67755-2A ^a	2Q15737.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-3, JC68071-4

CAS No.	Compound	JC67755-2A ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
375-22-4	Perfluorobutanoic acid	0.00894	0.0769	0.0865	101	0.0769	0.0850	99	2	70-130/30
2706-90-3	Perfluoropentanoic acid	0.00482	0.0769	0.0915	113	0.0769	0.0868	107	5	70-130/30
307-24-4	Perfluorohexanoic acid	0.00318 J	0.0769	0.0833	104	0.0769	0.0788	98	6	70-130/30
375-85-9	Perfluoroheptanoic acid	0.00604	0.0769	0.0878	106	0.0769	0.0882	107	0	71-130/30
335-67-1	Perfluorooctanoic acid	0.0191	0.0769	0.0999	105	0.0769	0.0960	100	4	74-130/30
375-95-1	Perfluorononanoic acid	ND	0.0769	0.0686	89	0.0769	0.0713	93	4	76-130/30
335-76-2	Perfluorodecanoic acid	ND	0.0769	0.0715	93	0.0769	0.0699	91	2	70-130/30
2058-94-8	Perfluoroundecanoic acid	ND	0.0769	0.0837	109	0.0769	0.0797	104	5	70-130/30
307-55-1	Perfluorododecanoic acid	ND	0.0769	0.0847	110	0.0769	0.0835	109	1	70-130/30
72629-94-8	Perfluorotridecanoic acid	ND	0.0769	0.0860	112	0.0769	0.0833	108	3	70-139/30
376-06-7	Perfluorotetradecanoic acid	ND	0.0769	0.0826	107	0.0769	0.0794	103	4	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.0136	0.0681	0.0798	97	0.0681	0.0788	96	1	73-130/30
355-46-4	Perfluorohexanesulfonic acid	0.00308	0.07	0.0780	107	0.07	0.0763	105	2	74-130/30
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0731	0.0767	105	0.0731	0.0728	100	5	74-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.00583	0.0712	0.0844	110	0.0712	0.0802	105	5	70-130/30
335-77-3	Perfluorodecanesulfonic acid	ND	0.0742	0.0577	78	0.0742	0.0559	75	3	70-130/30
754-91-6	PFOSA	ND	0.0769	0.0894	116	0.0769	0.0871	113	3	70-131/30
2355-31-9	MeFOSAA	ND	0.0769	0.0912	119	0.0769	0.0875	114	4	70-130/30
2991-50-6	EtFOSAA	ND	0.0769	0.0917	119	0.0769	0.0879	114	4	70-130/30
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0731	0.0889	122	0.0731	0.0851	116	4	70-133/30
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0738	0.0833	113	0.0738	0.0806	109	3	70-130/30

CAS No.	ID Standard Recoveries	MS	MSD	JC67755-2A	Limits
13C4-PFBA	59%	57%	51%		30-140%
13C5-PFPeA	56%	55%	47%		40-140%
13C5-PFHxA	58%	57%	49%*		50-150%
13C4-PFHpA	60%	57%	53%		50-150%
13C8-PFOA	65%	61%	57%		50-150%
13C9-PFNA	80%	72%	63%		50-150%
13C6-PFDA	76%	71%	61%		50-150%
13C7-PFU _n DA	97%	92%	74%		50-150%
13C2-PFD _o DA	76%	73%	59%		50-150%
13C2-PFT _e DA	71%	70%	54%		40-150%
13C3-PFBS	61%	59%	51%		50-150%

* = Outside of Control Limits.

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70531-MS	2Q15738.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278
OP70531-MSD	2Q15739.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278
JC67755-2A ^a	2Q15737.D	1	06/20/18	NG	06/18/18	OP70531	S2Q278

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-3, JC68071-4

CAS No.	ID Standard Recoveries	MS	MSD	JC67755-2A	Limits
13C3-PFHxS		59%	57%	50%	50-150%
13C8-PFOS		70%	66%	58%	50-150%
13C8-FOSA		29% * b	33%	23% *	30-140%
d3-MeFOSAA		69%	68%	57%	50-150%
13C2-6:2FTS		75%	71%	59%	50-150%
13C2-8:2FTS		88%	83%	63%	50-150%

(a) Confirmation run for surrogate recoveries.

(b) Outside control limits.

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* = Outside of Control Limits.

Duplicate Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70608-DUP	2Q16108.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286
JC67672-3	2Q16107.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-1, JC68071-2

CAS No.	Compound	JC67672-3 ug/l	DUP Q	ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.0228		0.0227		0	30
2706-90-3	Perfluoropentanoic acid	0.0586		0.0593		1	30
307-24-4	Perfluorohexanoic acid	0.0285		0.0290		2	30
375-85-9	Perfluoroheptanoic acid	0.0103		0.0103		0	30
335-67-1	Perfluorooctanoic acid	0.00942		0.0102		8	30
375-95-1	Perfluorononanoic acid	0.00104 J		0.00117 J		12	30
335-76-2	Perfluorodecanoic acid	ND		ND		nc	30
2058-94-8	Perfluoroundecanoic acid	ND		ND		nc	30
307-55-1	Perfluorododecanoic acid	ND		ND		nc	30
72629-94-8	Perfluorotridecanoic acid	ND		ND		nc	30
376-06-7	Perfluorotetradecanoic acid	ND		ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0175		0.0171		2	30
355-46-4	Perfluorohexanesulfonic acid	0.00193		0.00168 J		14	30
375-92-8	Perfluoroheptanesulfonic acid	ND		ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.00833		0.00799		4	30
335-77-3	Perfluorodecanesulfonic acid	ND		ND		nc	30
754-91-6	PFOSA	ND		ND		nc	30
2355-31-9	MeFOSAA	ND		ND		nc	30
2991-50-6	EtFOSAA	ND		ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.0392		0.0399		2	30
39108-34-4	8:2 Fluorotelomer sulfonate	ND		ND		nc	30

CAS No.	ID Standard Recoveries	DUP	JC67672-3	Limits
	13C4-PFBA	90%	91%	30-140%
	13C5-PFPeA	92%	92%	40-140%
	13C5-PFHxA	95%	96%	50-150%
	13C4-PFHpA	97%	95%	50-150%
	13C8-PFOA	105%	112%	50-150%
	13C9-PFNA	116%	115%	50-150%
	13C6-PFDA	96%	97%	50-150%
	13C7-PFUnDA	100%	97%	50-150%
	13C2-PFDoDA	106%	102%	50-150%
	13C2-PFTeDA	96%	99%	40-150%
	13C3-PFBS	93%	93%	50-150%

* = Outside of Control Limits.

