DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

S&ME, Inc.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Edmund Henriques Phone: 336-288-7180

E-mail: ehenriques@smeinc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Harris Landfill	New Hill, North Carolina	92-10	.0500	April 13, 2016

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☐ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Edmund Q.B. Henriques — Senior Geologist — 336-288-7180

Facility Representative Name (Print) — Title — (Area Code) Telephone Number

Edmund Q.B. Henriques — 6/9/2016 — Affix NC Licensed/ Professional Geologist Seal

Signature — Date

NORTH CAROLINA LICENSED SEAL 1216 GEOLOGIST EDMUND Q.B. HENRIQUES

8646 West Market Street, Suite 105, Greensboro, NC 27409

Facility Representative Address

S&ME Engineering License # F-0176, S&ME Geology License# C-145

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009

Harris Landfill, Permit No. 92-10
Harris Nuclear Plant
New Hill, North Carolina
Semi-Annual Water Quality Monitoring
April 2016 Monitoring Event
S&ME Project No. 7126-14-013

Prepared for:

Duke Energy Progress, LLC.
5413 Shearon Harris Road
New Hill, North Carolina 27562

Prepared by:

S&ME, Inc.
8646 W Market Street, Suite 105
Greensboro, North Carolina 27409

June 9, 2016

June 9, 2016

Duke Energy Progress, LLC.
5413 Shearon Harris Road
New Hill, North Carolina 27562

Attention: Bob Wilson, R.E.M., C.I.P.S.

Reference: **Harris Landfill (Permit No. 92-10)**
Harris Nuclear Plant
New Hill, North Carolina
Semi-Annual Water Quality Monitoring Report
April 2016 Sampling Event
S&ME Project No. 7126-14-013

Dear Mr. Wilson

S&ME, Inc. (S&ME) is pleased to submit this report documenting the semi-annual post closure monitoring conducted on April 13, 2016 at the Harris Landfill, located in New Hill, North Carolina. These services have been performed in general accordance with S&ME Proposal No. 71-1400065, dated August 14, 2014. Synterra Corporation provided Duke Energy Progress, LLC. (Duke) with the required groundwater sampling activities. Pace Analytical Services, Inc., provided Duke with the laboratory analytical services for the collected samples. S&ME reviewed the data collected and prepared this report and the corresponding Electronic Data Deliverables (EDD) required by the North Carolina Department of Environmental Quality (NCDEQ), Division of Waste Management, Solid Waste Section.

S&ME appreciates the opportunity to provide environmental services to Duke. Please contact the undersigned if you have any questions or comments.

Sincerely,

S&ME, Inc.

Edmund Q.B. Henriques, L.G.
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❖ EXECUTIVE SUMMARY

The Harris Landfill is located at the Duke Energy Progress, LLC. Harris Nuclear Plant. In accordance with the *Closure of the Harris Nuclear Plant, Unlined Industrial Landfill Unit; New Hill, North Carolina; FACILITY PERMIT #: 92-10*, letter from the North Carolina Department of Environmental Quality (NCDEQ) dated May 25, 2005; this unlined industrial landfill was closed and covered under NCDEQ Solid Waste Permit No. 92-10. Currently, monitoring wells MW-1, MW-2, MW-3, MW-6, and MW-7 comprise the groundwater monitoring network for the closed Harris Landfill. On April 13, 2016, groundwater samples were obtained from each of the five monitoring wells by Synterra Corporation (SynTerra). Samples collected from monitoring wells were submitted for laboratory analysis of the North Carolina Landfill Appendix I volatile organic constituents, the eight RCRA Metals, and sulfate. The samples were analyzed by PACE Analytical Services, Inc. (PACE) of Huntersville, North Carolina, a North Carolina certified laboratory.

Analytical results of the monitoring well groundwater samples indicate that sulfate and the 8-RCRA metals were not detected at concentrations greater than the corresponding 15A North Carolina Administrative Code (NCAC) 2L .0200 groundwater quality standards (2L Standard) during this event. The following volatile organic compounds were detected in these groundwater samples at concentrations greater than the corresponding 2L Standard.

	Groundwater Sample Locations			**NCAC 2L Standards**
Well ID	**MW-1**	**MW-2**	**MW-7**	
Sample ID	2016009445	2016009446	2016009449	
Date Collected	04/13/16	04/13/16	04/13/16	
Detected Analytes	(ug/L)	(ug/L)	(ug/L)	(ug/L)
1,1-Dichloroethane	**61.6**	**7.0**	**90.7**	6
1,2-Dichloroethane			**0.41J**	0.4
cis-1,2-Dichloroethene			**110**	70
Trichloroethene			**4.4**	3
Vinyl Chloride	**0.69J**		**2.5**	0.03

Note: A J value indicates an estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

The field measured pH for groundwater at monitoring well MW-2 was reported as 5.7. This value is outside of the 6.5 – 8.5 range published under the 2L Standards.

Based on the data available at this time, it is believed that the cause of the 2L Standards exceedances at the Harris Landfill is from percolation of landfill contents from the waste management units into the underlying groundwater aquifer. These 2L Standard exceedances were detected in monitoring wells MW-1, MW-2, and MW-7, two of which are located less than 100 foot from the landfill limits of waste (MW-1 and MW-7) and each well is substantially within the 500 foot compliance boundary. According to 15A NCAC 2L .0107, groundwater compliance would be determined at the Facility's compliance boundary.

1.0 INTRODUCTION

The Harris Landfill is an unlined industrial landfill located at the Duke Energy Progress, LLC. (here after referred to as Duke Energy), Harris Nuclear Plant, Wake County, North Carolina. The landfill and vicinity are depicted in **Figure 1**. In accordance with the *Closure of the Harris Nuclear Plant, Unlined Industrial Landfill Unit; New Hill, North Carolina; FACILITY PERMIT #: 92-10* letter from the North Carolina Department of Environmental Quality (NCDEQ) dated May 25, 2005, this unlined industrial landfill unit was closed and covered under NCDEQ Solid Waste Permit No. 92-10. Currently, the unit's post-closure care requires monitoring groundwater quality on a semi-annual basis. The groundwater monitoring network comprises five monitoring wells (MW-1, MW-2, MW-3, MW-6, and MW-7). In accordance with the Closure Plan the groundwater samples are to be analyzed for the North Carolina Landfill Appendix I volatile organic constituent suite, the eight Resource Conservation and Recovery Act (RCRA) metals, and sulfate.

2.0 SCOPE OF SERVICES

For this, the first semi-annual monitoring event for 2016, SynTerra provided Duke Energy with the required groundwater sampling activities. PACE a North Carolina certified laboratory, provided Duke Energy with the laboratory analytical services for the collected samples.

S&ME completed the following tasks:

- Reviewed the sampling event data prepared by SynTerra,
- Reviewed the laboratory analytical report and associated Electronic Data Deliverable (EDD) prepared by PACE,
- Prepared this report to summarize the methods employed and the results for the April 2016 semi-annual water quality monitoring event. The report provides:
    - A table summarizing observed water levels and well construction details,
    - A table summarizing the field parameters measured for the samples collected during this monitoring event,
    - A table summarizing the parameters detected above the corresponding method detection limits for the samples collected during this monitoring event and analyzed by PACE,
    - A table summarizing parameters with concentrations greater than the corresponding 2L Standard for the samples collected during this monitoring event,
    - A figure depicting generalized groundwater flow directions for this monitoring event,
    - A discussion of monitoring event findings and results,
    - The EDD provided to Duke Energy by PACE adapted to conform with the NCDEQ format and template requirements.

3.0 METHODS EMPLOYED

3.1 Monitoring Well Sampling

Groundwater monitoring well sampling was completed by SynTerra staff on April 13, 2016. Prior to sample collection each well was opened and the static water level measured relative to the top edge of the PVC well casing. The water level data and well construction details are summarized in **Table 1. Figure 2** depicts the monitoring well locations with respect to the landfill. The groundwater compliance boundary for the landfill is also shown, which is located 500 feet from the limits of waste.

Groundwater monitoring wells MW-1, MW-2, MW-3, MW-6, and MW-7 were sampled using a peristaltic pump and a low-flow sampling method. New tubing was used at each well to collect the samples. For low-flow sampling, a minimum purge volume is not required. The Low Flow Sampling Logs indicate that groundwater flow rates during purging and sampling ranged from approximately 40 milliliters/minute to 200 milliliters/minute. During the low-flow sampling field parameters of temperature, pH, conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were measured at the time intervals recorded on the Low Flow Sampling Log prepared for each sampled location, until parameters stabilized.

Turbidity was measured in the field. The low-flow sampling technique employed successfully obtained groundwater samples from the groundwater monitoring wells with turbidity values less than 10 Nephelometric Turbidity Units (NTUs). Upon meeting the stabilization goals or using professional judgment, a groundwater sample was collected from each well. As quality control/quality assurance measures, a duplicate sample was collected at monitoring well MW-6 and a field blank sample was collected.

The collected samples were placed under chain-of custody and submitted to PACE for laboratory analyses. The groundwater samples were analyzed for volatile organic compounds (VOCs) using EPA Method 8260, the 8-RCRA metals using EPA Methods 6010 and 7470, and sulfate using EPA Method 300.0.

Appendix I includes *Low Flow Sampling Logs* provided by SynTerra, which document the field data collected during the sample collection process. **Table 2** includes a summary of the field indicator parameters measured. The field stabilization parameters listed in **Table 2** were monitored and recorded before each groundwater sample was collected.

4.0 RESULTS

4.1 Groundwater Analytical Results

Table 3 provides a summary of the analytes detected by the laboratory analyses for the groundwater samples obtained from monitoring wells MW-1, MW-2, MW-3, MW-6, and MW-7, sampled on April 13, 2016. The table also provides the laboratory data qualifiers, corresponding method detection limits, and the corresponding 2L Standards for reference. As summarized in **Table 4**, the following analytes were detected in the referenced groundwater samples at concentrations that appear to exceed the corresponding 2L Standards. The complete laboratory reports are included in **Appendix II**.

- 1,1-Dichloroethane was reported at a concentration of 61.6 micrograms per liter (µg/L) at monitoring well MW-1, 7.0 µg/L at monitoring well MW-2, and at a concentration of 90.7 µg/L at monitoring well MW-7. These concentrations are greater than the 2L Standard established at 6 µg/L.
- 1,2-Dichloroethane was reported at a concentration of 0.41J* at monitoring well MW-7. This concentration is greater than the 2L Standard established at 0.4 µg/L.
- cis-1,2-Dichloroethene was reported at a concentration of 110 µg/L at monitoring well MW-7. This concentration is greater than the 2L Standard established at 70 µg/L.
- Trichloroethene was reported at a concentration of 4.4 µg/L at monitoring well MW-7. This concentration is greater than the 2L Standard established at 3 µg/L.
- Vinyl Chloride was reported in the groundwater samples collected from monitoring well MW-1 at an estimated concentration of 0.69J* µg/L and at monitoring well MW-7 at a concentration of 2.5 µg/L. These concentrations are greater than the 2L Standard established at 0.03 µg/L.

* *Concentration reported greater than the method detection limit but less than the SWSL (solid waste section limit), thus it is considered estimated. A J value indicates an estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.*

For this monitoring event, the field measured pH for groundwater at monitoring well MW-2 was reported as 5.7. This value is outside of the 6.5 – 8.5 range published under the 2L Standards.

During this monitoring event, other Appendix I volatile organic compounds, certain 8-RCRA metals, and sulfate were detected; however, the detected concentrations were less than the corresponding 2L Standards.

4.2 Quality Assurance

A qualitative review of the data was performed to verify that the detected concentrations in the laboratory report were of known quality. A formal, quantitative data validation was not performed. Laboratory-assigned data qualifiers were evaluated to verify that rejected or unsupportable data were not included in the dataset. Quality control data provided in the laboratory reports were also reviewed. No rejected or otherwise unacceptable quality data were reported from the laboratory.

During this monitoring event a duplicate sample labeled "Dup." was collected at monitoring well MW-6 and a field blank sample labeled "Field Blk" was collected. Both samples were analyzed for VOCs using EPA Method 8260, the 8-RCRA metals using EPA Methods 6010 and 7470, and sulfate using EPA Method 300.0. As summarized in **Table 3**, analytical results for duplicate sample "Dup." show good correlation with the analytical results for sample MW-6. Analytical results for field blank sample "Field Blk" reported concentrations of organic compounds including acetone (58.0 µg/L), 2-Butanone (MEK) (15.2 µg/L), chloromethane (0.29J µg/L), and 2-Hexanone (1.6J µg/L). These compounds were not detected in any of the groundwater samples collected during this event. While acetone is a common laboratory contaminant, the source of the remaining detections associated with the field blank remains unclear. A Laboratory QC Method Blank was also analyzed for the Appendix I volatile organic compounds as well as the 8-RCRA metals. The results of the duplicate sample, field blank sample, and laboratory QC sample analyses are included in **Appendix II**. Submitted with this semi-annual monitoring report is the Electronic Data Deliverables (EDD) file in .csv format, which contains field parameter data and laboratory analytical data obtained for this monitoring event.

4.3 Groundwater Flow Direction

The static water levels in the monitoring wells were measured on April 13, 2016. As summarized in **Table 1**, the depths to the water table ranged from 0.0 feet below top of well casing at MW-7 to 26.22 feet below the top of well casing at MW-3. For this event, the groundwater elevation at each monitoring well was calculated by subtracting the top of casing elevation from the depth to static water level measured at each monitoring well.

The monitoring well network includes monitoring wells MW-1, MW-2, and MW-3 which were completed and screened within the water table aquifer. Monitoring wells MW-6 and MW-7 are screened in a bedrock aquifer for which the observed water levels for these monitoring wells indicate artesian conditions in the intersected portions of the bedrock aquifer. For this monitoring event a figure depicting groundwater elevation contours was not prepared giving consideration to the following:

- The long-axis of the landfill unit parallels the axis of a local topographic ridge. Using topography as a guide to estimate groundwater flow directions, some degree of radial groundwater flow is expected within the shallow groundwater aquifer underlying the landfill. Considering the locations of monitoring wells MW-1, MW-2, and MW-3 relative to the axis of the ridge, groundwater elevation data for these points were not contoured.
- Three of the five monitoring wells are screened within the shallow unconfined aquifer and two are screened in the bedrock aquifer. It is often inappropriate to mix disparate aquifer water level data sets in the preparation of groundwater elevation contours.

Figure 2 presents the observed groundwater elevations for each sampled monitoring well. Using topography as a guide to estimate shallow unconfined aquifer flow directions, **Figure 2** was prepared and depicts groundwater flow direction arrows to illustrate estimated shallow groundwater flow in the vicinity of the closed landfill unit. Considering the above stated limitations to the preparation of groundwater elevation contours, groundwater flow rate calculations were not prepared for this monitoring report.

5.0 PRELIMINARY ANALYSIS OF 2L STANDARD EXCEEDANCES

It is believed that the cause of the 2L Standard exceedances reported for this monitoring event is from percolation of landfill contents from the waste management units into the underlying groundwater aquifer. The 2L Standard exceedances were detected in monitoring wells MW-1, MW-2, and MW-7, two of which are located less than 100 foot from the landfill limits of waste (MW-1 and MW-7) and all of which are substantially within the 500 foot compliance boundary.

6.0 REFERENCES

North Carolina Administrative Code, Title 15A, Department of Environment, Health and Natural Resources, Division of Environmental Management, Subchapter 2L, Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina, Sections .0100, .0200, and .0300; from the Environmental Management Commission Raleigh, North Carolina.

Appendices

Tables

TABLE 1
WELL CONSTRUCTION AND GROUNDWATER ELEVATION DATA
HARRIS LANDFILL - PERMIT # 92-10
HARRIS NUCLEAR PLANT
NEW HILL, NORTH CAROLINA
S&ME PROJECT NO. 7126-14-013

Well ID	Date Installed	Total Depth (feet)	Well Diameter (inches)	Depth to Top of Screen (feet bgs)	Well Screen Interval (feet bgs)	Geology of Screened Interval	Northing NAD 83	Easting NAD 83	Ground Elevation NAVD 88 (feet msl.)	Top of Casing Elevation NAVD 88 (feet msl.)	Depth to Groundwater[1] 4/13/2016 (feet)	Groundwater Elevation 4/13/2016 (feet msl.)
MW-1	11/14/1986	98.0	2	87.0	87 - 97	clayey, sandy silt	689729.55	2011877.41	276.17	277.17	22.51	254.66
MW-2	11/18/1986	52.5	2	30.0	30 - 40	clayey, sandy silt	689078.18	2011527.11	269.42	271.54	13.93	257.61
MW-3	11/24/1986	58.0	2	47.0	47 - 57	clayey, sandy silt	688959.39	2010700.94	277.72	279.88	26.22	253.66
MW-6	12/18/2003	68.5	2	53.5	53.5 - 68.5	conglomeritic bedrock	689960.82	2012032.44	253.97	256.51	1.84	254.67
MW-7	12/18/2003	53.0	2	38.0	38 - 53	conglomeritic bedrock	689780.68	2011515.15	272.82	274.98	0.00	274.98

McKim & Creed provided the top of casing elevations and ground surface elevations based on measurements obtained on October 21, 2014.
Well Construction details obtained from Well Construction Records
feet bgs. = feet below ground surface
feet msl. = feet mean sea level
Depth to Groundwater[1] = below top of casing
Well MW-7 exhibits artesian conditions, thus the groundwater elevation listed is not a static water level

TABLE 2
SUMMARY OF GROUNDWATER SAMPLING FIELD PARAMETERS
HARRIS LANDFILL - PERMIT # 92-10
HARRIS NUCLEAR PLANT
NEW HILL, NORTH CAROLINA
S&ME PROJECT NO. 7126-14-013

DATE	WELL ID	WELL DEPTH (feet)	DEPTH TO WATER (feet)	WATER ELEVATION (feet)	ODOR	PURGE METHOD	PUMP RATE (mL/min)	WELL VOLUME (gallons)	EVAC VOLUME (gallons)	PURGED DRY? (yes/no)	TEMP (deg C)	SPECIFIC CONDUCTANCE (µs/cm)	pH (SU)	TURBIDITY (NTU)	ORP (mV-NHE)	DO (mg/L)
4/13/2016	MW-1	97.51	22.51	254.66	None	Low Flow	85	12.25	0.25	no	14.9	968	7.5	3.20	149	0.5
4/13/2016	MW-2	41.49	13.93	257.61	None	Low Flow	80	4.49	0.25	no	14.3	262	**5.7**	2.96	241	0.3
4/13/2016	MW-3	59.30	26.22	253.66	None	Low Flow	40	5.39	0.25	no	14.4	493	7.6	1.98	145	1.2
4/13/2016	MW-6	70.78	1.84	254.67	None	Low Flow	200	11.24	0.50	no	14.0	343	7.6	2.36	150	2.1
4/13/2016	MW-7	55.05	0.00	274.98	None	Low Flow	115	8.97	0.25	no	14.1	805	7.2	0.53	169.8	0.3

Notes:
1. Field sampling performed by synTerra personnel.
2. TEMP = groundwater temperature, measured in degrees Celsius
3. Pump Rate, measured in milliliters/minute
4. Specific Conductance, measured in µs/cm indicates micro Siemens per centimeter.
5. SU indicates Standard Units.
6. NTU indicates Nephelometric Turbidity Units.
7. ORP = Oxidation Reduction Potential, mV-NHE indicates millivolts-Normal Hydrogen Electrode.
8. EVAC = evacuated volume of groundwater
9. DO = dissolved oxygen, measured in milligrams per liter
10. The pH value for MW-2 shown in bold print falls outside of the 6.5 - 8.5 su range published under 15A NCAC 2L Standards

TABLE 3
SUMMARY OF GROUNDWATER ANALYSES RESULTS - DETECTIONS
HARRIS LANDFILL - PERMIT # 92-10
HARRIS NUCLEAR PLANT
NEW HILL, NORTH CAROLINA
S&ME PROJECT NO. 7126-14-013

Appendix I Volatile Organic Compounds

Solid Waste Section ID #	Well ID / Sample ID / Date Collected / Detected Analytes	MW-1 2016009445 04/13/16 (ug/L)	MW-2 2016009446 04/13/16 (ug/L)	MW-3 2016009447 04/13/16 (ug/L)	MW-6 2016009448 04/13/16 (ug/L)	MW-7 2016009449 04/13/16 (ug/L)	Duplicate MW-6 2016009450 04/13/16 (ug/L)	Field Blank 2016009451 04/13/16 (ug/L)	NC SWSL (ug/L)	NCAC 2L Standards (ug/L)	NCDEQ IMAC (ug/L)	Federal MCLs (ug/L)
		Sample Locations										
3	**Acetone**	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	**58.0**	100	6,000	--	ns
141	**2-Butanone (MEK)**	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	**15.2**	100	4,000	--	5
16	**Benzene**	**0.49J**	**0.39J**	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	1	1	--	5
39	**Chlorobenzene**	< 0.23	**14.4**	< 0.23	< 0.23	<0.23	< 0.23	< 0.23	3	50	--	100
41	**Chloroethane**	**3.6**	**1.6**	< 0.54	< 0.54	**6.7**	< 0.54	< 0.54	10	3000	--	ns
44	**Chloroform**	<0.14	<0.14	<0.14	<0.14	**0.16J**	<0.14	<0.14	5	70	--	ns
137	**Chloromethane**	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	**0.29J**	1	3	--	5
71	**1,4-Dichlorobenzene**	**0.66J**	**3.0**	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	1	6	--	75
75	**1,1-Dichloroethane**	**61.6**	**7.0**	< 0.32	< 0.32	**90.7**	< 0.32	< 0.32	5	6	--	ns
77	**1,1-Dichloroethene**	**2.7**	<0.56	< 0.56	< 0.56	**12.1**	< 0.56	< 0.56	5	350	--	7
76	**1,2-Dichloroethane**	**0.33J**	<0.24	<0.24	<0.24	**0.41J**	<0.24	<0.24	1	0.4	--	5
78	**cis-1,2-Dichloroethene**	**1.6**	< 0.19	< 0.19	< 0.19	**110**	**0.34J**	< 0.19	5	70	--	70
124	**2-Hexanone**	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46	**1.6J**	50	NSE	40	ns
196	**Toluene**	**1.3**	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	1	600	--	1,000
201	**Trichloroethene**	**1.8**	< 0.47	< 0.47	< 0.47	**4.4**	< 0.47	< 0.47	1	3	--	5
211	**Vinyl Chloride**	**0.69J**	< 0.62	< 0.62	< 0.62	**2.5**	< 0.62	< 0.62	1	0.03	--	2

8-RCRA Metals + Sulfate

Solid Waste Section ID #	Well ID / Sample ID / Date Collected / Detected Analytes	MW-1 2016009445 04/13/16 (ug/L)	MW-2 2016009446 04/13/16 (ug/L)	MW-3 2016009447 04/13/16 (ug/L)	MW-6 2016009448 04/13/16 (ug/L)	MW-7 2016009449 04/13/16 (ug/L)	Duplicate MW-6 2016009450 04/13/16 (ug/L)	Field Blank 2016009451 04/13/16 (ug/L)	NC SWSL (ug/L)	NCAC 2L Standards (ug/L)	NCDEQ IMAC (ug/L)	Federal MCLs (ug/L)
		Sample Locations										
14	**Arsenic**	**8.5J**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	10	10	--	10
15	**Barium**	**138**	**25.2**	**163**	**337**	**108**	**340**	<2.5	100	700	--	2,000
315	**Sulfate**	**1,900J**	**5,200**	**23,500**	**4,400**	**5,400**	**4,400**	<1,000	250,000	250,000	--	250,000

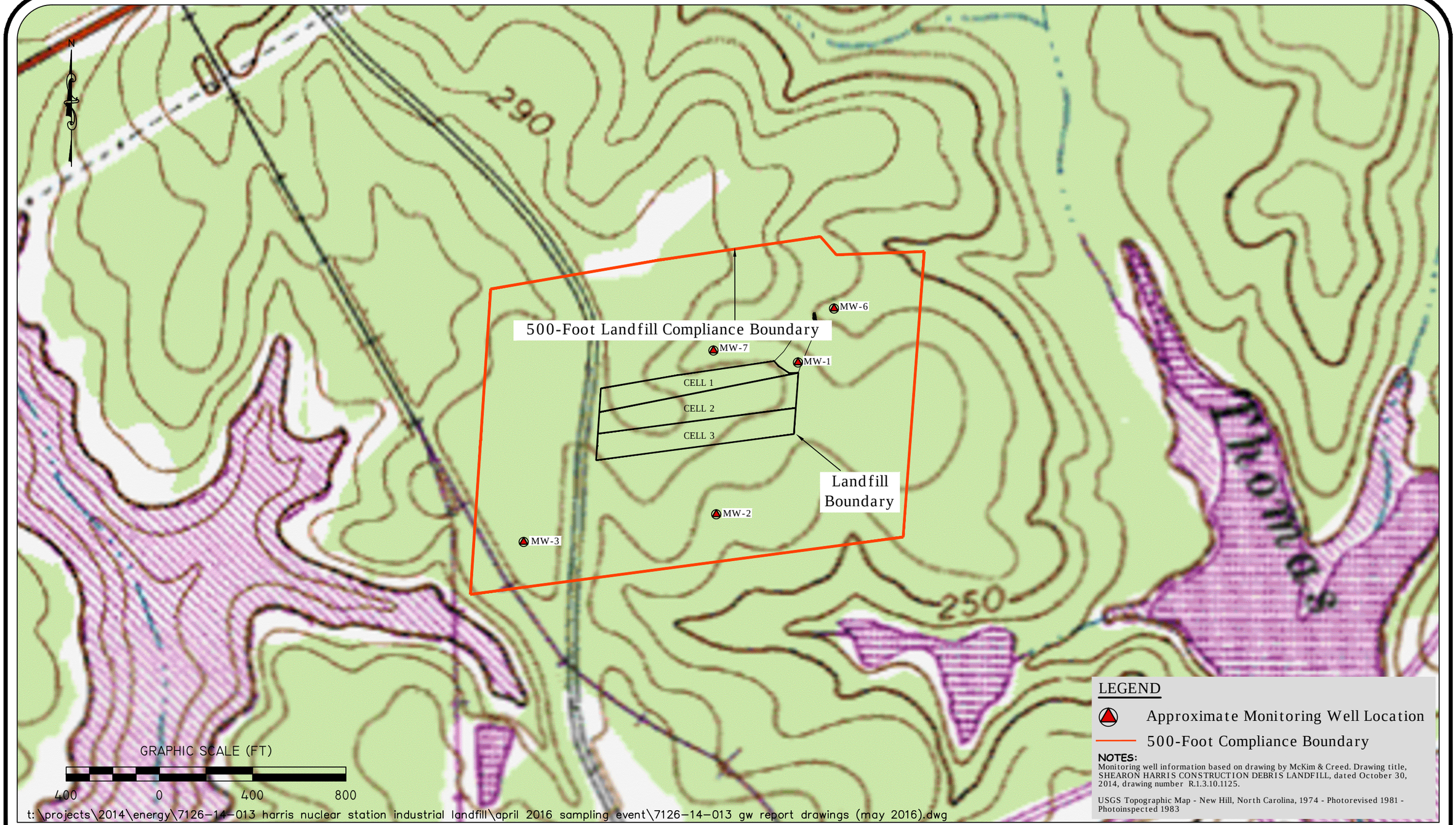
Concentrations in shaded cells are greater than the corresponding NCAC 2L Standard
ug/L = concentrations reported in micrograms per liter (ug/L)
< = concentrations is less than the method detection limit shown
NC SWSL = North Carolina Solid Waste Section Limit
J = Concentration reported greater than the method detection limit but less than the SWSL, thus it is considered estimated
NCAC 2L Standards = 15A North Carolina Administrative Code 2L .0200, GW Quality Standards for Class GA groundwater.
NCDEQ IMAC = Interim Maximum Allowed Concentration, NCDEQ
Federal MCL = Maximum Concentration Levels, USEPA

TABLE 4
SUMMARY OF 2L STANDARD EXCEEDANCES
HARRIS LANDFILL - PERMIT # 92-10
HARRIS NUCLEAR PLANT
NEW HILL, NORTH CAROLINA
S&ME PROJECT NO. 7126-14-013

Solid Waste Section ID #		Groundwater Sample Locations			NC SWSL	NCAC 2L Standards	NCDEQ IMAC	Federal MCLs
	Well ID	**MW-1**	**MW-2**	**MW-7**				
	Sample ID	2016009445	2016009446	2016009449				
	Date Collected	04/13/16	04/13/16	04/13/16				
	Detected Analytes	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
75	**1,1-Dichloroethane**	**61.6**	**7.0**	**90.7**	5	6	--	ns
76	**1,2-Dichloroethane**			**0.41J**	1	0.4		5
78	**cis-1,2-Dichloroethene**			**110**	5	70	--	70
201	**Trichloroethene**			**4.4**	1	3	--	5
211	**Vinyl Chloride**	**0.69J**		**2.5**	1	0.03	--	2

Only concentrations greater than the corresponding NCAC 2L Standards are shown
ug/L = concentrations reported in micrograms per liter (ug/L)
NC SWSL = North Carolina Solid Waste Section Limit
NCAC 2L Standards = 15A North Carolina Administrative Code 2L .0200, GW Quality Standards for Class GA groundwater
J= Concentration reported greater than the method detection limit but less than the SWSL, thus it is considered estimated
NCDEQ IMAC = Interim Maximum Allowed Concentration, NCDEQ
Federal MCL = Maximum Concentration Levels, USEPA
ns = no MCL listed, USEPA