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Duplicate Summary

Job Number: JC68071

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP70608-DUP	2Q16108.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286
JC67672-3	2Q16107.D	1	06/27/18	NG	06/22/18	OP70608	S2Q286

The QC reported here applies to the following samples:

Method: EPA 537M BY ID

JC68071-1, JC68071-2

CAS No.	ID Standard Recoveries	DUP	JC67672-3	Limits
	13C3-PFHxS	94%	97%	50-150%
	13C8-PFOS	93%	92%	50-150%
	13C8-FOSA	94%	71%	30-140%
	d3-MeFOSAA	76%	74%	50-150%
	13C2-6:2FTS	100%	102%	50-150%
	13C2-8:2FTS	86%	85%	50-150%

11.5.1

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* = Outside of Control Limits.

Isotope Dilution Standard Recovery Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: EPA 537M BY ID	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6	S7	S8
JC68071-1	2Q16103.D	62	61	62	63	66	76	83	85
JC68071-1	2Q15744.D	52	53	57	62	62	70	61	33*
JC68071-2	2Q16104.D	64	63	63	62	71	88	91	89
JC68071-2	2Q15745.D	56	56	60	64	68	76	82	53
JC68071-3	2Q15746.D	88	87	91	96	105	93	87	78
JC68071-4	2Q15747.D	88	87	92	95	100	93	86	79
OP70531-BS	2Q15734.D	86	86	89	89	91	90	87	84
OP70531-MB	2Q15735.D	87	87	90	98	110	88	78	78
OP70531-MS	2Q15738.D	59	56	58	60	65	80	76	97
OP70531-MSD	2Q15739.D	57	55	57	57	61	72	71	92
OP70608-BS	2Q16101.D	107	110	111	112	116	117	110	120
OP70608-DUP	2Q16108.D	90	92	95	97	105	116	96	100
OP70608-MB	2Q16102.D	100	102	104	104	107	106	101	106
OP70608-MS	2Q16106.D	76	75	75	76	80	90	94	96

Isotope Dilution Standards

Recovery Limits

S1 = 13C4-PFBA	30-140%
S2 = 13C5-PFPeA	40-140%
S3 = 13C5-PFHxA	50-150%
S4 = 13C4-PFHpA	50-150%
S5 = 13C8-PFOA	50-150%
S6 = 13C9-PFNA	50-150%
S7 = 13C6-PFDA	50-150%
S8 = 13C7-PFUnDA	50-150%

11.6.1

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Isotope Dilution Standard Recovery Summary

Job Number: JC68071
Account: ALNJ SGS Dayton, NJ
Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: EPA 537M BY ID	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S9	S10	S11	S12	S13	S14	S15	S16
JC68071-1	2Q16103.D	84	85	67	64	74	9* a	83	69
JC68071-1	2Q15744.D	20*	8*	56	53	45*	20*	38*	67
JC68071-2	2Q16104.D	84	89	69	66	84	19* a	84	74
JC68071-2	2Q15745.D	37*	21*	58	57	64	29*	59	72
JC68071-3	2Q15746.D	73	74	92	94	85	89	87	95
JC68071-4	2Q15747.D	76	78	92	95	86	93	88	94
OP70531-BS	2Q15734.D	79	77	92	94	94	80	88	95
OP70531-MB	2Q15735.D	78	79	88	86	75	88	85	97
OP70531-MS	2Q15738.D	76	71	61	59	70	29* b	69	75
OP70531-MSD	2Q15739.D	73	70	59	57	66	33	68	71
OP70608-BS	2Q16101.D	126	117	108	113	112	95	95	115
OP70608-DUP	2Q16108.D	106	96	93	94	93	94	76	100
OP70608-MB	2Q16102.D	106	101	99	104	102	76	82	104
OP70608-MS	2Q16106.D	96	88	80	78	91	20* b	74	84

Isotope Dilution Standards	Recovery Limits
S9 = 13C2-PFDoDA	50-150%
S10 = 13C2-PFTeDA	40-150%
S11 = 13C3-PFBS	50-150%
S12 = 13C3-PFHxS	50-150%
S13 = 13C8-PFOS	50-150%
S14 = 13C8-FOSA	30-140%
S15 = d3-MeFOSAA	50-150%
S16 = 13C2-6:2FTS	50-150%

- (a) Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.
- (b) Outside control limits.

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Isotope Dilution Standard Recovery Summary

Job Number: JC68071

Account: ALNJ SGS Dayton, NJ

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Method: EPA 537M BY ID

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S17
JC68071-1	2Q16103.D	87
JC68071-1	2Q15744.D	85
JC68071-2	2Q16104.D	96
JC68071-2	2Q15745.D	112
JC68071-3	2Q15746.D	82
JC68071-4	2Q15747.D	83
OP70531-BS	2Q15734.D	93
OP70531-MB	2Q15735.D	71
OP70531-MS	2Q15738.D	88
OP70531-MSD	2Q15739.D	83
OP70608-BS	2Q16101.D	105
OP70608-DUP	2Q16108.D	86
OP70608-MB	2Q16102.D	91
OP70608-MS	2Q16106.D	92

Isotope Dilution Standards	Recovery Limits
S17 = 13C2-8:2FTS	50-150%

Initial Calibration Summary

Job Number: JC68071

Sample: S2Q278-ICC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15714.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Initial Calibration ReSponse Factors - D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID : Calibration File