Figures



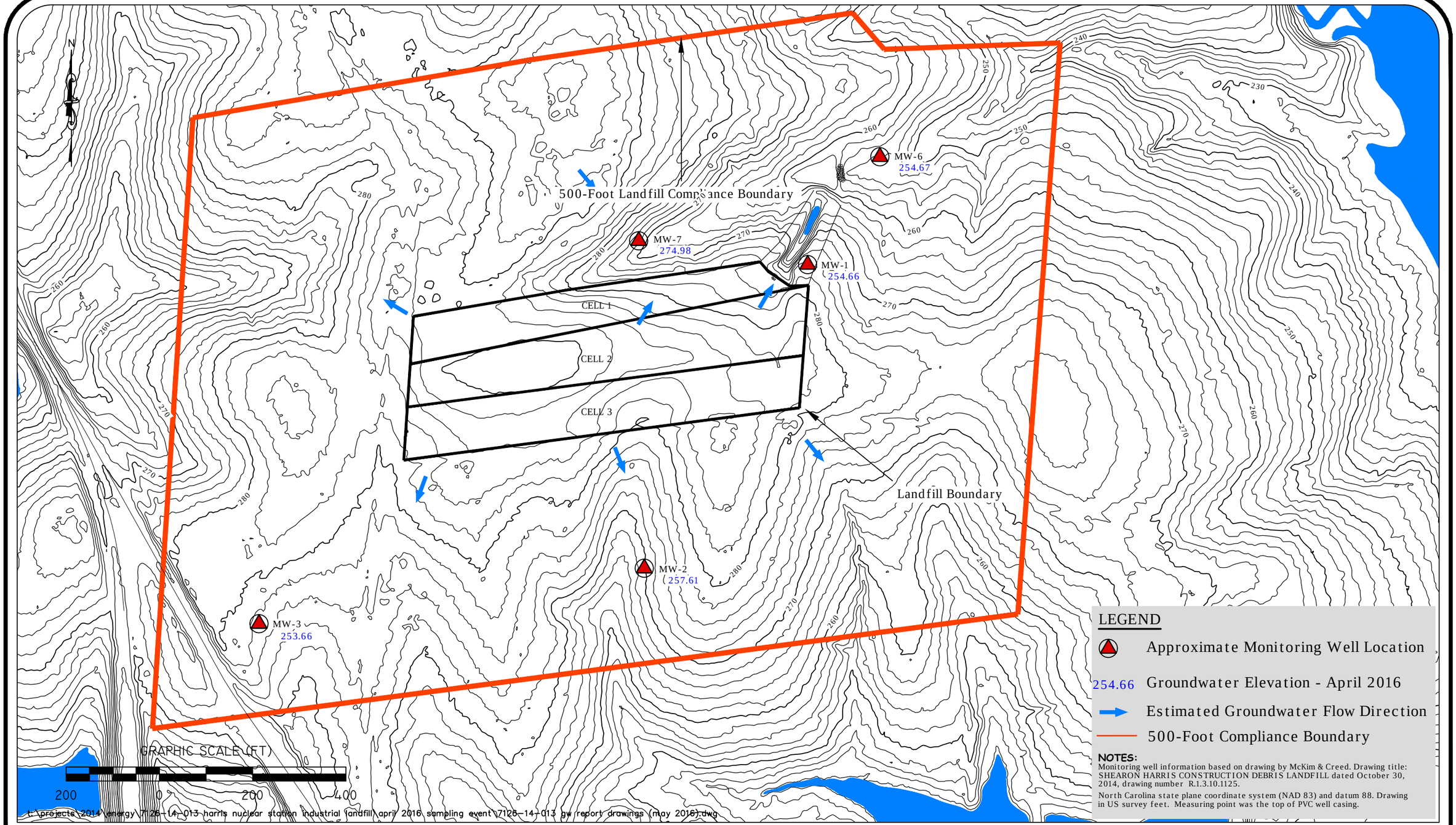
SCALE: As Shown	DATE: May 25, 2016		
PROJECT NO. 7126-14-013	DRAWN BY: jww		
	CHECKED BY: eqbh		

S&ME

301 Zima Park Road
Spartanburg, South Carolina 29301
Phone 864.574.2360
Fax 864.576.8730
WWW.SMEINC.COM

Site Topographic Map
Harris Nuclear Plant
Industrial Landfill Permit #92-10
New Hill, North Carolina

FIGURE NO.
1



SCALE: As Shown	DATE: May 25, 2016	S&ME	Generalized Groundwater Flow Map
PROJECT NO. 7126-14-013	DRAWN BY: jww	301 Zima Park Road Spartanburg, South Carolina 29301 Phone 864.574.2360 Fax 864.576.8730 WWW.SMEINC.COM	Harris Nuclear Plant Industrial Landfill Permit #92-10 New Hill, North Carolina
	CHECKED BY: eqbh		FIGURE NO. 2

Appendix I – Low Flow Sampling Logs

2016 GROUNDWATER MONITORING

DUKE ENERGY PROGRESS, INC
HARRIS PLANT

LOW FLOW SAMPLING LOG

synTerra
148 River Street, Suite 220
Greenville, South Carolina 29601
(864) 421-9999 • (864) 421-9909 Fax
www.synTerracorp.com

FIELD PERSONNEL: R. Jacobs, A. Lefitz

WEATHER: ☒ SUNNY ☐ OVERCAST ☐ RAIN TEMPERATURE (APPROX): 68F
Windy

NOTES: YSI - 17B100050
Turb - 06511803

WELL ID:	MW - 1	PUMP/TUBING INTAKE DEPTH:	90 BS (FT)	START PURGE TIME:	1004
MEASURING POINT:	TOC	START PURGE DATE:	~~4.14.16~~ 4-13-16	END PURGE TIME:	1022
WELL DIAMETER:	2 IN	END PURGE DATE:	~~4.14.16~~ BS 4-13-16	FINAL READING TIME:	1022
WELL DEPTH:	97.51 (FT)	TOTAL VOLUME PURGED:	0.25 (GAL)		
DEPTH TO WATER:	22.51 (FT)	SAMPLE DATE:	~~4.14.16~~ BS 4-13-16	SAMPLE COLLECTION TIME:	1022

PURGE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer
SAMPLE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer

TIME	WATER LEVEL (FT)	FLOW RATE (mL/min)	TEMPERATURE (° Celsius)	CONDUCTANCE (µS/cm)	DO (mg/L)	pH (su)	ORP* (mV)	TURBIDITY* (NTU)	NOTES
1013	22.81	85	14.5	900	1.5	7.6	143	2.44	
1016	23.14	85	14.8	942	0.7	7.5	145	4.61	
1019	23.40	85	15.0	954	0.6	7.5	148	4.07	
1022	23.45	85	14.9	968	0.5	7.5	149	3.20	

CONSTITUENTS SAMPLED	NUMBER OF CONTAINERS: 40 ml VOA	125 ml GLASS CLEAR	250 ml GLASS CLEAR	500 ml GLASS CLEAR	1 L GLASS AMBER	125 ml POLYETHYLENE	250 mL POLYETHYLENE	500 mL POLYETHYLENE			PRESERVATION: UNPRESERVED	H_2SO_4	HNO_3	HCL	NaOH	$Na_2S_2O_3$	METHANOL	OTHER	
Appendix I VOC	3																		
8 RCRA Metals				1															
Sulfate				1															

COMMENTS: FIELD VEHICLE ACCESSIBLE ☒ YES ☐ NO
Lock needs replacement

Associated midday/end-of-day DO, conductivity, pH within range? (See calibration sheet for this sample date) ☒ YES ☐ NO. If NO, which parameter _____. NOTE that reported data should be considered as flagged accordingly.

* SynTerra is not NC-certified for these parameters. Data collected for information purposes only

WELL TAG			PROTECTIVE CASING			LOCK			CAP			CONCRETE PAD		
☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☐ GOOD	☐ BAD	☒ NONE	☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE

2016 GROUNDWATER MONITORING

DUKE ENERGY PROGRESS, INC
HARRIS PLANT

LOW FLOW SAMPLING LOG

synTerra
148 River Street, Suite 220
Greenville, South Carolina 29601
(864) 421-9999 • (864) 421-9909 Fax
www.synTerracorp.com

FIELD PERSONNEL: R. Jacobs, A. Lefitz

WEATHER: ☒ SUNNY ☐ OVERCAST ☐ RAIN TEMPERATURE (APPROX): 60 °F Windy

NOTES: YSI - 12B 100050
Turb 20651803

WELL ID:	MW - 2	PUMP/TUBING INTAKE DEPTH:	32 (FT)	START PURGE TIME:	1049
MEASURING POINT:	TOC	START PURGE DATE:	4.13.16	END PURGE TIME:	1101
WELL DIAMETER:	2 IN	END PURGE DATE:	4.13.16	FINAL READING TIME:	1101
WELL DEPTH:	41.49 (FT)	TOTAL VOLUME PURGED:	0.25 (GAL)		
DEPTH TO WATER:	13.93 (FT)	SAMPLE DATE:	4.13.16	SAMPLE COLLECTION TIME:	1101

PURGE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer
SAMPLE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer

TIME	WATER LEVEL (FT)	FLOW RATE (mL/min)	TEMPERATURE (° Celsius)	CONDUCTANCE (µS/cm)	DO (mg/L)	pH (su)	ORP* (mV)	TURBIDITY* (NTU)	NOTES
1047	14.26	80	13.9	283	1.1	6.0	231	4.47	
1052	14.71	80	14.0	282	0.5	5.8	239	3.75	
1055	14.98	80	14.1	280	0.4	5.7	240	3.82	
1058	15.10	80	14.3	263	0.4	5.7	241	2.31	
1101	15.17	80	14.3	262	0.3	5.7	241	2.96	

CONSTITUENTS SAMPLED	NUMBER OF CONTAINERS: 40 ml VOA	125 ml GLASS CLEAR	250 ml GLASS CLEAR	500 ml GLASS CLEAR	1 L GLASS AMBER	125 ml POLYETHYLENE	250 mL POLYETHYLENE	500 mL POLYETHYLENE			PRESERVATION: UNPRESERVED	H_2SO_4	HNO_3	HCL	NaOH	$NA_2S_2O_3$	METHANOL	OTHER	
Appendix I VOC	3																		
8 RCRA Metals				1															
Sulfate				1															

COMMENTS: FIELD VEHICLE ACCESSIBLE ☐ YES ☐ NO
Cut lock - needs replacement

Associated midday/end-of-day DO, conductivity, pH within range? (See calibration sheet for this sample date) ☒ YES ☐ NO. If NO, which parameter _____. NOTE that reported data should be considered as flagged accordingly.

* SynTerra is not NC-certified for these parameters. Data collected for information purposes only

WELL TAG			PROTECTIVE CASING			LOCK			CAP			CONCRETE PAD		
☐ GOOD	☐ BAD	☐ NONE	☐ GOOD	☐ BAD	☐ NONE	☐ GOOD	☒ BAD	☐ NONE	☐ GOOD	☐ BAD	☐ NONE	☐ GOOD	☐ BAD	☐ NONE

2016 GROUNDWATER MONITORING

DUKE ENERGY PROGRESS, INC
HARRIS PLANT

LOW FLOW SAMPLING LOG

synTerra
148 River Street, Suite 220
Greenville, South Carolina 29601
(864) 421-9999 • (864) 421-9909 Fax
www.synTerracorp.com

FIELD PERSONNEL: R. Jacobs, A. Lefitz

WEATHER: ☒ SUNNY ☐ OVERCAST ☐ RAIN TEMPERATURE (APPROX): 68°F

NOTES: YSI - 12B100050
Turb - 06511803

WELL ID:	MW - 3	PUMP/TUBING INTAKE DEPTH:	55 (FT)	START PURGE TIME:	1123
MEASURING POINT:	TOC	START PURGE DATE:	4.13.16	END PURGE TIME:	1154
WELL DIAMETER:	2 IN	END PURGE DATE:	4.13.16	FINAL READING TIME:	1154
WELL DEPTH:	59.30 (FT)	TOTAL VOLUME PURGED:	0.25 (GAL)		
DEPTH TO WATER:	~~4.13.16~~ (FT) 26.22	SAMPLE DATE:	4.13.16	SAMPLE COLLECTION TIME:	1200

PURGE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer
SAMPLE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer

TIME	WATER LEVEL (FT)	FLOW RATE (mL/min)	TEMPERATURE (° Celsius)	CONDUCTANCE (µS/cm)	DO (mg/L)	pH (su)	ORP* (mV)	TURBIDITY* (NTU)	NOTES
1133	26.50	40	14.2	467	4.1	7.6	153	NR	
1138	26.72	40	14.0	490	1.8	7.6	150	4.64	clear w/ bubbles
1143	26.89	40	14.0	494	1.4	7.6	148	1.45	clear w/ bubbles
1149	27.08	40	14.2	494	1.2	7.6	147	1.33	clear w/ bubbles
1154	27.24	40	14.4	493	1.2	7.6	145	1.98	clear w/ bubbles

CONSTITUENTS SAMPLED	NUMBER OF CONTAINERS: 40 ml VOA	125 ml GLASS CLEAR	250 ml GLASS CLEAR	500 ml GLASS CLEAR	1 L GLASS AMBER	125 ml POLYETHYLENE	250 ml POLYETHYLENE	500 ml POLYETHYLENE			PRESERVATION: UNPRESERVED	H_2SO_4	HNO_3	HCL	NaOH	$Na_2S_2O_3$	METHANOL	OTHER	
Appendix I VOC	3																		
8 RCRA Metals				1															
Sulfate				1															

COMMENTS: FIELD VEHICLE ACCESSIBLE ☒ YES ☐ NO

Associated midday/end-of-day DO, conductivity, pH within range? (See calibration sheet for this sample date) ☒ YES ☐ NO. If NO, which parameter _____. NOTE that reported data should be considered as flagged accordingly.

* SynTerra is not NC-certified for these parameters. Data collected for information purposes only

WELL TAG			PROTECTIVE CASING			LOCK			CAP			CONCRETE PAD		
☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE

2016 GROUNDWATER MONITORING

DUKE ENERGY PROGRESS, INC
HARRIS PLANT

LOW FLOW SAMPLING LOG

synTerra
148 River Street, Suite 220
Greenville, South Carolina 29601
(864) 421-9999 • (864) 421-9909 Fax
www.synTerracorp.com

FIELD PERSONNEL: R. Jacobs, A. Lefitz

WEATHER: ☒ SUNNY ☐ OVERCAST ☐ RAIN TEMPERATURE (APPROX): 60°F windy

NOTES: DUP collected
YSI - 12B100080
Turb. - 06511803

WELL ID:	MW - 6	PUMP/TUBING INTAKE DEPTH:	60' (FT)	START PURGE TIME:	856
MEASURING POINT:	TOC	START PURGE DATE:	4.13.16	END PURGE TIME:	907
WELL DIAMETER:	2 IN	END PURGE DATE:	4.13.16	FINAL READING TIME:	907
WELL DEPTH:	70.78 (FT)	TOTAL VOLUME PURGED:	0.5 (GAL)		
DEPTH TO WATER:	1.84 (FT)	SAMPLE DATE:	4.13.16	SAMPLE COLLECTION TIME:	907 dup collected

PURGE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer
SAMPLE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer

TIME	WATER LEVEL (FT)	FLOW RATE (mL/min)	TEMPERATURE (° Celsius)	CONDUCTANCE (µS/cm)	DO (mg/L)	pH (su)	ORP* (mV)	TURBIDITY* (NTU)	NOTES
858	1.86	200	13	380	3.5	7.4	162	1.51	
901	1.86	200	14	356	2.2	7.6	153	2.98	
904	1.86	200	14	346	2.2	7.6	151	1.22	
907	1.86	200	14	343	2.1	7.6	150	2.36	

CONSTITUENTS SAMPLED	NUMBER OF CONTAINERS: 40 ml VOA	125 ml GLASS CLEAR	250 ml GLASS CLEAR	500 ml GLASS CLEAR	1 L GLASS AMBER	125 ml POLYETHYLENE	250 mL POLYETHYLENE	500 mL POLYETHYLENE			PRESERVATION: UNPRESERVED	H_2SO_4	HNO_3	HCL	NaOH	$Na_2S_2O_3$	METHANOL	OTHER	
Appendix I VOC	3																		
8 RCRA Metals				1															
Sulfate				1															

COMMENTS: FIELD VEHICLE ACCESSIBLE ☒ YES ☐ NO

Associated midday/end-of-day DO, conductivity, pH within range? (See calibration sheet for this sample date) ☒ YES ☐ NO. If NO, which parameter _____. NOTE that reported data should be considered as flagged accordingly.

* SynTerra is not NC-certified for these parameters. Data collected for information purposes only

WELL TAG			PROTECTIVE CASING			LOCK			CAP			CONCRETE PAD		
☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE

2016 GROUNDWATER MONITORING

DUKE ENERGY PROGRESS, INC
HARRIS PLANT

LOW FLOW SAMPLING LOG

synTerra
148 River Street, Suite 220
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(864) 421-9999 • (864) 421-9909 Fax
www.synTerracorp.com

FIELD PERSONNEL: R. Jacobs, A. Lefitz

WEATHER: ☐ SUNNY ☐ OVERCAST ☐ RAIN TEMPERATURE (APPROX): 60°F windy

NOTES: YSI - 12B100050
Turb - 06511803

WELL ID:	MW - 7	PUMP/TUBING INTAKE DEPTH:	45.0 (FT)	START PURGE TIME:	932
MEASURING POINT:	TOC	START PURGE DATE:	4.13.16	END PURGE TIME:	943
WELL DIAMETER:	2 IN	END PURGE DATE:	4.13.16	FINAL READING TIME:	943
WELL DEPTH:	55.05 (FT)	TOTAL VOLUME PURGED:	0.25 (GAL)		
DEPTH TO WATER:	0.0 (FT)	SAMPLE DATE:	4.13.16	SAMPLE COLLECTION TIME:	943

PURGE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer
SAMPLE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer

TIME	WATER LEVEL (FT)	FLOW RATE (mL/min)	TEMPERATURE (° Celsius)	CONDUCTANCE (µS/cm)	DO (mg/L)	pH (su)	ORP* (mV)	TURBIDITY* (NTU)	NOTES
934	~~0.5~~ 0.5	115	14.0	797	2.0	7.3	176	2.22	
937	~~0.5~~ 0.5	115	14.0	803	0.5	7.2	~~803~~ 172	0.71	
940	0.5	115	14.0	803	0.4	7.2	172	0.69	
943	0.5	115	14.1	805	0.3	7.2	169.8	0.53	

CONSTITUENTS SAMPLED	NUMBER OF CONTAINERS: 40 ml VOA	125 ml GLASS CLEAR	250 ml GLASS CLEAR	500 ml GLASS CLEAR	1 L GLASS AMBER	125 ml POLYETHYLENE	250 mL POLYETHYLENE	500 mL POLYETHYLENE			PRESERVATION: UNPRESERVED	H_2SO_4	HNO_3	HCL	NaOH	$NA_2S_2O_3$	METHANOL	OTHER	
Appendix I VOC	3																		
8 RCRA Metals				1															
Sulfate				1															

COMMENTS: FIELD VEHICLE ACCESSIBLE ☒ YES ☐ NO
Cut lock - needs replacement

Associated midday/end-of-day DO, conductivity, pH within range? (See calibration sheet for this sample date) ☒ YES ☐ NO. If NO, which parameter _____. NOTE that reported data should be considered as flagged accordingly.

* SynTerra is not NC-certified for these parameters. Data collected for information purposes only

WELL TAG			PROTECTIVE CASING			LOCK			CAP			CONCRETE PAD		
☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☐ GOOD	☒ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE	☒ GOOD	☐ BAD	☐ NONE

2016 GROUNDWATER MONITORING

DUKE ENERGY PROGRESS, INC
HARRIS PLANT

LOW FLOW SAMPLING LOG

FIELD PERSONNEL: ARL, RJ

WEATHER: ☐ SUNNY ☐ OVERCAST ☐ RAIN TEMPERATURE (APPROX):

NOTES:

synTerra
148 River Street, Suite 220
Greenville, South Carolina 29601
(864) 421-9999 • (864) 421-9909 Fax
www.synTerracorp.com

WELL ID: FB
MEASURING POINT: TOC
WELL DIAMETER: 2 IN
WELL DEPTH: — (FT)
DEPTH TO WATER: — (FT)

PUMP/TUBING INTAKE DEPTH: — (FT)
START PURGE DATE: —
END PURGE DATE: —
TOTAL VOLUME PURGED: — (GAL)
SAMPLE DATE: 4.13.16

START PURGE TIME: —
END PURGE TIME: —
FINAL READING TIME: —
SAMPLE COLLECTION TIME: 1050

PURGE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer
SAMPLE METHOD: ☐ Grundfos Pump ☐ 12 Volt Pump ☒ Peristaltic Pump ☐ Dedicated Pump ☐ Teflon Bailer ☐ Polyethylene Bailer

TIME	WATER LEVEL (FT)	FLOW RATE (mL/min)	TEMPERATURE (° Celsius)	CONDUCTANCE (µS/cm)	DO (mg/L)	pH (su)	ORP* (mV)	TURBIDITY* (NTU)	NOTES

CONSTITUENTS SAMPLED	NUMBER OF CONTAINERS									PRESERVATION								
	40 ml VOA	125 ml GLASS CLEAR	250 ml GLASS CLEAR	500 ml GLASS CLEAR	1 L GLASS AMBER	125 ml POLYETHYLENE	250 mL POLYETHYLENE	500 mL POLYETHYLENE		UNPRESERVED	H_2SO_4	HNO_3	HCL	NaOH	$NA_2S_2O_3$	METHANOL	OTHER	
Appendix I VOC	3																	
8 RCRA Metals				1														
Sulfate				1														

COMMENTS: FIELD VEHICLE ACCESSIBLE ☐ YES ☐ NO

Associated midday/end-of-day DO, conductivity, pH within range? (See calibration sheet for this sample date) ☐ YES ☐ NO. If NO, which parameter _____. NOTE that reported data should be considered as flagged accordingly.

* SynTerra is not NC-certified for these parameters. Data collected for information purposes only

WELL TAG			PROTECTIVE CASING			LOCK			CAP			CONCRETE PAD		
☐ GOOD	☐ BAD	☐ NONE	☐ GOOD	☐ BAD	☐ NONE	☐ GOOD	☐ BAD	☐ NONE	☐ GOOD	☐ BAD	☐ NONE	☐ GOOD	☐ BAD	☐ NONE

Appendix II – Laboratory Analytical Report

Analytical Laboratory

13339 Hagers Ferry Road
Huntersville, NC 28078-7929
McGuire Nuclear Complex - MG03A2
Phone: 980-875-5245 Fax: 980-875-4349

Order Summary Report

Order Number:	**J16040076**
Project Name:	HARRIS - GW MONITORING
Customer Name(s):	John Toepfer, Fred Holt, Tim Hunsucker
Customer Address:	P. O. Box 165 New Hill,NC 27562-0165
Lab Contact:	Peggy Kendall Phone:
Report Authorized By: (Signature)	Peggy J Kendall **Date:** 4/25/2016 Peggy Kendall

Program Comments:

Please contact the Program Manager (Peggy Kendall) with any questions regarding this report.

Data Flags & Calculations:

Any analytical tests or individual analytes within a test flagged with a Qualifier indicate a deviation from the method quality system or quality control requirement. The qualifier description is found at the end of the Certificate of Analysis (sample results) under the qualifiers heading. All results are reported on a dry weight basis unless otherwise noted. Subcontracted data included on the Duke Certificate of Analysis is to be used as information only. Certified vendor results can be found in the subcontracted lab final report. Duke Energy Analytical Laboratory subcontracts analyses to other vendor laboratories that have been qualified by Duke Energy to perform these analyses except where noted.

Data Package:

This data package includes analytical results that are applicable only to the samples described in this narrative. An estimation of the uncertainty of measurement for the results in the report is available upon request. This report shall not be reproduced, except in full, without the written consent of the Analytical Laboratory. Please contact the Analytical laboratory with any questions. The order of individual sections within this report is as follows:

Job Summary Report, Sample Identification, Technical Validation of Data Package, Analytical Laboratory Certificate of Analysis, Analytical Laboratory QC Reports, Sub-contracted Laboratory Results, Customer Specific Data Sheets, Reports & Documentation, Customer Database Entries, Test Case Narratives, Chain of Custody (COC)

Certification:

The Analytical Laboratory holds the following State Certifications : North Carolina (DENR) Certificate #248, South Carolina (DHEC) Laboratory ID # 99005. Contact the Analytical Laboratory for definitive information about the certification status of specific methods.

Sample ID's & Descriptions:

Sample ID	Plant/Station	Collection Date and Time	Collected By	Sample Description
2016009445	HARRIS	13-Apr-16 10:22 AM	Synterra	MW-1
2016009446	HARRIS	13-Apr-16 11:01 AM	Synterra	MW-2
2016009447	HARRIS	13-Apr-16 12:00 PM	Synterra	MW-3
2016009448	HARRIS	13-Apr-16 9:07 AM	Synterra	MW-6
2016009449	HARRIS	13-Apr-16 9:43 AM	Synterra	MW-7
2016009450	HARRIS	13-Apr-16 9:07 AM	Synterra	Dup MW-6
2016009451	HARRIS	13-Apr-16	Synterra	Field Blank

7 Total Samples

Technical Validation Review

Checklist:

COC and .pdf report are in agreement with sample totals and analyses (compliance programs and procedures).	☑ Yes	☐ No
All Results are less than the laboratory reporting limits.	☐ Yes	☑ No
All laboratory QA/QC requirements are acceptable.	☑ Yes	☐ No

Report Sections Included:

- ☑ Job Summary Report
- ☑ Sample Identification
- ☑ Technical Validation of Data Package
- ☑ Analytical Laboratory Certificate of Analysis
- ☐ Analytical Laboratory QC Report
- ☑ Sub-contracted Laboratory Results
- ☐ Customer Specific Data Sheets, Reports, & Documentation
- ☐ Customer Database Entries
- ☑ Chain of Custody
- ☑ Electronic Data Deliverable (EDD) Sent Separately

Reviewed By: DBA Account Date: 4/25/2016

Certificate of Laboratory Analysis

This report shall not be reproduced, except in full.

Order # J16040076

Site: MW-1 **Sample #: 2016009445**

Collection Date: 13-Apr-16 10:22 AM Matrix: GW_WW

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
DIONEX ANIONS BY VENDOR - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
METALS ANALYSIS BY VENDOR LAB - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
Volatiles by GCMS EPA 8260 - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE

Certificate of Laboratory Analysis

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Order # J16040076

Site: MW-2 **Sample #: 2016009446**

Collection Date: 13-Apr-16 11:01 AM Matrix: GW_WW

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
DIONEX ANIONS BY VENDOR - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
METALS ANALYSIS BY VENDOR LAB - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
Volatiles by GCMS EPA 8260 - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE

Certificate of Laboratory Analysis

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Order # J16040076

Site: MW-3 **Sample #: 2016009447**

Collection Date: 13-Apr-16 12:00 PM Matrix: GW_WW

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
DIONEX ANIONS BY VENDOR - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
METALS ANALYSIS BY VENDOR LAB - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
Volatiles by GCMS EPA 8260 - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE

Certificate of Laboratory Analysis

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Order # J16040076

Site: MW-6 **Sample #: 2016009448**

Collection Date: 13-Apr-16 9:07 AM Matrix: GW_WW

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
DIONEX ANIONS BY VENDOR - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
METALS ANALYSIS BY VENDOR LAB - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
Volatiles by GCMS EPA 8260 - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE

Certificate of Laboratory Analysis

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Order # J16040076

Site: MW-7 **Sample #: 2016009449**

Collection Date: 13-Apr-16 9:43 AM Matrix: GW_WW

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
DIONEX ANIONS BY VENDOR - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
METALS ANALYSIS BY VENDOR LAB - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
Volatiles by GCMS EPA 8260 - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE

Certificate of Laboratory Analysis

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Order # J16040076

Site: Dup MW-6 **Sample #: 2016009450**

Collection Date: 13-Apr-16 9:07 AM Matrix: GW_WW

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
DIONEX ANIONS BY VENDOR - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
METALS ANALYSIS BY VENDOR LAB - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
Volatiles by GCMS EPA 8260 - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE

Certificate of Laboratory Analysis

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Order # J16040076

Site: Field Blank

Collection Date: 13-Apr-16

Sample #: **2016009451**

Matrix: GW_WW

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
DIONEX ANIONS BY VENDOR - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
METALS ANALYSIS BY VENDOR LAB - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE
Volatiles by GCMS EPA 8260 - (Analysis Performed by Pace Laboratories)								
Vendor Parameter	**Complete**					Vendor Method		V_PACE

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
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(704)875-9092

April 21, 2016

Program Manager
Duke Energy
13339 Hagers Ferry Road
Bldg. 7405 MG30A2
Huntersville, NC 28078

RE: Project: J16040076
Pace Project No.: 92293803

Dear Program Manager:
Enclosed are the analytical results for sample(s) received by the laboratory on April 14, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Herring
kevin.herring@pacelabs.com
HORIZON Database Administrator

Enclosures

cc: Mary Ann Ogle, Duke Energy
Rodney Wike, Duke Energy

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CERTIFICATIONS

Project: J16040076
Pace Project No.: 92293803

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Asheville Certification IDs
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: J16040076
Pace Project No.: 92293803

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92293803001	**2016009445**	Water	04/13/16 10:22	04/14/16 09:12
92293803002	**2016009446**	Water	04/13/16 11:01	04/14/16 09:12
92293803003	**2016009447**	Water	04/13/16 12:00	04/14/16 09:12
92293803004	**2016009448**	Water	04/13/16 09:07	04/14/16 09:12
92293803005	**2016009449**	Water	04/13/16 09:43	04/14/16 09:12
92293803006	**2016009450**	Water	04/13/16 09:07	04/14/16 09:12
92293803007	**2016009451**	Water	04/13/16 00:00	04/14/16 09:12

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SAMPLE ANALYTE COUNT

Project: J16040076
Pace Project No.: 92293803

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92293803001	**2016009445**	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	52	PASI-C
		EPA 300.0	MDW	1	PASI-A
92293803002	**2016009446**	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	52	PASI-C
		EPA 300.0	MDW	1	PASI-A
92293803003	**2016009447**	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	52	PASI-C
		EPA 300.0	MDW	1	PASI-A
92293803004	**2016009448**	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	52	PASI-C
		EPA 300.0	MDW	1	PASI-A
92293803005	**2016009449**	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	52	PASI-C
		EPA 300.0	MDW	1	PASI-A
92293803006	**2016009450**	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	52	PASI-C
		EPA 300.0	MDW	1	PASI-A
92293803007	**2016009451**	EPA 6010	CDF	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	52	PASI-C
		EPA 300.0	MDW	1	PASI-A

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SUMMARY OF DETECTION

Project: J16040076
Pace Project No.: 92293803

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92293803001	**2016009445**					
EPA 6010	Arsenic	8.5J	ug/L	10.0	04/20/16 15:02	
EPA 6010	Barium	138	ug/L	5.0	04/20/16 15:02	
EPA 8260	Benzene	0.49J	ug/L	1.0	04/19/16 06:22	
EPA 8260	Chloroethane	3.6	ug/L	1.0	04/19/16 06:22	
EPA 8260	1,4-Dichlorobenzene	0.66J	ug/L	1.0	04/19/16 06:22	
EPA 8260	1,1-Dichloroethane	61.6	ug/L	1.0	04/19/16 06:22	
EPA 8260	1,2-Dichloroethane	0.33J	ug/L	1.0	04/19/16 06:22	
EPA 8260	1,1-Dichloroethene	2.7	ug/L	1.0	04/19/16 06:22	
EPA 8260	cis-1,2-Dichloroethene	1.6	ug/L	1.0	04/19/16 06:22	
EPA 8260	Toluene	1.3	ug/L	1.0	04/19/16 06:22	
EPA 8260	Trichloroethene	1.8	ug/L	1.0	04/19/16 06:22	
EPA 8260	Vinyl chloride	0.69J	ug/L	1.0	04/19/16 06:22	
EPA 300.0	Sulfate	1.9J	mg/L	2.0	04/20/16 12:18	
92293803002	**2016009446**					
EPA 6010	Barium	25.2	ug/L	5.0	04/20/16 15:05	
EPA 8260	Benzene	0.39J	ug/L	1.0	04/19/16 06:05	
EPA 8260	Chlorobenzene	14.4	ug/L	1.0	04/19/16 06:05	
EPA 8260	Chloroethane	1.6	ug/L	1.0	04/19/16 06:05	
EPA 8260	1,4-Dichlorobenzene	3.0	ug/L	1.0	04/19/16 06:05	
EPA 8260	1,1-Dichloroethane	7.0	ug/L	1.0	04/19/16 06:05	
EPA 300.0	Sulfate	5.2	mg/L	2.0	04/20/16 12:59	
92293803003	**2016009447**					
EPA 6010	Barium	163	ug/L	5.0	04/20/16 15:08	
EPA 300.0	Sulfate	23.5	mg/L	2.0	04/20/16 13:12	
92293803004	**2016009448**					
EPA 6010	Barium	337	ug/L	5.0	04/20/16 15:11	
EPA 300.0	Sulfate	4.4	mg/L	2.0	04/20/16 13:26	
92293803005	**2016009449**					
EPA 6010	Barium	108	ug/L	5.0	04/20/16 15:23	
EPA 8260	Chloroethane	6.7	ug/L	1.0	04/19/16 06:56	
EPA 8260	Chloroform	0.16J	ug/L	1.0	04/19/16 06:56	
EPA 8260	1,1-Dichloroethane	90.7	ug/L	1.0	04/19/16 06:56	
EPA 8260	1,2-Dichloroethane	0.41J	ug/L	1.0	04/19/16 06:56	
EPA 8260	1,1-Dichloroethene	12.1	ug/L	1.0	04/19/16 06:56	
EPA 8260	cis-1,2-Dichloroethene	110	ug/L	1.0	04/19/16 06:56	
EPA 8260	Trichloroethene	4.4	ug/L	1.0	04/19/16 06:56	
EPA 8260	Vinyl chloride	2.5	ug/L	1.0	04/19/16 06:56	
EPA 300.0	Sulfate	5.4	mg/L	2.0	04/20/16 13:39	
92293803006	**2016009450**					
EPA 6010	Barium	340	ug/L	5.0	04/20/16 15:27	
EPA 8260	cis-1,2-Dichloroethene	0.34J	ug/L	1.0	04/19/16 07:14	
EPA 300.0	Sulfate	4.4	mg/L	2.0	04/20/16 13:53	
92293803007	**2016009451**					
EPA 8260	Acetone	58.0	ug/L	25.0	04/19/16 07:31	