- 1 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8 : D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Compound	1	2	3	4	5	6	7	8	AvgRF	%RSD	r^2
1) 13C2-4:2PTS	2.85e+3	3.17e+3	3.10e+3	3.18e+3	3.37e+3	3.37e+3	3.68e+3	3.61e+3	3.29e+3	8.288	0.0000
2) 13C2-6:2PTS	2.86e+3	3.16e+3	3.09e+3	3.10e+3	3.31e+3	3.28e+3	3.59e+3	3.50e+3	3.24e+3	7.216	0.0000
3) 13C2-8:2PTS	4.84e+3	5.66e+3	5.48e+3	5.56e+3	5.88e+3	5.91e+3	6.55e+3	6.59e+3	5.81e+3	9.891	0.0000
4) 13C2-PFDoDA	1.42e+3	1.71e+3	1.68e+3	1.70e+3	1.83e+3	1.77e+3	1.79e+3	1.57e+3	1.68e+3	8.003	0.0000
6) 13C2-PFTeDA	7.35e+2	9.07e+2	8.96e+2	8.81e+2	9.48e+2	9.17e+2	9.32e+2	8.11e+2	8.78e+2	8.112	0.0000
7) 13C3-PFBS	4.85e+2	5.39e+2	5.23e+2	5.32e+2	5.52e+2	5.40e+2	5.43e+2	4.60e+2	5.22e+2	6.190	0.0000
8) 13C3-PFHxS	5.94e+2	6.54e+2	6.44e+2	6.50e+2	6.67e+2	6.57e+2	6.52e+2	5.56e+2	6.34e+2	6.039	0.0000
9) 13C4-PFBA	3.14e+3	3.49e+3	3.35e+3	3.38e+3	3.48e+3	3.38e+3	3.38e+3	2.87e+3	3.31e+3	6.228	0.0000
10) 13C4-PFHpA	1.32e+3	1.48e+3	1.43e+3	1.45e+3	1.47e+3	1.41e+3	1.44e+3	1.23e+3	1.40e+3	6.141	0.0000
12) 13C5-PFHxA	1.25e+3	1.39e+3	1.35e+3	1.39e+3	1.44e+3	1.39e+3	1.39e+3	1.14e+3	1.34e+3	7.411	0.0000
13) 13C5-PFPeA	1.29e+3	1.42e+3	1.38e+3	1.39e+3	1.44e+3	1.40e+3	1.41e+3	1.19e+3	1.37e+3	6.232	0.0000
14) 13C6-PFDA	2.52e+3	2.76e+3	2.71e+3	2.75e+3	2.87e+3	2.73e+3	2.72e+3	2.27e+3	2.67e+3	6.954	0.0000
15) 13C7-PFUnDA	1.48e+3	1.77e+3	1.74e+3	1.83e+3	1.86e+3	1.80e+3	1.81e+3	1.54e+3	1.73e+3	8.085	0.0000
16) 13C8-FOSA	2.42e+3	2.77e+3	2.65e+3	2.66e+3	2.75e+3	2.64e+3	2.56e+3	2.09e+3	2.57e+3	8.702	0.0000
17) 13C8-PFOA	1.18e+3	1.38e+3	1.26e+3	1.30e+3	1.33e+3	1.31e+3	1.32e+3	1.13e+3	1.28e+3	6.540	0.0000
18) 13C8-PFOS	5.33e+2	5.95e+2	5.73e+2	5.81e+2	6.00e+2	5.94e+2	5.96e+2	5.09e+2	5.73e+2	5.857	0.0000
19) 13C9-PFNA	1.25e+3	1.40e+3	1.33e+3	1.36e+3	1.43e+3	1.39e+3	1.41e+3	1.22e+3	1.35e+3	5.719	0.0000
23) d3-MeFOSAA	1.94e+3	2.02e+3	1.99e+3	1.97e+3	2.06e+3	2.01e+3	2.03e+3	1.70e+3	1.97e+3	5.706	0.0000
5) 13C2-PFOA	-----ISTD-----										
24) M2-PFOA	1.0004	1.0000	0.9997	1.0003	0.9999	0.9987	1.0000	1.0007	1.0000	0.058	0.0000
11) 13C4-PFOS	-----ISTD-----										
46) M4-PFOS	0.9997	0.9998	1.0002	0.9999	1.0003	0.9995	0.9998	0.9999	0.9999	0.027	0.0000
47) M4-PFBA	-----ISTD-----										
28) PFBA	0.2915	0.2363	0.2235	0.2033	0.2329	0.2241	0.2092	0.2438	0.2331	11.653	0.9950
48) M5-PFPeA	-----ISTD-----										
41) PFPeA	-----	2.3875	1.9845	1.8088	1.9592	1.8943	1.7770	-----	1.9686	11.213	0.9999
49) M5-PFHxA	-----ISTD-----										
35) PFHxA	0.7365	0.5527	0.5201	0.4722	0.5404	0.5088	0.4839	0.5802	0.5493	15.199	0.9968
50) M4-PFHpA	-----ISTD-----										
33) PFHpA	1.6812	1.3597	1.2988	1.1861	1.3622	1.3489	1.2409	1.4195	1.3621	10.924	0.9961
51) M8-PFOA	-----ISTD-----										
39) PFOA	1.0573	0.8919	0.7980	0.7666	0.8747	0.8297	0.7753	0.8939	0.8609	10.928	0.9956
52) M9-PFNA	-----ISTD-----										
37) PFNA	1.0178	0.8364	0.7454	0.6727	0.7544	0.7062	0.6786	0.7745	0.7733	14.543	0.9961
53) M6-PFDA	-----ISTD-----										
30) PFDA	0.5932	0.4968	0.4629	0.4105	0.4824	0.4659	0.4438	0.5149	0.4838	11.275	0.9951
54) M7-PFUnDA	-----ISTD-----										
32) PFDS	0.4290	0.3519	0.3060	0.2952	0.3449	0.3335	0.3178	0.3704	0.3436	12.354	0.9948
45) PFUnDA	0.9177	0.7439	0.6401	0.5846	0.6543	0.6330	0.6025	-----	0.6823	16.933	0.9998
55) M2-PFDoDA	-----ISTD-----										
31) PFDoDA	-----	0.8368	0.6756	0.6172	0.6780	0.6467	0.6152	-----	0.6783	12.131	0.9986
56) M2-PFTeDA	-----ISTD-----										
43) PFTeDA	-----	0.8355	0.7779	0.7028	0.7886	0.7317	0.6848	0.7764	0.7568	6.986	0.9989
44) PFTrDA	1.4551	1.2438	1.0680	1.0531	1.1873	1.1475	1.0597	1.2434	1.1822	11.438	0.9946
57) M8-FOSA	-----ISTD-----										
26) FOSA	1.1341	0.9646	0.8518	0.7840	0.9023	0.8759	0.8258	0.9479	0.9108	11.897	0.9992

Initial Calibration Summary

Job Number: JC68071

Sample: S2Q278-ICC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15714.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

58) M3-PFBS	-----ISTD-----											
29) PFBS	3.5422	2.7785	2.5454	2.3877	2.7217	2.6447	2.4793	2.8993	2.7498	13.105	0.9947	
42) PFPeS	2.3943	1.8643	1.7426	1.6430	1.8361	1.7779	1.6855	1.9537	1.8622	12.722	0.9952	
59) M3-PFHxS	-----ISTD-----											
34) PFHpS	2.7165	2.1400	1.9307	1.8161	2.1311	2.0363	1.9284	2.2152	2.1143	13.101	0.9958	
36) PFHxS	2.9272	2.4199	2.2806	2.0901	2.4365	2.3295	2.2354	2.5959	2.4144	10.603	0.9980	
60) M8-PFOS	-----ISTD-----											
38) PFNS	2.6648	2.2204	2.0416	1.9016	2.1791	2.0547	1.9671	2.2876	2.1646	11.099	0.9950	
40) PFOS	3.2380	2.6872	2.2588	2.1798	2.4556	2.3100	2.2243	2.5415	2.4869	14.052	0.9960	
61) M2-4:2FTS	-----ISTD-----											
20) 4:2FTS	0.7200	0.5986	0.5512	0.5003	0.5565	0.5335	0.4584	0.4724	0.5489	15.157	0.9986	
62) M2-6:2FTS	-----ISTD-----											
21) 6:2FTS	-----	0.7678	0.7149	0.6600	0.7386	0.7095	0.6130	0.6212	0.6893	8.575	0.9987	
63) M2-8:2FTS	-----ISTD-----											
22) 8:2FTS	1.1884	0.9753	0.9047	0.8501	0.9259	0.8806	0.7673	0.7559	0.9060	15.069	0.9991	
64) M3-MeFOSAA	-----ISTD-----											
25) EtFOSAA	0.3874	0.3086	0.2933	0.2762	0.3094	0.2997	0.2745	0.3102	0.3074	11.488	0.9968	
27) MeFOSAA	-----	0.4197	0.3833	0.3609	0.4024	0.4012	0.3698	0.4299	0.3953	6.411	0.9989	

 *(value) - Average RF below (value)

11.7.1

11

Initial Calibration Verification

Job Number: JC68071

Sample: S2Q278-ICV278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15718.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Data File: 2Q15718

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	17.407	-13.0	87.0
13C2-6:2FTS	20.000	17.745	-11.3	88.7
13C2-8:2FTS	20.000	17.268	-13.7	86.3
13C2-PFDoDA	20.000	18.008	-10.0	90.0
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	17.948	-10.3	89.7
13C3-PFBS	20.000	17.377	-13.1	86.9
13C3-PFHxS	20.000	17.386	-13.1	86.9
13C4-PFBA	20.000	17.177	-14.1	85.9
13C4-PFHpA	20.000	17.468	-12.7	87.3
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	17.687	-11.6	88.4
13C5-PFPeA	20.000	17.345	-13.3	86.7
13C6-PFDA	20.000	18.072	-9.6	90.4
13C7-PFUnDA	20.000	17.833	-10.8	89.2
13C8-FOSA	20.000	17.765	-11.2	88.8
13C8-PFOA	20.000	17.562	-12.2	87.8
13C8-PFOS	20.000	18.188	-9.1	90.9
13C9-PFNA	20.000	18.378	-8.1	91.9
4:2FTS	20.000	22.448	12.2	112.2
6:2FTS	20.000	22.488	12.4	112.4
8:2FTS	20.000	21.546	7.7	107.7
d3-MeFOSAA	20.000	17.992	-10.0	90.0
M2-PFOA	20.000	19.986	-0.1	99.9
EtFOSAA	20.000	21.796	9.0	109.0
FOSA	20.000	24.046	20.2	120.2
MeFOSAA	20.000	23.633	18.2	118.2
PFBA	20.000	20.822	4.1	104.1
PFBS	20.000	17.743	-11.3	88.7
PFDA	20.000	18.571	-7.1	92.9
PFDoDA	20.000	21.726	8.6	108.6
PFDS	20.000	18.984	-5.1	94.9
PFHpA	20.000	21.086	5.4	105.4
PFHpS	20.000	19.306	-3.5	96.5
PFHxA	20.000	20.452	2.3	102.3
PFHxS	20.000	19.627	-1.9	98.1
PFNA	20.000	19.117	-4.4	95.6

11.7.2
11

Initial Calibration Verification

Job Number: JC68071

Sample: S2Q278-ICV278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15718.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.630	-6.8	93.2
PFOA	20.000	21.867	9.3	109.3
PFOS	20.000	20.421	2.1	102.1
PFPeA	20.000	22.138	10.7	110.7
PFPeS	20.000	18.914	-5.4	94.6
PFTeDA	20.000	22.276	11.4	111.4
PFTTrDA	20.000	21.521	7.6	107.6
PFUnDA	20.000	22.166	10.8	110.8
M4-PFOS	20.000	19.990	-0.1	99.9
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15721.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Data File: 2Q15721

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	20.642	3.2	103.2
13C2-6:2FTS	20.000	20.918	4.6	104.6
13C2-8:2FTS	20.000	20.110	0.6	100.6
13C2-PFDoDA	20.000	21.527	7.6	107.6
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.412	7.1	107.1
13C3-PFBS	20.000	20.467	2.3	102.3
13C3-PFHxS	20.000	20.460	2.3	102.3
13C4-PFBA	20.000	20.040	0.2	100.2
13C4-PFHpA	20.000	20.614	3.1	103.1
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	20.742	3.7	103.7
13C5-PFPeA	20.000	20.159	0.8	100.8
13C6-PFDA	20.000	21.063	5.3	105.3
13C7-PFUnDA	20.000	21.151	5.8	105.8
13C8-FOSA	20.000	20.523	2.6	102.6
13C8-PFOA	20.000	21.208	6.0	106.0
13C8-PFOS	20.000	20.727	3.6	103.6
13C9-PFNA	20.000	21.540	7.7	107.7
4:2FTS	20.000	21.951	9.8	109.8
6:2FTS	20.000	21.945	9.7	109.7
8:2FTS	20.000	21.717	8.6	108.6
d3-MeFOSAA	20.000	20.633	3.2	103.2
M2-PFOA	20.000	20.007	0.0	100.0
EtFOSAA	20.000	20.295	1.5	101.5
FOSA	20.000	21.652	8.3	108.3
MeFOSAA	20.000	22.507	12.5	112.5
PFBA	20.000	18.745	-6.3	93.7
PFBS	20.000	18.778	-6.1	93.9
PFDA	20.000	18.907	-5.5	94.5
PFDoDA	20.000	20.422	2.1	102.1
PFDS	20.000	18.775	-6.1	93.9
PFHpA	20.000	19.533	-2.3	97.7
PFHpS	20.000	19.186	-4.1	95.9
PFHxA	20.000	20.963	4.8	104.8
PFHxS	20.000	21.116	5.6	105.6
PFNA	20.000	18.926	-5.4	94.6

11.7.3
11

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15721.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.730	-6.3	93.7
PFOA	20.000	19.040	-4.8	95.2
PFOS	20.000	18.928	-5.4	94.6
PFPeA	20.000	20.803	4.0	104.0
PFPeS	20.000	19.021	-4.9	95.1
PFTeDA	20.000	21.981	9.9	109.9
PFTrDA	20.000	18.822	-5.9	94.1
PFUnDA	20.000	20.577	2.9	102.9
M4-PFOS	20.000	20.042	0.2	100.2
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15732.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Data File: 2Q15732