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SUMMARY OF DETECTION

Project: J16040076
Pace Project No.: 92293803

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92293803007	**2016009451**					
EPA 8260	2-Butanone (MEK)	15.2	ug/L	5.0	04/19/16 07:31	
EPA 8260	Chloromethane	0.29J	ug/L	1.0	04/19/16 07:31	
EPA 8260	2-Hexanone	1.6J	ug/L	5.0	04/19/16 07:31	

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PROJECT NARRATIVE

Project: J16040076
Pace Project No.: 92293803

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Duke Energy
Date: April 21, 2016

General Information:
7 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16040076
Pace Project No.: 92293803

Method: **EPA 7470**
Description: 7470 Mercury
Client: Duke Energy
Date: April 21, 2016

General Information:
7 samples were analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16040076
Pace Project No.: 92293803

Method: **EPA 8260**
Description: 8260 MSV Low Level Landfill
Client: Duke Energy
Date: April 21, 2016

General Information:
7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/36438

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1713188)
  - 1,1,2-Trichloroethane

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/36438

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92293957001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1713190)
  - Iodomethane

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16040076
Pace Project No.: 92293803

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Duke Energy
Date: April 21, 2016

General Information:
7 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009445 **Lab ID: 92293803001** Collected: 04/13/16 10:22 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Arsenic	**8.5J**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:02	7440-38-2	
Barium	**138**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:02	7440-39-3	
Cadmium	**<0.50**	ug/L	1.0	0.50	1	04/18/16 20:00	04/20/16 15:02	7440-43-9	
Chromium	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:02	7440-47-3	
Lead	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:02	7439-92-1	
Selenium	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:02	7782-49-2	
Silver	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:02	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.10**	ug/L	0.20	0.10	1	04/15/16 18:15	04/18/16 12:44	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**<10.0**	ug/L	25.0	10.0	1		04/19/16 06:22	67-64-1	
Acrylonitrile	**<1.9**	ug/L	10.0	1.9	1		04/19/16 06:22	107-13-1	
Benzene	**0.49J**	ug/L	1.0	0.25	1		04/19/16 06:22	71-43-2	
Bromochloromethane	**<0.17**	ug/L	1.0	0.17	1		04/19/16 06:22	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	1.0	0.18	1		04/19/16 06:22	75-27-4	
Bromoform	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:22	75-25-2	
Bromomethane	**<0.29**	ug/L	2.0	0.29	1		04/19/16 06:22	74-83-9	
2-Butanone (MEK)	**<0.96**	ug/L	5.0	0.96	1		04/19/16 06:22	78-93-3	
Carbon disulfide	**<1.2**	ug/L	2.0	1.2	1		04/19/16 06:22	75-15-0	
Carbon tetrachloride	**<0.25**	ug/L	1.0	0.25	1		04/19/16 06:22	56-23-5	
Chlorobenzene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 06:22	108-90-7	
Chloroethane	**3.6**	ug/L	1.0	0.54	1		04/19/16 06:22	75-00-3	
Chloroform	**<0.14**	ug/L	1.0	0.14	1		04/19/16 06:22	67-66-3	
Chloromethane	**<0.11**	ug/L	1.0	0.11	1		04/19/16 06:22	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	2.0	2.0	1		04/19/16 06:22	96-12-8	
Dibromochloromethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 06:22	124-48-1	
1,2-Dibromoethane (EDB)	**<0.27**	ug/L	1.0	0.27	1		04/19/16 06:22	106-93-4	
Dibromomethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 06:22	74-95-3	
1,2-Dichlorobenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 06:22	95-50-1	
1,4-Dichlorobenzene	**0.66J**	ug/L	1.0	0.33	1		04/19/16 06:22	106-46-7	
trans-1,4-Dichloro-2-butene	**<1.0**	ug/L	1.0	1.0	1		04/19/16 06:22	110-57-6	
1,1-Dichloroethane	**61.6**	ug/L	1.0	0.32	1		04/19/16 06:22	75-34-3	
1,2-Dichloroethane	**0.33J**	ug/L	1.0	0.24	1		04/19/16 06:22	107-06-2	
1,1-Dichloroethene	**2.7**	ug/L	1.0	0.56	1		04/19/16 06:22	75-35-4	
cis-1,2-Dichloroethene	**1.6**	ug/L	1.0	0.19	1		04/19/16 06:22	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/L	1.0	0.49	1		04/19/16 06:22	156-60-5	
1,2-Dichloropropane	**<0.27**	ug/L	1.0	0.27	1		04/19/16 06:22	78-87-5	
cis-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		04/19/16 06:22	10061-01-5	
trans-1,3-Dichloropropene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:22	10061-02-6	
Ethylbenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 06:22	100-41-4	
2-Hexanone	**<0.46**	ug/L	5.0	0.46	1		04/19/16 06:22	591-78-6	
Iodomethane	**<0.32**	ug/L	5.0	0.32	1		04/19/16 06:22	74-88-4	
Methylene Chloride	**<0.97**	ug/L	1.0	0.97	1		04/19/16 06:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.33**	ug/L	5.0	0.33	1		04/19/16 06:22	108-10-1	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009445 **Lab ID: 92293803001** Collected: 04/13/16 10:22 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Styrene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:22	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.33**	ug/L	1.0	0.33	1		04/19/16 06:22	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/L	1.0	0.40	1		04/19/16 06:22	79-34-5	
Tetrachloroethene	**<0.46**	ug/L	1.0	0.46	1		04/19/16 06:22	127-18-4	
Toluene	**1.3**	ug/L	1.0	0.26	1		04/19/16 06:22	108-88-3	
1,1,1-Trichloroethane	**<0.48**	ug/L	1.0	0.48	1		04/19/16 06:22	71-55-6	
1,1,2-Trichloroethane	**<0.29**	ug/L	1.0	0.29	1		04/19/16 06:22	79-00-5	L2
Trichloroethene	**1.8**	ug/L	1.0	0.47	1		04/19/16 06:22	79-01-6	
Trichlorofluoromethane	**<0.20**	ug/L	1.0	0.20	1		04/19/16 06:22	75-69-4	
1,2,3-Trichloropropane	**<0.41**	ug/L	1.0	0.41	1		04/19/16 06:22	96-18-4	
Vinyl acetate	**<0.35**	ug/L	2.0	0.35	1		04/19/16 06:22	108-05-4	
Vinyl chloride	**0.69J**	ug/L	1.0	0.62	1		04/19/16 06:22	75-01-4	
Xylene (Total)	**<0.66**	ug/L	2.0	0.66	1		04/19/16 06:22	1330-20-7	
m&p-Xylene	**<0.66**	ug/L	2.0	0.66	1		04/19/16 06:22	179601-23-1	
o-Xylene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 06:22	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		04/19/16 06:22	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		04/19/16 06:22	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/19/16 06:22	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1.9J**	mg/L	2.0	1.0	1		04/20/16 12:18	14808-79-8	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009446 **Lab ID: 92293803002** Collected: 04/13/16 11:01 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Arsenic	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:05	7440-38-2	
Barium	**25.2**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:05	7440-39-3	
Cadmium	**<0.50**	ug/L	1.0	0.50	1	04/18/16 20:00	04/20/16 15:05	7440-43-9	
Chromium	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:05	7440-47-3	
Lead	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:05	7439-92-1	
Selenium	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:05	7782-49-2	
Silver	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:05	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.10**	ug/L	0.20	0.10	1	04/15/16 18:15	04/18/16 12:46	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**<10.0**	ug/L	25.0	10.0	1		04/19/16 06:05	67-64-1	
Acrylonitrile	**<1.9**	ug/L	10.0	1.9	1		04/19/16 06:05	107-13-1	
Benzene	**0.39J**	ug/L	1.0	0.25	1		04/19/16 06:05	71-43-2	
Bromochloromethane	**<0.17**	ug/L	1.0	0.17	1		04/19/16 06:05	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	1.0	0.18	1		04/19/16 06:05	75-27-4	
Bromoform	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:05	75-25-2	
Bromomethane	**<0.29**	ug/L	2.0	0.29	1		04/19/16 06:05	74-83-9	
2-Butanone (MEK)	**<0.96**	ug/L	5.0	0.96	1		04/19/16 06:05	78-93-3	
Carbon disulfide	**<1.2**	ug/L	2.0	1.2	1		04/19/16 06:05	75-15-0	
Carbon tetrachloride	**<0.25**	ug/L	1.0	0.25	1		04/19/16 06:05	56-23-5	
Chlorobenzene	**14.4**	ug/L	1.0	0.23	1		04/19/16 06:05	108-90-7	
Chloroethane	**1.6**	ug/L	1.0	0.54	1		04/19/16 06:05	75-00-3	
Chloroform	**<0.14**	ug/L	1.0	0.14	1		04/19/16 06:05	67-66-3	
Chloromethane	**<0.11**	ug/L	1.0	0.11	1		04/19/16 06:05	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	2.0	2.0	1		04/19/16 06:05	96-12-8	
Dibromochloromethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 06:05	124-48-1	
1,2-Dibromoethane (EDB)	**<0.27**	ug/L	1.0	0.27	1		04/19/16 06:05	106-93-4	
Dibromomethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 06:05	74-95-3	
1,2-Dichlorobenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 06:05	95-50-1	
1,4-Dichlorobenzene	**3.0**	ug/L	1.0	0.33	1		04/19/16 06:05	106-46-7	
trans-1,4-Dichloro-2-butene	**<1.0**	ug/L	1.0	1.0	1		04/19/16 06:05	110-57-6	
1,1-Dichloroethane	**7.0**	ug/L	1.0	0.32	1		04/19/16 06:05	75-34-3	
1,2-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/19/16 06:05	107-06-2	
1,1-Dichloroethene	**<0.56**	ug/L	1.0	0.56	1		04/19/16 06:05	75-35-4	
cis-1,2-Dichloroethene	**<0.19**	ug/L	1.0	0.19	1		04/19/16 06:05	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/L	1.0	0.49	1		04/19/16 06:05	156-60-5	
1,2-Dichloropropane	**<0.27**	ug/L	1.0	0.27	1		04/19/16 06:05	78-87-5	
cis-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		04/19/16 06:05	10061-01-5	
trans-1,3-Dichloropropene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:05	10061-02-6	
Ethylbenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 06:05	100-41-4	
2-Hexanone	**<0.46**	ug/L	5.0	0.46	1		04/19/16 06:05	591-78-6	
Iodomethane	**<0.32**	ug/L	5.0	0.32	1		04/19/16 06:05	74-88-4	
Methylene Chloride	**<0.97**	ug/L	1.0	0.97	1		04/19/16 06:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.33**	ug/L	5.0	0.33	1		04/19/16 06:05	108-10-1	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009446 **Lab ID: 92293803002** Collected: 04/13/16 11:01 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Styrene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:05	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.33**	ug/L	1.0	0.33	1		04/19/16 06:05	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/L	1.0	0.40	1		04/19/16 06:05	79-34-5	
Tetrachloroethene	**<0.46**	ug/L	1.0	0.46	1		04/19/16 06:05	127-18-4	
Toluene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:05	108-88-3	
1,1,1-Trichloroethane	**<0.48**	ug/L	1.0	0.48	1		04/19/16 06:05	71-55-6	
1,1,2-Trichloroethane	**<0.29**	ug/L	1.0	0.29	1		04/19/16 06:05	79-00-5	L2
Trichloroethene	**<0.47**	ug/L	1.0	0.47	1		04/19/16 06:05	79-01-6	
Trichlorofluoromethane	**<0.20**	ug/L	1.0	0.20	1		04/19/16 06:05	75-69-4	
1,2,3-Trichloropropane	**<0.41**	ug/L	1.0	0.41	1		04/19/16 06:05	96-18-4	
Vinyl acetate	**<0.35**	ug/L	2.0	0.35	1		04/19/16 06:05	108-05-4	
Vinyl chloride	**<0.62**	ug/L	1.0	0.62	1		04/19/16 06:05	75-01-4	
Xylene (Total)	**<0.66**	ug/L	2.0	0.66	1		04/19/16 06:05	1330-20-7	
m&p-Xylene	**<0.66**	ug/L	2.0	0.66	1		04/19/16 06:05	179601-23-1	
o-Xylene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 06:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		04/19/16 06:05	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		04/19/16 06:05	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		04/19/16 06:05	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**5.2**	mg/L	2.0	1.0	1		04/20/16 12:59	14808-79-8	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009447 **Lab ID: 92293803003** Collected: 04/13/16 12:00 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Arsenic	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:08	7440-38-2	
Barium	**163**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:08	7440-39-3	
Cadmium	**<0.50**	ug/L	1.0	0.50	1	04/18/16 20:00	04/20/16 15:08	7440-43-9	
Chromium	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:08	7440-47-3	
Lead	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:08	7439-92-1	
Selenium	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:08	7782-49-2	
Silver	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:08	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.10**	ug/L	0.20	0.10	1	04/15/16 18:15	04/18/16 12:49	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**<10.0**	ug/L	25.0	10.0	1		04/19/16 07:48	67-64-1	
Acrylonitrile	**<1.9**	ug/L	10.0	1.9	1		04/19/16 07:48	107-13-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		04/19/16 07:48	71-43-2	
Bromochloromethane	**<0.17**	ug/L	1.0	0.17	1		04/19/16 07:48	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	1.0	0.18	1		04/19/16 07:48	75-27-4	
Bromoform	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:48	75-25-2	
Bromomethane	**<0.29**	ug/L	2.0	0.29	1		04/19/16 07:48	74-83-9	
2-Butanone (MEK)	**<0.96**	ug/L	5.0	0.96	1		04/19/16 07:48	78-93-3	
Carbon disulfide	**<1.2**	ug/L	2.0	1.2	1		04/19/16 07:48	75-15-0	
Carbon tetrachloride	**<0.25**	ug/L	1.0	0.25	1		04/19/16 07:48	56-23-5	
Chlorobenzene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 07:48	108-90-7	
Chloroethane	**<0.54**	ug/L	1.0	0.54	1		04/19/16 07:48	75-00-3	
Chloroform	**<0.14**	ug/L	1.0	0.14	1		04/19/16 07:48	67-66-3	
Chloromethane	**<0.11**	ug/L	1.0	0.11	1		04/19/16 07:48	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	2.0	2.0	1		04/19/16 07:48	96-12-8	
Dibromochloromethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 07:48	124-48-1	
1,2-Dibromoethane (EDB)	**<0.27**	ug/L	1.0	0.27	1		04/19/16 07:48	106-93-4	
Dibromomethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 07:48	74-95-3	
1,2-Dichlorobenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 07:48	95-50-1	
1,4-Dichlorobenzene	**<0.33**	ug/L	1.0	0.33	1		04/19/16 07:48	106-46-7	
trans-1,4-Dichloro-2-butene	**<1.0**	ug/L	1.0	1.0	1		04/19/16 07:48	110-57-6	
1,1-Dichloroethane	**<0.32**	ug/L	1.0	0.32	1		04/19/16 07:48	75-34-3	
1,2-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/19/16 07:48	107-06-2	
1,1-Dichloroethene	**<0.56**	ug/L	1.0	0.56	1		04/19/16 07:48	75-35-4	
cis-1,2-Dichloroethene	**<0.19**	ug/L	1.0	0.19	1		04/19/16 07:48	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/L	1.0	0.49	1		04/19/16 07:48	156-60-5	
1,2-Dichloropropane	**<0.27**	ug/L	1.0	0.27	1		04/19/16 07:48	78-87-5	
cis-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		04/19/16 07:48	10061-01-5	
trans-1,3-Dichloropropene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:48	10061-02-6	
Ethylbenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 07:48	100-41-4	
2-Hexanone	**<0.46**	ug/L	5.0	0.46	1		04/19/16 07:48	591-78-6	
Iodomethane	**<0.32**	ug/L	5.0	0.32	1		04/19/16 07:48	74-88-4	
Methylene Chloride	**<0.97**	ug/L	1.0	0.97	1		04/19/16 07:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.33**	ug/L	5.0	0.33	1		04/19/16 07:48	108-10-1	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009447 **Lab ID: 92293803003** Collected: 04/13/16 12:00 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Styrene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:48	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.33**	ug/L	1.0	0.33	1		04/19/16 07:48	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/L	1.0	0.40	1		04/19/16 07:48	79-34-5	
Tetrachloroethene	**<0.46**	ug/L	1.0	0.46	1		04/19/16 07:48	127-18-4	
Toluene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:48	108-88-3	
1,1,1-Trichloroethane	**<0.48**	ug/L	1.0	0.48	1		04/19/16 07:48	71-55-6	
1,1,2-Trichloroethane	**<0.29**	ug/L	1.0	0.29	1		04/19/16 07:48	79-00-5	L2
Trichloroethene	**<0.47**	ug/L	1.0	0.47	1		04/19/16 07:48	79-01-6	
Trichlorofluoromethane	**<0.20**	ug/L	1.0	0.20	1		04/19/16 07:48	75-69-4	
1,2,3-Trichloropropane	**<0.41**	ug/L	1.0	0.41	1		04/19/16 07:48	96-18-4	
Vinyl acetate	**<0.35**	ug/L	2.0	0.35	1		04/19/16 07:48	108-05-4	
Vinyl chloride	**<0.62**	ug/L	1.0	0.62	1		04/19/16 07:48	75-01-4	
Xylene (Total)	**<0.66**	ug/L	2.0	0.66	1		04/19/16 07:48	1330-20-7	
m&p-Xylene	**<0.66**	ug/L	2.0	0.66	1		04/19/16 07:48	179601-23-1	
o-Xylene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 07:48	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		04/19/16 07:48	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		04/19/16 07:48	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/19/16 07:48	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**23.5**	mg/L	2.0	1.0	1		04/20/16 13:12	14808-79-8	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009448 **Lab ID: 92293803004** Collected: 04/13/16 09:07 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Arsenic	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:11	7440-38-2	
Barium	**337**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:11	7440-39-3	
Cadmium	**<0.50**	ug/L	1.0	0.50	1	04/18/16 20:00	04/20/16 15:11	7440-43-9	
Chromium	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:11	7440-47-3	
Lead	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:11	7439-92-1	
Selenium	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:11	7782-49-2	
Silver	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:11	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.10**	ug/L	0.20	0.10	1	04/15/16 18:15	04/18/16 12:56	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**<10.0**	ug/L	25.0	10.0	1		04/19/16 06:39	67-64-1	