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.022	5.1	105.1
13C2-6:2FTS	20.000	21.664	8.3	108.3
13C2-8:2FTS	20.000	21.099	5.5	105.5
13C2-PFDoDA	20.000	21.193	6.0	106.0
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.181	5.9	105.9
13C3-PFBS	20.000	20.886	4.4	104.4
13C3-PFHxS	20.000	20.848	4.2	104.2
13C4-PFBA	20.000	20.174	0.9	100.9
13C4-PFHpA	20.000	20.543	2.7	102.7
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	21.145	5.7	105.7
13C5-PFPeA	20.000	20.173	0.9	100.9
13C6-PFDA	20.000	20.754	3.8	103.8
13C7-PFUnDA	20.000	21.473	7.4	107.4
13C8-FOSA	20.000	21.267	6.3	106.3
13C8-PFOA	20.000	21.123	5.6	105.6
13C8-PFOS	20.000	21.533	7.7	107.7
13C9-PFNA	20.000	21.527	7.6	107.6
4:2FTS	20.000	22.127	10.6	110.6
6:2FTS	20.000	21.678	8.4	108.4
8:2FTS	20.000	21.914	9.6	109.6
d3-MeFOSAA	20.000	21.586	7.9	107.9
M2-PFOA	20.000	20.001	0.0	100.0
EtFOSAA	20.000	20.391	2.0	102.0
FOSA	20.000	21.448	7.2	107.2
MeFOSAA	20.000	21.671	8.4	108.4
PFBA	20.000	18.626	-6.9	93.1
PFBS	20.000	18.819	-5.9	94.1
PFDA	20.000	18.497	-7.5	92.5
PFDoDA	20.000	20.151	0.8	100.8
PFDS	20.000	19.122	-4.4	95.6
PFHpA	20.000	19.742	-1.3	98.7
PFHpS	20.000	19.447	-2.8	97.2
PFHxA	20.000	20.232	1.2	101.2
PFHxS	20.000	21.103	5.5	105.5
PFNA	20.000	18.952	-5.2	94.8

11.7.4

11

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15732.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.276	-8.6	91.4
PFOA	20.000	19.603	-2.0	98.0
PFOS	20.000	18.725	-6.4	93.6
PFPeA	20.000	20.848	4.2	104.2
PFPeS	20.000	18.668	-6.7	93.3
PFTeDA	20.000	22.012	10.1	110.1
PFTTrDA	20.000	19.146	-4.3	95.7
PFUnDA	20.000	19.552	-2.2	97.8
M4-PFOS	20.000	20.003	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

11.7.4
11

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15742.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Data File: 2Q15742

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.480	7.4	107.4
13C2-6:2FTS	20.000	21.283	6.4	106.4
13C2-8:2FTS	20.000	21.839	9.2	109.2
13C2-PFDoDA	20.000	21.699	8.5	108.5
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	20.847	4.2	104.2
13C3-PFBS	20.000	21.148	5.7	105.7
13C3-PFHxS	20.000	21.413	7.1	107.1
13C4-PFBA	20.000	20.475	2.4	102.4
13C4-PFHpA	20.000	20.244	1.2	101.2
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	20.671	3.4	103.4
13C5-PFPeA	20.000	20.393	2.0	102.0
13C6-PFDA	20.000	19.910	-0.4	99.6
13C7-PFUnDA	20.000	21.209	6.0	106.0
13C8-FOSA	20.000	20.815	4.1	104.1
13C8-PFOA	20.000	21.281	6.4	106.4
13C8-PFOS	20.000	21.225	6.1	106.1
13C9-PFNA	20.000	21.061	5.3	105.3
4:2FTS	20.000	22.128	10.6	110.6
6:2FTS	20.000	22.306	11.5	111.5
8:2FTS	20.000	21.474	7.4	107.4
d3-MeFOSAA	20.000	22.006	10.0	110.0
M2-PFOA	20.000	19.995	0.0	100.0
EtFOSAA	20.000	19.542	-2.3	97.7
FOSA	20.000	21.791	9.0	109.0
MeFOSAA	20.000	22.110	10.6	110.6
PFBA	20.000	18.353	-8.2	91.8
PFBS	20.000	19.058	-4.7	95.3
PFDA	20.000	18.707	-6.5	93.5
PFDoDA	20.000	20.184	0.9	100.9
PFDS	20.000	19.341	-3.3	96.7
PFHpA	20.000	20.099	0.5	100.5
PFHpS	20.000	18.882	-5.6	94.4
PFHxA	20.000	20.676	3.4	103.4
PFHxS	20.000	21.044	5.2	105.2
PFNA	20.000	18.898	-5.5	94.5

11.7.5
11

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15742.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.460	-7.7	92.3
PFOA	20.000	19.371	-3.1	96.9
PFOS	20.000	19.183	-4.1	95.9
PFPeA	20.000	21.081	5.4	105.4
PFPeS	20.000	18.467	-7.7	92.3
PFTeDA	20.000	21.950	9.8	109.8
PFTrDA	20.000	19.728	-1.4	98.6
PFUnDA	20.000	20.292	1.5	101.5
M4-PFOS	20.000	20.010	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15748.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0620_PFC_ID_S2Q278\s2q278.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15709.d
- 2:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15710.d
- 3:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15711.d
- 4:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15712.d
- 5:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15713.d
- 6:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15714.d
- 7:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15715.d
- 8:D:\MassHunter\Data\0620_PFC_ID_S2Q278\2Q15716.d

Data File: 2Q15748

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	21.773	8.9	108.9
13C2-6:2FTS	20.000	21.622	8.1	108.1
13C2-8:2FTS	20.000	21.704	8.5	108.5
13C2-PFDoDA	20.000	21.687	8.4	108.4
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	21.233	6.2	106.2
13C3-PFBS	20.000	21.533	7.7	107.7
13C3-PFHxS	20.000	21.766	8.8	108.8
13C4-PFBA	20.000	20.385	1.9	101.9
13C4-PFHpA	20.000	20.780	3.9	103.9
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	21.067	5.3	105.3
13C5-PFPeA	20.000	20.485	2.4	102.4
13C6-PFDA	20.000	20.398	2.0	102.0
13C7-PFUnDA	20.000	21.387	6.9	106.9
13C8-FOSA	20.000	21.206	6.0	106.0
13C8-PFOA	20.000	20.989	4.9	104.9
13C8-PFOS	20.000	20.982	4.9	104.9
13C9-PFNA	20.000	21.732	8.7	108.7
4:2FTS	20.000	21.681	8.4	108.4
6:2FTS	20.000	22.226	11.1	111.1
8:2FTS	20.000	21.606	8.0	108.0
d3-MeFOSAA	20.000	22.485	12.4	112.4
M2-PFOA	20.000	20.003	0.0	100.0
EtFOSAA	20.000	19.589	-2.1	97.9
FOSA	20.000	22.123	10.6	110.6
MeFOSAA	20.000	21.564	7.8	107.8
PFBA	20.000	18.187	-9.1	90.9
PFBS	20.000	18.729	-6.4	93.6
PFDA	20.000	18.183	-9.1	90.9
PFDoDA	20.000	19.771	-1.1	98.9
PFDS	20.000	19.307	-3.5	96.5
PFHpA	20.000	19.460	-2.7	97.3
PFHpS	20.000	18.933	-5.3	94.7
PFHxA	20.000	20.856	4.3	104.3
PFHxS	20.000	20.817	4.1	104.1
PFNA	20.000	18.429	-7.9	92.1

11.76
11

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q278-CC278

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q15748.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	18.698	-6.5	93.5
PFOA	20.000	19.867	-0.7	99.3
PFOS	20.000	19.525	-2.4	97.6
PFPeA	20.000	21.013	5.1	105.1
PFPeS	20.000	18.352	-8.2	91.8
PFTeDA	20.000	21.633	8.2	108.2
PFTrDA	20.000	19.575	-2.1	97.9
PFUnDA	20.000	19.942	-0.3	99.7
M4-PFOS	20.000	19.992	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDoDA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Initial Calibration Summary

Job Number: JC68071

Sample: S2Q285-ICC285

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16076.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Initial Calibration ReSponse Factors - D:\MassHunter\Data\0627_PFC_ID_S2Q285\s2q285.batch.bin

Level ID : Calibration File

- 1 : D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16071.d
- 2 : D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16072.d
- 3 : D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16073.d
- 4 : D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16074.d
- 5 : D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16078.d
- 6 : D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16076.d
- 7 : D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16077.d
- 8 : D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16079.d

Compound	1	2	3	4	5	6	7	8	AvgRF	%RSD	r^2
1) 13C2-4:2FTS	2.69e+3	3.04e+3	3.22e+3	3.16e+3	2.91e+3	3.35e+3	3.66e+3	3.97e+3	3.25e+3	12.579	0.0000
2) 13C2-6:2FTS	2.34e+3	2.66e+3	2.78e+3	2.75e+3	2.52e+3	2.87e+3	3.08e+3	3.14e+3	2.77e+3	9.589	0.0000
3) 13C2-8:2FTS	2.48e+3	2.76e+3	2.98e+3	2.92e+3	2.67e+3	3.07e+3	3.40e+3	3.72e+3	3.00e+3	13.352	0.0000
4) 13C2-PFDoDA	2.65e+3	2.96e+3	3.22e+3	3.16e+3	3.06e+3	3.34e+3	3.48e+3	3.56e+3	3.18e+3	9.331	0.0000
6) 13C2-PFTeDA	1.32e+3	1.40e+3	1.59e+3	1.55e+3	1.31e+3	1.53e+3	1.69e+3	1.74e+3	1.52e+3	10.541	0.0000
7) 13C3-PFBS	3.79e+2	4.27e+2	4.55e+2	4.39e+2	3.98e+2	4.43e+2	4.67e+2	4.52e+2	4.33e+2	6.916	0.0000
8) 13C3-PFHxS	3.91e+2	4.49e+2	4.80e+2	4.67e+2	4.23e+2	4.78e+2	4.92e+2	4.78e+2	4.57e+2	7.538	0.0000
9) 13C4-PFBA	2.56e+3	2.86e+3	2.98e+3	2.88e+3	2.59e+3	2.94e+3	2.98e+3	2.88e+3	2.83e+3	5.907	0.0000
10) 13C4-PFHpA	1.24e+3	1.38e+3	1.45e+3	1.42e+3	1.28e+3	1.42e+3	1.45e+3	1.38e+3	1.38e+3	5.717	0.0000
12) 13C5-PFHxA	1.15e+3	1.32e+3	1.37e+3	1.32e+3	1.21e+3	1.35e+3	1.35e+3	1.29e+3	1.29e+3	5.875	0.0000
13) 13C5-PFPeA	1.12e+3	1.26e+3	1.32e+3	1.28e+3	1.14e+3	1.29e+3	1.31e+3	1.26e+3	1.25e+3	6.062	0.0000
14) 13C6-PFDA	1.72e+3	1.88e+3	2.09e+3	2.01e+3	1.88e+3	2.02e+3	2.03e+3	1.88e+3	1.94e+3	6.139	0.0000
15) 13C7-PFUnDA	1.97e+3	2.25e+3	2.32e+3	2.18e+3	2.21e+3	2.31e+3	2.44e+3	2.43e+3	2.26e+3	6.695	0.0000
16) 13C8-FOSA	1.82e+3	2.02e+3	2.13e+3	2.07e+3	1.88e+3	2.10e+3	1.99e+3	1.83e+3	1.98e+3	6.114	0.0000
17) 13C8-PFOA	1.01e+3	1.12e+3	1.19e+3	1.15e+3	1.04e+3	1.18e+3	1.19e+3	1.11e+3	1.12e+3	6.124	0.0000
18) 13C8-PFOS	2.91e+2	3.32e+2	3.57e+2	3.39e+2	3.23e+2	3.50e+2	3.83e+2	3.77e+2	3.44e+2	8.661	0.0000
19) 13C9-PFNA	1.07e+3	1.19e+3	1.26e+3	1.22e+3	1.20e+3	1.23e+3	1.30e+3	1.25e+3	1.22e+3	5.813	0.0000
23) d3-MeFOSAA	1.38e+3	1.56e+3	1.64e+3	1.57e+3	1.48e+3	1.68e+3	1.72e+3	1.72e+3	1.59e+3	7.459	0.0000
5) 13C2-PFOA	-----ISTD-----										
24) M2-PFOA	0.9995	1.0000	0.9999	1.0003	0.9997	0.9992	1.0002	0.9998	0.9998	0.038	0.0000
11) 13C4-PFOS	-----ISTD-----										
46) M4-PFOS	1.0004	0.9996	0.9999	0.9999	0.9995	0.9976	1.0001	1.0019	0.9999	0.117	0.0000
47) M4-PFBA	-----ISTD-----										
28) PFBA	0.2321	0.2136	0.2089	0.2094	0.2346	0.2104	0.2089	0.2100	0.2160	5.013	0.9998
48) M5-PFPeA	-----ISTD-----										
41) PFPeA	2.7844	2.2976	1.9821	1.8938	2.1242	1.9055	1.8585	1.8991	2.0931	15.114	0.9997
49) M5-PFHxA	-----ISTD-----										
35) PFHxA	0.6270	0.5492	0.4831	0.4933	0.5647	0.5109	0.5061	0.5030	0.5297	9.080	0.9998
50) M4-PFHpA	-----ISTD-----										
33) PFHpA	1.3850	1.2997	1.2635	1.2641	1.4573	1.3067	1.2786	1.2975	1.3191	5.140	0.9998
51) M8-PFOA	-----ISTD-----										
39) PFOA	0.8491	0.8601	0.7742	0.7759	0.9295	0.7968	0.7716	0.7977	0.8194	6.822	0.9994
52) M9-PFNA	-----ISTD-----										
37) PFNA	0.7355	0.7166	0.7074	0.6945	0.7313	0.7288	0.6648	0.7003	0.7099	3.321	0.9992
53) M6-PFDA	-----ISTD-----										
30) PFDA	0.5567	0.5361	0.4651	0.4125	0.5257	0.4825	0.4552	0.4716	0.4882	9.812	0.9995
54) M7-PFUnDA	-----ISTD-----										
32) PFDS	0.1895	0.1586	0.1588	0.1627	0.1783	0.1659	0.1645	0.1660	0.1680	6.330	0.9999
45) PFUnDA	0.6600	0.6367	0.6100	0.6253	0.6539	0.6086	0.6057	0.6148	0.6269	3.377	0.9999
55) M2-PFDoDA	-----ISTD-----										
31) PFDoDA	0.8518	0.7262	0.6341	0.6271	0.7091	0.6375	0.6321	0.6366	0.6818	11.545	0.9998
56) M2-PFTeDA	-----ISTD-----										
43) PFTeDA	0.9231	0.8173	0.7680	0.6439	0.8649	0.7239	0.7314	0.7290	0.7752	11.503	0.9995
44) PFTrDA	1.4778	1.6043	1.3516	1.3628	1.6354	1.4392	1.3941	1.4049	1.4588	7.369	0.9996
57) M8-FOSA	-----ISTD-----										
26) FOSA	0.7758	0.8032	0.7986	0.8076	0.9049	0.8335	0.8185	0.8138	0.8195	4.675	0.9998