Acrylonitrile	**<1.9**	ug/L	10.0	1.9	1		04/19/16 06:39	107-13-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		04/19/16 06:39	71-43-2	
Bromochloromethane	**<0.17**	ug/L	1.0	0.17	1		04/19/16 06:39	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	1.0	0.18	1		04/19/16 06:39	75-27-4	
Bromoform	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:39	75-25-2	
Bromomethane	**<0.29**	ug/L	2.0	0.29	1		04/19/16 06:39	74-83-9	
2-Butanone (MEK)	**<0.96**	ug/L	5.0	0.96	1		04/19/16 06:39	78-93-3	
Carbon disulfide	**<1.2**	ug/L	2.0	1.2	1		04/19/16 06:39	75-15-0	
Carbon tetrachloride	**<0.25**	ug/L	1.0	0.25	1		04/19/16 06:39	56-23-5	
Chlorobenzene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 06:39	108-90-7	
Chloroethane	**<0.54**	ug/L	1.0	0.54	1		04/19/16 06:39	75-00-3	
Chloroform	**<0.14**	ug/L	1.0	0.14	1		04/19/16 06:39	67-66-3	
Chloromethane	**<0.11**	ug/L	1.0	0.11	1		04/19/16 06:39	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	2.0	2.0	1		04/19/16 06:39	96-12-8	
Dibromochloromethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 06:39	124-48-1	
1,2-Dibromoethane (EDB)	**<0.27**	ug/L	1.0	0.27	1		04/19/16 06:39	106-93-4	
Dibromomethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 06:39	74-95-3	
1,2-Dichlorobenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 06:39	95-50-1	
1,4-Dichlorobenzene	**<0.33**	ug/L	1.0	0.33	1		04/19/16 06:39	106-46-7	
trans-1,4-Dichloro-2-butene	**<1.0**	ug/L	1.0	1.0	1		04/19/16 06:39	110-57-6	
1,1-Dichloroethane	**<0.32**	ug/L	1.0	0.32	1		04/19/16 06:39	75-34-3	
1,2-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/19/16 06:39	107-06-2	
1,1-Dichloroethene	**<0.56**	ug/L	1.0	0.56	1		04/19/16 06:39	75-35-4	
cis-1,2-Dichloroethene	**<0.19**	ug/L	1.0	0.19	1		04/19/16 06:39	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/L	1.0	0.49	1		04/19/16 06:39	156-60-5	
1,2-Dichloropropane	**<0.27**	ug/L	1.0	0.27	1		04/19/16 06:39	78-87-5	
cis-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		04/19/16 06:39	10061-01-5	
trans-1,3-Dichloropropene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:39	10061-02-6	
Ethylbenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 06:39	100-41-4	
2-Hexanone	**<0.46**	ug/L	5.0	0.46	1		04/19/16 06:39	591-78-6	
Iodomethane	**<0.32**	ug/L	5.0	0.32	1		04/19/16 06:39	74-88-4	
Methylene Chloride	**<0.97**	ug/L	1.0	0.97	1		04/19/16 06:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.33**	ug/L	5.0	0.33	1		04/19/16 06:39	108-10-1	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009448 **Lab ID: 92293803004** Collected: 04/13/16 09:07 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Styrene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:39	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.33**	ug/L	1.0	0.33	1		04/19/16 06:39	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/L	1.0	0.40	1		04/19/16 06:39	79-34-5	
Tetrachloroethene	**<0.46**	ug/L	1.0	0.46	1		04/19/16 06:39	127-18-4	
Toluene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:39	108-88-3	
1,1,1-Trichloroethane	**<0.48**	ug/L	1.0	0.48	1		04/19/16 06:39	71-55-6	
1,1,2-Trichloroethane	**<0.29**	ug/L	1.0	0.29	1		04/19/16 06:39	79-00-5	L2
Trichloroethene	**<0.47**	ug/L	1.0	0.47	1		04/19/16 06:39	79-01-6	
Trichlorofluoromethane	**<0.20**	ug/L	1.0	0.20	1		04/19/16 06:39	75-69-4	
1,2,3-Trichloropropane	**<0.41**	ug/L	1.0	0.41	1		04/19/16 06:39	96-18-4	
Vinyl acetate	**<0.35**	ug/L	2.0	0.35	1		04/19/16 06:39	108-05-4	
Vinyl chloride	**<0.62**	ug/L	1.0	0.62	1		04/19/16 06:39	75-01-4	
Xylene (Total)	**<0.66**	ug/L	2.0	0.66	1		04/19/16 06:39	1330-20-7	
m&p-Xylene	**<0.66**	ug/L	2.0	0.66	1		04/19/16 06:39	179601-23-1	
o-Xylene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 06:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		04/19/16 06:39	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		04/19/16 06:39	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/19/16 06:39	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**4.4**	mg/L	2.0	1.0	1		04/20/16 13:26	14808-79-8	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009449 **Lab ID: 92293803005** Collected: 04/13/16 09:43 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Arsenic	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:23	7440-38-2	
Barium	**108**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:23	7440-39-3	
Cadmium	**<0.50**	ug/L	1.0	0.50	1	04/18/16 20:00	04/20/16 15:23	7440-43-9	
Chromium	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:23	7440-47-3	
Lead	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:23	7439-92-1	
Selenium	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:23	7782-49-2	
Silver	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:23	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.10**	ug/L	0.20	0.10	1	04/15/16 18:15	04/18/16 12:58	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**<10.0**	ug/L	25.0	10.0	1		04/19/16 06:56	67-64-1	
Acrylonitrile	**<1.9**	ug/L	10.0	1.9	1		04/19/16 06:56	107-13-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		04/19/16 06:56	71-43-2	
Bromochloromethane	**<0.17**	ug/L	1.0	0.17	1		04/19/16 06:56	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	1.0	0.18	1		04/19/16 06:56	75-27-4	
Bromoform	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:56	75-25-2	
Bromomethane	**<0.29**	ug/L	2.0	0.29	1		04/19/16 06:56	74-83-9	
2-Butanone (MEK)	**<0.96**	ug/L	5.0	0.96	1		04/19/16 06:56	78-93-3	
Carbon disulfide	**<1.2**	ug/L	2.0	1.2	1		04/19/16 06:56	75-15-0	
Carbon tetrachloride	**<0.25**	ug/L	1.0	0.25	1		04/19/16 06:56	56-23-5	
Chlorobenzene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 06:56	108-90-7	
Chloroethane	**6.7**	ug/L	1.0	0.54	1		04/19/16 06:56	75-00-3	
Chloroform	**0.16J**	ug/L	1.0	0.14	1		04/19/16 06:56	67-66-3	
Chloromethane	**<0.11**	ug/L	1.0	0.11	1		04/19/16 06:56	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	2.0	2.0	1		04/19/16 06:56	96-12-8	
Dibromochloromethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 06:56	124-48-1	
1,2-Dibromoethane (EDB)	**<0.27**	ug/L	1.0	0.27	1		04/19/16 06:56	106-93-4	
Dibromomethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 06:56	74-95-3	
1,2-Dichlorobenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 06:56	95-50-1	
1,4-Dichlorobenzene	**<0.33**	ug/L	1.0	0.33	1		04/19/16 06:56	106-46-7	
trans-1,4-Dichloro-2-butene	**<1.0**	ug/L	1.0	1.0	1		04/19/16 06:56	110-57-6	
1,1-Dichloroethane	**90.7**	ug/L	1.0	0.32	1		04/19/16 06:56	75-34-3	
1,2-Dichloroethane	**0.41J**	ug/L	1.0	0.24	1		04/19/16 06:56	107-06-2	
1,1-Dichloroethene	**12.1**	ug/L	1.0	0.56	1		04/19/16 06:56	75-35-4	
cis-1,2-Dichloroethene	**110**	ug/L	1.0	0.19	1		04/19/16 06:56	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/L	1.0	0.49	1		04/19/16 06:56	156-60-5	
1,2-Dichloropropane	**<0.27**	ug/L	1.0	0.27	1		04/19/16 06:56	78-87-5	
cis-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		04/19/16 06:56	10061-01-5	
trans-1,3-Dichloropropene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:56	10061-02-6	
Ethylbenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 06:56	100-41-4	
2-Hexanone	**<0.46**	ug/L	5.0	0.46	1		04/19/16 06:56	591-78-6	
Iodomethane	**<0.32**	ug/L	5.0	0.32	1		04/19/16 06:56	74-88-4	
Methylene Chloride	**<0.97**	ug/L	1.0	0.97	1		04/19/16 06:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.33**	ug/L	5.0	0.33	1		04/19/16 06:56	108-10-1	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009449 **Lab ID: 92293803005** Collected: 04/13/16 09:43 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Styrene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:56	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.33**	ug/L	1.0	0.33	1		04/19/16 06:56	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/L	1.0	0.40	1		04/19/16 06:56	79-34-5	
Tetrachloroethene	**<0.46**	ug/L	1.0	0.46	1		04/19/16 06:56	127-18-4	
Toluene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 06:56	108-88-3	
1,1,1-Trichloroethane	**<0.48**	ug/L	1.0	0.48	1		04/19/16 06:56	71-55-6	
1,1,2-Trichloroethane	**<0.29**	ug/L	1.0	0.29	1		04/19/16 06:56	79-00-5	L2
Trichloroethene	**4.4**	ug/L	1.0	0.47	1		04/19/16 06:56	79-01-6	
Trichlorofluoromethane	**<0.20**	ug/L	1.0	0.20	1		04/19/16 06:56	75-69-4	
1,2,3-Trichloropropane	**<0.41**	ug/L	1.0	0.41	1		04/19/16 06:56	96-18-4	
Vinyl acetate	**<0.35**	ug/L	2.0	0.35	1		04/19/16 06:56	108-05-4	
Vinyl chloride	**2.5**	ug/L	1.0	0.62	1		04/19/16 06:56	75-01-4	
Xylene (Total)	**<0.66**	ug/L	2.0	0.66	1		04/19/16 06:56	1330-20-7	
m&p-Xylene	**<0.66**	ug/L	2.0	0.66	1		04/19/16 06:56	179601-23-1	
o-Xylene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 06:56	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		04/19/16 06:56	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		04/19/16 06:56	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/19/16 06:56	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**5.4**	mg/L	2.0	1.0	1		04/20/16 13:39	14808-79-8	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009450 **Lab ID: 92293803006** Collected: 04/13/16 09:07 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Arsenic	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:27	7440-38-2	
Barium	**340**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:27	7440-39-3	
Cadmium	**<0.50**	ug/L	1.0	0.50	1	04/18/16 20:00	04/20/16 15:27	7440-43-9	
Chromium	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:27	7440-47-3	
Lead	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:27	7439-92-1	
Selenium	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:27	7782-49-2	
Silver	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:27	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.10**	ug/L	0.20	0.10	1	04/15/16 18:15	04/18/16 13:01	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**<10.0**	ug/L	25.0	10.0	1		04/19/16 07:14	67-64-1	
Acrylonitrile	**<1.9**	ug/L	10.0	1.9	1		04/19/16 07:14	107-13-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		04/19/16 07:14	71-43-2	
Bromochloromethane	**<0.17**	ug/L	1.0	0.17	1		04/19/16 07:14	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	1.0	0.18	1		04/19/16 07:14	75-27-4	
Bromoform	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:14	75-25-2	
Bromomethane	**<0.29**	ug/L	2.0	0.29	1		04/19/16 07:14	74-83-9	
2-Butanone (MEK)	**<0.96**	ug/L	5.0	0.96	1		04/19/16 07:14	78-93-3	
Carbon disulfide	**<1.2**	ug/L	2.0	1.2	1		04/19/16 07:14	75-15-0	
Carbon tetrachloride	**<0.25**	ug/L	1.0	0.25	1		04/19/16 07:14	56-23-5	
Chlorobenzene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 07:14	108-90-7	
Chloroethane	**<0.54**	ug/L	1.0	0.54	1		04/19/16 07:14	75-00-3	
Chloroform	**<0.14**	ug/L	1.0	0.14	1		04/19/16 07:14	67-66-3	
Chloromethane	**<0.11**	ug/L	1.0	0.11	1		04/19/16 07:14	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	2.0	2.0	1		04/19/16 07:14	96-12-8	
Dibromochloromethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 07:14	124-48-1	
1,2-Dibromoethane (EDB)	**<0.27**	ug/L	1.0	0.27	1		04/19/16 07:14	106-93-4	
Dibromomethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 07:14	74-95-3	
1,2-Dichlorobenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 07:14	95-50-1	
1,4-Dichlorobenzene	**<0.33**	ug/L	1.0	0.33	1		04/19/16 07:14	106-46-7	
trans-1,4-Dichloro-2-butene	**<1.0**	ug/L	1.0	1.0	1		04/19/16 07:14	110-57-6	
1,1-Dichloroethane	**<0.32**	ug/L	1.0	0.32	1		04/19/16 07:14	75-34-3	
1,2-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/19/16 07:14	107-06-2	
1,1-Dichloroethene	**<0.56**	ug/L	1.0	0.56	1		04/19/16 07:14	75-35-4	
cis-1,2-Dichloroethene	**0.34J**	ug/L	1.0	0.19	1		04/19/16 07:14	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/L	1.0	0.49	1		04/19/16 07:14	156-60-5	
1,2-Dichloropropane	**<0.27**	ug/L	1.0	0.27	1		04/19/16 07:14	78-87-5	
cis-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		04/19/16 07:14	10061-01-5	
trans-1,3-Dichloropropene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:14	10061-02-6	
Ethylbenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 07:14	100-41-4	
2-Hexanone	**<0.46**	ug/L	5.0	0.46	1		04/19/16 07:14	591-78-6	
Iodomethane	**<0.32**	ug/L	5.0	0.32	1		04/19/16 07:14	74-88-4	
Methylene Chloride	**<0.97**	ug/L	1.0	0.97	1		04/19/16 07:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.33**	ug/L	5.0	0.33	1		04/19/16 07:14	108-10-1	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009450 **Lab ID: 92293803006** Collected: 04/13/16 09:07 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Styrene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:14	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.33**	ug/L	1.0	0.33	1		04/19/16 07:14	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/L	1.0	0.40	1		04/19/16 07:14	79-34-5	
Tetrachloroethene	**<0.46**	ug/L	1.0	0.46	1		04/19/16 07:14	127-18-4	
Toluene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:14	108-88-3	
1,1,1-Trichloroethane	**<0.48**	ug/L	1.0	0.48	1		04/19/16 07:14	71-55-6	
1,1,2-Trichloroethane	**<0.29**	ug/L	1.0	0.29	1		04/19/16 07:14	79-00-5	L2
Trichloroethene	**<0.47**	ug/L	1.0	0.47	1		04/19/16 07:14	79-01-6	
Trichlorofluoromethane	**<0.20**	ug/L	1.0	0.20	1		04/19/16 07:14	75-69-4	
1,2,3-Trichloropropane	**<0.41**	ug/L	1.0	0.41	1		04/19/16 07:14	96-18-4	
Vinyl acetate	**<0.35**	ug/L	2.0	0.35	1		04/19/16 07:14	108-05-4	
Vinyl chloride	**<0.62**	ug/L	1.0	0.62	1		04/19/16 07:14	75-01-4	
Xylene (Total)	**<0.66**	ug/L	2.0	0.66	1		04/19/16 07:14	1330-20-7	
m&p-Xylene	**<0.66**	ug/L	2.0	0.66	1		04/19/16 07:14	179601-23-1	
o-Xylene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 07:14	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		04/19/16 07:14	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		04/19/16 07:14	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		04/19/16 07:14	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**4.4**	mg/L	2.0	1.0	1		04/20/16 13:53	14808-79-8	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009451 **Lab ID: 92293803007** Collected: 04/13/16 00:00 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
Arsenic	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:30	7440-38-2	
Barium	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:30	7440-39-3	
Cadmium	**<0.50**	ug/L	1.0	0.50	1	04/18/16 20:00	04/20/16 15:30	7440-43-9	
Chromium	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:30	7440-47-3	
Lead	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:30	7439-92-1	
Selenium	**<5.0**	ug/L	10.0	5.0	1	04/18/16 20:00	04/20/16 15:30	7782-49-2	
Silver	**<2.5**	ug/L	5.0	2.5	1	04/18/16 20:00	04/20/16 15:30	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.10**	ug/L	0.20	0.10	1	04/15/16 18:15	04/18/16 13:03	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**58.0**	ug/L	25.0	10.0	1		04/19/16 07:31	67-64-1	
Acrylonitrile	**<1.9**	ug/L	10.0	1.9	1		04/19/16 07:31	107-13-1	
Benzene	**<0.25**	ug/L	1.0	0.25	1		04/19/16 07:31	71-43-2	
Bromochloromethane	**<0.17**	ug/L	1.0	0.17	1		04/19/16 07:31	74-97-5	
Bromodichloromethane	**<0.18**	ug/L	1.0	0.18	1		04/19/16 07:31	75-27-4	
Bromoform	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:31	75-25-2	
Bromomethane	**<0.29**	ug/L	2.0	0.29	1		04/19/16 07:31	74-83-9	
2-Butanone (MEK)	**15.2**	ug/L	5.0	0.96	1		04/19/16 07:31	78-93-3	
Carbon disulfide	**<1.2**	ug/L	2.0	1.2	1		04/19/16 07:31	75-15-0	
Carbon tetrachloride	**<0.25**	ug/L	1.0	0.25	1		04/19/16 07:31	56-23-5	
Chlorobenzene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 07:31	108-90-7	
Chloroethane	**<0.54**	ug/L	1.0	0.54	1		04/19/16 07:31	75-00-3	
Chloroform	**<0.14**	ug/L	1.0	0.14	1		04/19/16 07:31	67-66-3	
Chloromethane	**0.29J**	ug/L	1.0	0.11	1		04/19/16 07:31	74-87-3	
1,2-Dibromo-3-chloropropane	**<2.0**	ug/L	2.0	2.0	1		04/19/16 07:31	96-12-8	
Dibromochloromethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 07:31	124-48-1	
1,2-Dibromoethane (EDB)	**<0.27**	ug/L	1.0	0.27	1		04/19/16 07:31	106-93-4	
Dibromomethane	**<0.21**	ug/L	1.0	0.21	1		04/19/16 07:31	74-95-3	
1,2-Dichlorobenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 07:31	95-50-1	
1,4-Dichlorobenzene	**<0.33**	ug/L	1.0	0.33	1		04/19/16 07:31	106-46-7	
trans-1,4-Dichloro-2-butene	**<1.0**	ug/L	1.0	1.0	1		04/19/16 07:31	110-57-6	
1,1-Dichloroethane	**<0.32**	ug/L	1.0	0.32	1		04/19/16 07:31	75-34-3	
1,2-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/19/16 07:31	107-06-2	
1,1-Dichloroethene	**<0.56**	ug/L	1.0	0.56	1		04/19/16 07:31	75-35-4	
cis-1,2-Dichloroethene	**<0.19**	ug/L	1.0	0.19	1		04/19/16 07:31	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/L	1.0	0.49	1		04/19/16 07:31	156-60-5	
1,2-Dichloropropane	**<0.27**	ug/L	1.0	0.27	1		04/19/16 07:31	78-87-5	
cis-1,3-Dichloropropene	**<0.13**	ug/L	1.0	0.13	1		04/19/16 07:31	10061-01-5	
trans-1,3-Dichloropropene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:31	10061-02-6	
Ethylbenzene	**<0.30**	ug/L	1.0	0.30	1		04/19/16 07:31	100-41-4	
2-Hexanone	**1.6J**	ug/L	5.0	0.46	1		04/19/16 07:31	591-78-6	
Iodomethane	**<0.32**	ug/L	5.0	0.32	1		04/19/16 07:31	74-88-4	
Methylene Chloride	**<0.97**	ug/L	1.0	0.97	1		04/19/16 07:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.33**	ug/L	5.0	0.33	1		04/19/16 07:31	108-10-1	