Initial Calibration Summary

Job Number: JC68071

Sample: S2Q285-ICC285

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16076.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

58) M3-PFBS	-----ISTD-----											
29) PFBS	2.9033	2.6532	2.5026	2.4720	2.7539	2.5224	2.4869	2.5723	2.6083	5.858	0.9997	
42) PFPeS	1.6856	1.6227	1.5301	1.5573	1.7185	1.6055	1.5830	1.6296	1.6165	3.885	0.9998	
59) M3-PFHxS	-----ISTD-----											
34) PFHpS	1.9601	1.9066	1.7260	1.7110	1.9307	1.8208	1.7875	1.7417	1.8230	5.375	0.9996	
36) PFHxS	2.3451	2.2743	2.1896	2.1963	2.4863	2.2845	2.2745	2.3201	2.2963	4.083	0.9998	
60) M8-PFOS	-----ISTD-----											
38) PFNS	1.8999	1.5712	1.6370	1.4971	1.7474	1.6511	1.5139	1.5378	1.6319	8.358	0.9994	
40) PFOS	3.0743	2.5434	2.2664	2.3868	2.5506	2.4132	2.2226	2.2701	2.4659	11.155	0.9995	
61) M2-4:2FTS	-----ISTD-----											
20) 4:2FTS	0.5829	0.5347	0.5313	0.5151	0.5867	0.5158	0.4705	0.4301	0.5209	10.088	0.9996	
62) M2-6:2FTS	-----ISTD-----											
21) 6:2FTS	0.7535	0.7528	0.6856	0.6662	0.7623	0.6890	0.6151	0.5704	0.6869	10.092	0.9995	
63) M2-8:2FTS	-----ISTD-----											
22) 8:2FTS	0.9889	0.9031	0.8558	0.8642	0.9656	0.8668	0.7754	0.7068	0.8658	10.699	0.9995	
64) M3-MeFOSAA	-----ISTD-----											
25) EtFOSAA	0.3899	0.3579	0.3176	0.3790	0.3847	0.3463	0.3297	0.3184	0.3529	8.369	0.9989	
27) MeFOSAA	0.4172	0.4360	0.3885	0.3786	0.4307	0.3840	0.3739	0.3717	0.3976	6.593	0.9997	

 *(value) - Average RF below (value)

11.77
11

Initial Calibration Verification

Job Number: JC68071

Sample: S2Q285-ICV285

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16081.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0627_PFC_ID_S2Q285\s2q285.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16071.d
- 2:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16072.d
- 3:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16073.d
- 4:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16074.d
- 5:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16078.d
- 6:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16076.d
- 7:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16077.d
- 8:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16079.d

Data File: 2q16081

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	18.392	-8.0	92.0
13C2-6:2FTS	20.000	18.864	-5.7	94.3
13C2-8:2FTS	20.000	18.187	-9.1	90.9
13C2-PFDoDA	20.000	19.768	-1.2	98.8
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	18.692	-6.5	93.5
13C3-PFBS	20.000	18.324	-8.4	91.6
13C3-PFHxS	20.000	18.165	-9.2	90.8
13C4-PFBA	20.000	18.139	-9.3	90.7
13C4-PFHpA	20.000	18.749	-6.3	93.7
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	18.857	-5.7	94.3
13C5-PFPeA	20.000	18.222	-8.9	91.1
13C6-PFDA	20.000	18.715	-6.4	93.6
13C7-PFUnDA	20.000	19.083	-4.6	95.4
13C8-FOSA	20.000	18.732	-6.3	93.7
13C8-PFOA	20.000	18.980	-5.1	94.9
13C8-PFOS	20.000	18.554	-7.2	92.8
13C9-PFNA	20.000	19.130	-4.3	95.7
4:2FTS	20.000	20.721	3.6	103.6
6:2FTS	20.000	21.179	5.9	105.9
8:2FTS	20.000	20.662	3.3	103.3
d3-MeFOSAA	20.000	18.529	-7.4	92.6
M2-PFOA	20.000	20.015	0.1	100.1
EtFOSAA	20.000	23.264	16.3	116.3
FOSA	20.000	22.056	10.3	110.3
MeFOSAA	20.000	22.494	12.5	112.5
PFBA	20.000	21.681	8.4	108.4
PFBS	20.000	18.812	-5.9	94.1
PFDA	20.000	19.108	-4.5	95.5
PFDoDA	20.000	22.340	11.7	111.7
PFDS	20.000	20.005	0.0	100.0
PFHpA	20.000	22.231	11.2	111.2
PFHpS	20.000	20.822	4.1	104.1
PFHxA	20.000	19.294	-3.5	96.5
PFHxS	20.000	19.912	-0.4	99.6
PFNA	20.000	19.940	-0.3	99.7

11.7.8
11

Initial Calibration Verification

Job Number: JC68071

Sample: S2Q285-ICV285

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16081.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	21.719	8.6	108.6
PFOA	20.000	21.211	6.1	106.1
PFOS	20.000	22.209	11.0	111.0
PFPeA	20.000	21.208	6.0	106.0
PFPeS	20.000	19.974	-0.1	99.9
PFTeDA	20.000	19.510	-2.4	97.6
PFTrDA	20.000	23.287	16.4	116.4
PFUnDA	20.000	21.252	6.3	106.3
M4-PFOS	20.000	20.057	0.3	100.3
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q286-CC285

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16099.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0627_PFC_ID_S2Q286\s2q286.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16071.d
- 2:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16072.d
- 3:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16073.d
- 4:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16074.d
- 5:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16078.d
- 6:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16076.d
- 7:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16077.d
- 8:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16079.d