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ANALYTICAL RESULTS

Project: J16040076
Pace Project No.: 92293803

Sample: 2016009451 **Lab ID: 92293803007** Collected: 04/13/16 00:00 Received: 04/14/16 09:12 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Styrene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:31	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.33**	ug/L	1.0	0.33	1		04/19/16 07:31	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/L	1.0	0.40	1		04/19/16 07:31	79-34-5	
Tetrachloroethene	**<0.46**	ug/L	1.0	0.46	1		04/19/16 07:31	127-18-4	
Toluene	**<0.26**	ug/L	1.0	0.26	1		04/19/16 07:31	108-88-3	
1,1,1-Trichloroethane	**<0.48**	ug/L	1.0	0.48	1		04/19/16 07:31	71-55-6	
1,1,2-Trichloroethane	**<0.29**	ug/L	1.0	0.29	1		04/19/16 07:31	79-00-5	L2
Trichloroethene	**<0.47**	ug/L	1.0	0.47	1		04/19/16 07:31	79-01-6	
Trichlorofluoromethane	**<0.20**	ug/L	1.0	0.20	1		04/19/16 07:31	75-69-4	
1,2,3-Trichloropropane	**<0.41**	ug/L	1.0	0.41	1		04/19/16 07:31	96-18-4	
Vinyl acetate	**<0.35**	ug/L	2.0	0.35	1		04/19/16 07:31	108-05-4	
Vinyl chloride	**<0.62**	ug/L	1.0	0.62	1		04/19/16 07:31	75-01-4	
Xylene (Total)	**<0.66**	ug/L	2.0	0.66	1		04/19/16 07:31	1330-20-7	
m&p-Xylene	**<0.66**	ug/L	2.0	0.66	1		04/19/16 07:31	179601-23-1	
o-Xylene	**<0.23**	ug/L	1.0	0.23	1		04/19/16 07:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		04/19/16 07:31	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		04/19/16 07:31	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/19/16 07:31	2037-26-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**<1.0**	mg/L	2.0	1.0	1		04/20/16 14:34	14808-79-8	

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QUALITY CONTROL DATA

Project: J16040076
Pace Project No.: 92293803

QC Batch: MERP/9266 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

METHOD BLANK: 1711487 Matrix: Water
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.10	0.20	0.10	04/18/16 12:28	

LABORATORY CONTROL SAMPLE: 1711488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1711489 1711490

Parameter	Units	92293190002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.5	2.5	100	100	75-125	0	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J16040076
Pace Project No.: 92293803

QC Batch: MPRP/21425 Analysis Method: EPA 6010
QC Batch Method: EPA 3010A Analysis Description: 6010 MET
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

METHOD BLANK: 1713276 Matrix: Water
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<5.0	10.0	5.0	04/20/16 14:47	
Barium	ug/L	<2.5	5.0	2.5	04/20/16 14:47	
Cadmium	ug/L	<0.50	1.0	0.50	04/20/16 14:47	
Chromium	ug/L	<2.5	5.0	2.5	04/20/16 14:47	
Lead	ug/L	<2.5	5.0	2.5	04/20/16 14:47	
Selenium	ug/L	<5.0	10.0	5.0	04/20/16 14:47	
Silver	ug/L	<2.5	5.0	2.5	04/20/16 14:47	

LABORATORY CONTROL SAMPLE: 1713277

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	442	88	80-120	
Barium	ug/L	500	470	94	80-120	
Cadmium	ug/L	500	460	92	80-120	
Chromium	ug/L	500	471	94	80-120	
Lead	ug/L	500	455	91	80-120	
Selenium	ug/L	500	454	91	80-120	
Silver	ug/L	250	232	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1713278 1713279

Parameter	Units	92293594002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	443	431	88	86	75-125	3	20	
Barium	ug/L	34.1	500	500	485	474	90	88	75-125	2	20	
Cadmium	ug/L	ND	500	500	446	438	89	88	75-125	2	20	
Chromium	ug/L	ND	500	500	447	440	89	88	75-125	2	20	
Lead	ug/L	ND	500	500	429	422	86	84	75-125	2	20	
Selenium	ug/L	ND	500	500	444	432	89	86	75-125	3	20	
Silver	ug/L	ND	250	250	224	220	90	88	75-125	2	20	

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QUALITY CONTROL DATA

Project: J16040076
Pace Project No.: 92293803

QC Batch: MSV/36438 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

METHOD BLANK: 1713187 Matrix: Water
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.33	1.0	0.33	04/19/16 03:31	
1,1,1-Trichloroethane	ug/L	<0.48	1.0	0.48	04/19/16 03:31	
1,1,2,2-Tetrachloroethane	ug/L	<0.40	1.0	0.40	04/19/16 03:31	
1,1,2-Trichloroethane	ug/L	<0.29	1.0	0.29	04/19/16 03:31	
1,1-Dichloroethane	ug/L	<0.32	1.0	0.32	04/19/16 03:31	
1,1-Dichloroethene	ug/L	<0.56	1.0	0.56	04/19/16 03:31	
1,2,3-Trichloropropane	ug/L	<0.41	1.0	0.41	04/19/16 03:31	
1,2-Dibromo-3-chloropropane	ug/L	<2.0	2.0	2.0	04/19/16 03:31	
1,2-Dibromoethane (EDB)	ug/L	<0.27	1.0	0.27	04/19/16 03:31	
1,2-Dichlorobenzene	ug/L	<0.30	1.0	0.30	04/19/16 03:31	
1,2-Dichloroethane	ug/L	<0.24	1.0	0.24	04/19/16 03:31	
1,2-Dichloropropane	ug/L	<0.27	1.0	0.27	04/19/16 03:31	
1,4-Dichlorobenzene	ug/L	<0.33	1.0	0.33	04/19/16 03:31	
2-Butanone (MEK)	ug/L	<0.96	5.0	0.96	04/19/16 03:31	
2-Hexanone	ug/L	<0.46	5.0	0.46	04/19/16 03:31	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.33	5.0	0.33	04/19/16 03:31	
Acetone	ug/L	<10.0	25.0	10.0	04/19/16 03:31	
Acrylonitrile	ug/L	<1.9	10.0	1.9	04/19/16 03:31	
Benzene	ug/L	<0.25	1.0	0.25	04/19/16 03:31	
Bromochloromethane	ug/L	<0.17	1.0	0.17	04/19/16 03:31	
Bromodichloromethane	ug/L	<0.18	1.0	0.18	04/19/16 03:31	
Bromoform	ug/L	<0.26	1.0	0.26	04/19/16 03:31	
Bromomethane	ug/L	<0.29	2.0	0.29	04/19/16 03:31	
Carbon disulfide	ug/L	<1.2	2.0	1.2	04/19/16 03:31	
Carbon tetrachloride	ug/L	<0.25	1.0	0.25	04/19/16 03:31	
Chlorobenzene	ug/L	<0.23	1.0	0.23	04/19/16 03:31	
Chloroethane	ug/L	<0.54	1.0	0.54	04/19/16 03:31	
Chloroform	ug/L	<0.14	1.0	0.14	04/19/16 03:31	
Chloromethane	ug/L	<0.11	1.0	0.11	04/19/16 03:31	
cis-1,2-Dichloroethene	ug/L	<0.19	1.0	0.19	04/19/16 03:31	
cis-1,3-Dichloropropene	ug/L	<0.13	1.0	0.13	04/19/16 03:31	
Dibromochloromethane	ug/L	<0.21	1.0	0.21	04/19/16 03:31	
Dibromomethane	ug/L	<0.21	1.0	0.21	04/19/16 03:31	
Ethylbenzene	ug/L	<0.30	1.0	0.30	04/19/16 03:31	
Iodomethane	ug/L	<0.32	5.0	0.32	04/19/16 03:31	
m&p-Xylene	ug/L	<0.66	2.0	0.66	04/19/16 03:31	
Methylene Chloride	ug/L	<0.97	1.0	0.97	04/19/16 03:31	
o-Xylene	ug/L	<0.23	1.0	0.23	04/19/16 03:31	
Styrene	ug/L	<0.26	1.0	0.26	04/19/16 03:31	
Tetrachloroethene	ug/L	<0.46	1.0	0.46	04/19/16 03:31	
Toluene	ug/L	<0.26	1.0	0.26	04/19/16 03:31	