Data File: 2q16099

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	22.972	14.9	114.9
13C2-6:2FTS	20.000	22.876	14.4	114.4
13C2-8:2FTS	20.000	21.577	7.9	107.9
13C2-PFDoDA	20.000	27.341	# 36.7	136.7
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	26.014	# 30.1	130.1
13C3-PFBS	20.000	22.109	10.5	110.5
13C3-PFHxS	20.000	23.481	17.4	117.4
13C4-PFBA	20.000	22.026	10.1	110.1
13C4-PFHpA	20.000	23.547	17.7	117.7
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	23.173	15.9	115.9
13C5-PFPeA	20.000	22.559	12.8	112.8
13C6-PFDA	20.000	23.592	18.0	118.0
13C7-PFUnDA	20.000	25.160	25.8	125.8
13C8-FOSA	20.000	21.608	8.0	108.0
13C8-PFOA	20.000	24.135	20.7	120.7
13C8-PFOS	20.000	23.218	16.1	116.1
13C9-PFNA	20.000	24.323	21.6	121.6
4:2FTS	20.000	20.400	2.0	102.0
6:2FTS	20.000	20.684	3.4	103.4
8:2FTS	20.000	20.342	1.7	101.7
d3-MeFOSAA	20.000	20.201	1.0	101.0
M2-PFOA	20.000	20.002	0.0	100.0
EtFOSAA	20.000	21.303	6.5	106.5
FOSA	20.000	20.355	1.8	101.8
MeFOSAA	20.000	20.741	3.7	103.7
PFBA	20.000	19.722	-1.4	98.6
PFBS	20.000	19.397	-3.0	97.0
PFDA	20.000	20.218	1.1	101.1
PFDoDA	20.000	20.461	2.3	102.3
PFDS	20.000	19.391	-3.0	97.0
PFHpA	20.000	19.926	-0.4	99.6
PFHpS	20.000	20.324	1.6	101.6
PFHxA	20.000	20.108	0.5	100.5
PFHxS	20.000	19.827	-0.9	99.1
PFNA	20.000	19.602	-2.0	98.0

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Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q286-CC285

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16099.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	21.359	6.8	106.8
PFOA	20.000	20.882	4.4	104.4
PFOS	20.000	20.536	2.7	102.7
PFPeA	20.000	20.098	0.5	100.5
PFPeS	20.000	19.868	-0.7	99.3
PFTeDA	20.000	19.400	-3.0	97.0
PFTrDA	20.000	17.371	-13.1	86.9
PFUnDA	20.000	19.867	-0.7	99.3
M4-PFOS	20.000	19.995	0.0	100.0
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%

11.7.9
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Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q286-CC285

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16109.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

Continuing Calibration Report

Batch: D:\MassHunter\Data\0627_PFC_ID_S2Q286\s2q286.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16071.d
- 2:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16072.d
- 3:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16073.d
- 4:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16074.d
- 5:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16078.d
- 6:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16076.d
- 7:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16077.d
- 8:D:\MassHunter\Data\0627_PFC_ID_S2Q285\2q16079.d

Data File: 2q16109

Type : QC

Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-4:2FTS	20.000	23.254	16.3	116.3
13C2-6:2FTS	20.000	22.166	10.8	110.8
13C2-8:2FTS	20.000	21.850	9.2	109.2
13C2-PFDoDA	20.000	28.402	# 42.0	142.0
13C2-PFOA	---	--ISTD--		
13C2-PFTeDA	20.000	25.721	28.6	128.6
13C3-PFBS	20.000	22.766	13.8	113.8
13C3-PFHxS	20.000	23.773	18.9	118.9
13C4-PFBA	20.000	22.084	10.4	110.4
13C4-PFHpA	20.000	23.135	15.7	115.7
13C4-PFOS	---	--ISTD--		
13C5-PFHxA	20.000	23.177	15.9	115.9
13C5-PFPeA	20.000	22.582	12.9	112.9
13C6-PFDA	20.000	24.127	20.6	120.6
13C7-PFUnDA	20.000	25.648	28.2	128.2
13C8-FOSA	20.000	21.661	8.3	108.3
13C8-PFOA	20.000	23.634	18.2	118.2
13C8-PFOS	20.000	24.391	22.0	122.0
13C9-PFNA	20.000	23.969	19.8	119.8
4:2FTS	20.000	20.470	2.3	102.3
6:2FTS	20.000	20.776	3.9	103.9
8:2FTS	20.000	20.387	1.9	101.9
d3-MeFOSAA	20.000	19.479	-2.6	97.4
M2-PFOA	20.000	20.033	0.2	100.2
EtFOSAA	20.000	21.962	9.8	109.8
FOSA	20.000	20.390	1.9	101.9
MeFOSAA	20.000	21.150	5.8	105.8
PFBA	20.000	19.506	-2.5	97.5
PFBS	20.000	19.244	-3.8	96.2
PFDA	20.000	19.542	-2.3	97.7
PFDoDA	20.000	20.135	0.7	100.7
PFDS	20.000	19.723	-1.4	98.6
PFHpA	20.000	20.479	2.4	102.4
PFHpS	20.000	20.661	3.3	103.3
PFHxA	20.000	19.511	-2.4	97.6
PFHxS	20.000	19.719	-1.4	98.6
PFNA	20.000	19.520	-2.4	97.6

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Continuing Calibration Summary

Job Number: JC68071

Sample: S2Q286-CC285

Account: ALNJ SGS Dayton, NJ

Lab FileID: 2Q16109.D

Project: ILINY: OBGNYA: ILI - Region 1, Denton Avenue Landfill

PFNS	20.000	20.156	0.8	100.8
PFOA	20.000	20.216	1.1	101.1
PFOS	20.000	20.225	1.1	101.1
PFPeA	20.000	19.966	-0.2	99.8
PFPeS	20.000	19.711	-1.4	98.6
PFTeDA	20.000	19.541	-2.3	97.7
PFTrDA	20.000	0.052	# -99.7	0.3
PFUnDA	20.000	19.813	-0.9	99.1
M4-PFOS	20.000	19.970	-0.1	99.9
M4-PFBA	---	--ISTD--		
M5-PFPeA	---	--ISTD--		
M5-PFHxA	---	--ISTD--		
M4-PFHpA	---	--ISTD--		
M8-PFOA	---	--ISTD--		
M9-PFNA	---	--ISTD--		
M6-PFDA	---	--ISTD--		
M7-PFUnDA	---	--ISTD--		
M2-PFDODA	---	--ISTD--		
M2-PFTeDA	---	--ISTD--		
M8-FOSA	---	--ISTD--		
M3-PFBS	---	--ISTD--		
M3-PFHxS	---	--ISTD--		
M8-PFOS	---	--ISTD--		
M2-4:2FTS	---	--ISTD--		
M2-6:2FTS	---	--ISTD--		
M2-8:2FTS	---	--ISTD--		
M3-MeFOSAA	---	--ISTD--		

CC Criteria: +/- 30%