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QUALITY CONTROL DATA

Project: J16040076
Pace Project No.: 92293803

METHOD BLANK: 1713187 Matrix: Water
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	<0.49	1.0	0.49	04/19/16 03:31	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	0.26	04/19/16 03:31	
trans-1,4-Dichloro-2-butene	ug/L	<1.0	1.0	1.0	04/19/16 03:31	
Trichloroethene	ug/L	<0.47	1.0	0.47	04/19/16 03:31	
Trichlorofluoromethane	ug/L	<0.20	1.0	0.20	04/19/16 03:31	
Vinyl acetate	ug/L	<0.35	2.0	0.35	04/19/16 03:31	
Vinyl chloride	ug/L	<0.62	1.0	0.62	04/19/16 03:31	
Xylene (Total)	ug/L	<0.66	2.0	0.66	04/19/16 03:31	
1,2-Dichloroethane-d4 (S)	%	102	70-130		04/19/16 03:31	
4-Bromofluorobenzene (S)	%	98	70-130		04/19/16 03:31	
Toluene-d8 (S)	%	100	70-130		04/19/16 03:31	

LABORATORY CONTROL SAMPLE: 1713188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	41.5	83	80-125	
1,1,1-Trichloroethane	ug/L	50	45.6	91	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	41.3	83	79-124	
1,1,2-Trichloroethane	ug/L	50	40.0	80	85-125	L0
1,1-Dichloroethane	ug/L	50	44.3	89	73-126	
1,1-Dichloroethene	ug/L	50	46.0	92	66-135	
1,2,3-Trichloropropane	ug/L	50	42.1	84	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	45.9	92	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	43.2	86	83-124	
1,2-Dichlorobenzene	ug/L	50	42.0	84	80-133	
1,2-Dichloroethane	ug/L	50	42.2	84	67-128	
1,2-Dichloropropane	ug/L	50	40.7	81	75-132	
1,4-Dichlorobenzene	ug/L	50	43.9	88	78-130	
2-Butanone (MEK)	ug/L	100	89.9	90	61-144	
2-Hexanone	ug/L	100	85.3	85	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	89.4	89	72-135	
Acetone	ug/L	100	89.5	90	48-146	
Acrylonitrile	ug/L	250	227	91	40-160	
Benzene	ug/L	50	42.1	84	80-125	
Bromochloromethane	ug/L	50	44.2	88	71-125	
Bromodichloromethane	ug/L	50	41.3	83	78-124	
Bromoform	ug/L	50	40.5	81	71-128	
Bromomethane	ug/L	50	38.5	77	40-160	
Carbon disulfide	ug/L	50	46.3	93	50-160	
Carbon tetrachloride	ug/L	50	43.8	88	69-131	
Chlorobenzene	ug/L	50	41.8	84	81-122	
Chloroethane	ug/L	50	44.9	90	39-148	
Chloroform	ug/L	50	43.4	87	73-127	
Chloromethane	ug/L	50	42.5	85	44-146	

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QUALITY CONTROL DATA

Project: J16040076
Pace Project No.: 92293803

LABORATORY CONTROL SAMPLE: 1713188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	44.1	88	74-124	
cis-1,3-Dichloropropene	ug/L	50	41.0	82	72-132	
Dibromochloromethane	ug/L	50	40.5	81	78-125	
Dibromomethane	ug/L	50	42.3	85	82-120	
Ethylbenzene	ug/L	50	42.0	84	79-121	
Iodomethane	ug/L	100	68.1	68	39-154	
m&p-Xylene	ug/L	100	82.6	83	81-124	
Methylene Chloride	ug/L	50	43.9	88	64-133	
o-Xylene	ug/L	50	40.8	82	79-131	
Styrene	ug/L	50	41.9	84	84-126	
Tetrachloroethene	ug/L	50	41.1	82	78-122	
Toluene	ug/L	50	41.9	84	80-121	
trans-1,2-Dichloroethene	ug/L	50	44.7	89	71-127	
trans-1,3-Dichloropropene	ug/L	50	40.9	82	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	38.6	77	40-160	
Trichloroethene	ug/L	50	41.3	83	78-122	
Trichlorofluoromethane	ug/L	50	51.2	102	53-137	
Vinyl acetate	ug/L	100	103	103	40-160	
Vinyl chloride	ug/L	50	47.2	94	58-137	
Xylene (Total)	ug/L	150	123	82	81-126	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1713190

Parameter	Units	92293957001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	19.0	95	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	21.8	109	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.2	91	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	18.1	91	70-130	
1,1-Dichloroethane	ug/L	0.64J	20	20.9	101	70-130	
1,1-Dichloroethene	ug/L	ND	20	22.5	112	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	17.9	89	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	19.0	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	18.6	93	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	17.9	88	70-130	
1,2-Dichloroethane	ug/L	ND	20	19.6	97	70-130	
1,2-Dichloropropane	ug/L	ND	20	18.9	95	70-130	
1,4-Dichlorobenzene	ug/L	4.8	20	23.2	92	70-130	
2-Butanone (MEK)	ug/L	ND	40	40.5	101	70-130	
2-Hexanone	ug/L	ND	40	38.1	95	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	39.0	98	70-130	
Acetone	ug/L	ND	40	43.3	105	70-130	
Acrylonitrile	ug/L	ND	100	112	112	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J16040076
Pace Project No.: 92293803

MATRIX SPIKE SAMPLE: 1713190

Parameter	Units	92293957001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	1.3	20	20.3	95	70-148	
Bromochloromethane	ug/L	ND	20	20.1	100	70-130	
Bromodichloromethane	ug/L	ND	20	18.6	93	70-130	
Bromoform	ug/L	ND	20	17.2	86	70-130	
Bromomethane	ug/L	ND	20	18.4	92	70-130	
Carbon disulfide	ug/L	ND	20	21.7	109	70-130	
Carbon tetrachloride	ug/L	ND	20	20.6	103	70-130	
Chlorobenzene	ug/L	2.7	20	20.8	91	70-146	
Chloroethane	ug/L	ND	20	22.8	112	70-130	
Chloroform	ug/L	ND	20	20.2	101	70-130	
Chloromethane	ug/L	ND	20	19.9	99	70-130	
cis-1,2-Dichloroethene	ug/L	2.7	20	22.9	101	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	18.0	90	70-130	
Dibromochloromethane	ug/L	ND	20	17.7	89	70-130	
Dibromomethane	ug/L	ND	20	19.0	95	70-130	
Ethylbenzene	ug/L	ND	20	19.2	96	70-130	
Iodomethane	ug/L	ND	40	19.9	50	70-130	M1
m&p-Xylene	ug/L	ND	40	38.1	95	70-130	
Methylene Chloride	ug/L	ND	20	20.5	101	70-130	
o-Xylene	ug/L	ND	20	18.6	93	70-130	
Styrene	ug/L	ND	20	18.7	93	70-130	
Tetrachloroethene	ug/L	ND	20	18.6	93	70-130	
Toluene	ug/L	ND	20	19.4	97	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	21.4	107	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	17.8	89	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	16.4	82	70-130	
Trichloroethene	ug/L	ND	20	19.1	95	69-151	
Trichlorofluoromethane	ug/L	ND	20	23.7	119	70-130	
Vinyl acetate	ug/L	ND	40	36.5	91	70-130	
Vinyl chloride	ug/L	ND	20	22.7	112	70-130	
1,2-Dichloroethane-d4 (S)	%				111	70-130	
4-Bromofluorobenzene (S)	%				97	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1713189

Parameter	Units	92293982001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	<0.33		30	
1,1,1-Trichloroethane	ug/L	ND	<0.48		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	<0.40		30	
1,1,2-Trichloroethane	ug/L	ND	<0.29		30	
1,1-Dichloroethane	ug/L	ND	<0.32		30	
1,1-Dichloroethene	ug/L	ND	<0.56		30	
1,2,3-Trichloropropane	ug/L	ND	<0.41		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	<2.0		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J16040076
Pace Project No.: 92293803

SAMPLE DUPLICATE: 1713189

Parameter	Units	92293982001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	<0.27		30	
1,2-Dichlorobenzene	ug/L	ND	<0.30		30	
1,2-Dichloroethane	ug/L	ND	<0.24		30	
1,2-Dichloropropane	ug/L	ND	<0.27		30	
1,4-Dichlorobenzene	ug/L	ND	<0.33		30	
2-Butanone (MEK)	ug/L	ND	<0.96		30	
2-Hexanone	ug/L	ND	<0.46		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	<0.33		30	
Acetone	ug/L	ND	<10.0		30	
Acrylonitrile	ug/L	ND	<1.9		30	
Benzene	ug/L	ND	<0.25		30	
Bromochloromethane	ug/L	ND	<0.17		30	
Bromodichloromethane	ug/L	ND	<0.18		30	
Bromoform	ug/L	ND	<0.26		30	
Bromomethane	ug/L	ND	<0.29		30	
Carbon disulfide	ug/L	ND	<1.2		30	
Carbon tetrachloride	ug/L	ND	<0.25		30	
Chlorobenzene	ug/L	ND	<0.23		30	
Chloroethane	ug/L	ND	<0.54		30	
Chloroform	ug/L	ND	<0.14		30	
Chloromethane	ug/L	ND	<0.11		30	
cis-1,2-Dichloroethene	ug/L	ND	<0.19		30	
cis-1,3-Dichloropropene	ug/L	ND	<0.13		30	
Dibromochloromethane	ug/L	ND	<0.21		30	
Dibromomethane	ug/L	ND	<0.21		30	
Ethylbenzene	ug/L	ND	<0.30		30	
Iodomethane	ug/L	ND	<0.32		30	
m&p-Xylene	ug/L	ND	<0.66		30	
Methylene Chloride	ug/L	ND	<0.97		30	
o-Xylene	ug/L	ND	<0.23		30	
Styrene	ug/L	ND	<0.26		30	
Tetrachloroethene	ug/L	ND	<0.46		30	
Toluene	ug/L	ND	<0.26		30	
trans-1,2-Dichloroethene	ug/L	ND	<0.49		30	
trans-1,3-Dichloropropene	ug/L	ND	<0.26		30	
trans-1,4-Dichloro-2-butene	ug/L	ND	<1.0		30	
Trichloroethene	ug/L	ND	<0.47		30	
Trichlorofluoromethane	ug/L	ND	<0.20		30	
Vinyl acetate	ug/L	ND	<0.35		30	
Vinyl chloride	ug/L	ND	<0.62		30	
Xylene (Total)	ug/L	ND	<0.66		30	
1,2-Dichloroethane-d4 (S)	%	107	106	0		
4-Bromofluorobenzene (S)	%	92	94	2		
Toluene-d8 (S)	%	98	100	1		

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QUALITY CONTROL DATA

Project: J16040076
Pace Project No.: 92293803

QC Batch: WETA/27260 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

METHOD BLANK: 1714159 Matrix: Water
Associated Lab Samples: 92293803001, 92293803002, 92293803003, 92293803004, 92293803005, 92293803006, 92293803007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	<1.0	2.0	1.0	04/20/16 11:50	

LABORATORY CONTROL SAMPLE: 1714160

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.0	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1714161 1714162

Parameter	Units	92293803001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	1.9J	20	20	20.5	20.4	93	93	90-110	0	10	

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QUALIFIERS

Project: J16040076
Pace Project No.: 92293803

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J16040076
Pace Project No.: 92293803

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92293803001	**2016009445**	EPA 3010A	MPRP/21425	EPA 6010	ICP/19234
92293803002	**2016009446**	EPA 3010A	MPRP/21425	EPA 6010	ICP/19234
92293803003	**2016009447**	EPA 3010A	MPRP/21425	EPA 6010	ICP/19234
92293803004	**2016009448**	EPA 3010A	MPRP/21425	EPA 6010	ICP/19234
92293803005	**2016009449**	EPA 3010A	MPRP/21425	EPA 6010	ICP/19234
92293803006	**2016009450**	EPA 3010A	MPRP/21425	EPA 6010	ICP/19234
92293803007	**2016009451**	EPA 3010A	MPRP/21425	EPA 6010	ICP/19234
92293803001	**2016009445**	EPA 7470	MERP/9266	EPA 7470	MERC/8900
92293803002	**2016009446**	EPA 7470	MERP/9266	EPA 7470	MERC/8900
92293803003	**2016009447**	EPA 7470	MERP/9266	EPA 7470	MERC/8900
92293803004	**2016009448**	EPA 7470	MERP/9266	EPA 7470	MERC/8900
92293803005	**2016009449**	EPA 7470	MERP/9266	EPA 7470	MERC/8900
92293803006	**2016009450**	EPA 7470	MERP/9266	EPA 7470	MERC/8900
92293803007	**2016009451**	EPA 7470	MERP/9266	EPA 7470	MERC/8900
92293803001	**2016009445**	EPA 8260	MSV/36438		
92293803002	**2016009446**	EPA 8260	MSV/36438		
92293803003	**2016009447**	EPA 8260	MSV/36438		
92293803004	**2016009448**	EPA 8260	MSV/36438		
92293803005	**2016009449**	EPA 8260	MSV/36438		
92293803006	**2016009450**	EPA 8260	MSV/36438		
92293803007	**2016009451**	EPA 8260	MSV/36438		
92293803001	**2016009445**	EPA 300.0	WETA/27260		
92293803002	**2016009446**	EPA 300.0	WETA/27260		
92293803003	**2016009447**	EPA 300.0	WETA/27260		
92293803004	**2016009448**	EPA 300.0	WETA/27260		
92293803005	**2016009449**	EPA 300.0	WETA/27260		
92293803006	**2016009450**	EPA 300.0	WETA/27260		
92293803007	**2016009451**	EPA 300.0	WETA/27260		

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WO# : 92293803

92293803

Sample Condition Upon Receipt

Client Name: DUKE

Project #

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other:____

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: TH 4-14-16

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other:____

Thermometer: ☑ T1505 ☐ ____ **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Correction Factor: 0.0°C **Cooler Temp Corrected (°C):** 5.1 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

				COMMENTS:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☑ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☐ Yes	☑ No	☐ N/A	12. Line 2 Sulfate ID = MW-1, 2016009445
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	☑ Yes	☐ No	☐ N/A	
Samples checked for dechlorination	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☑ No	☐ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased): ____				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: ____ Date/Time: ____

Comments/Resolution: ____

Project Manager SCURF Review: KKH **Date:** 4/14/16

Project Manager SRF Review: KKH **Date:** 4/15/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

DUKE ENERGY.

Analytical Laboratory Services
Mail Code MGO3A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(980) 875-5245
Fax: (980) 875-4349

Analytical Laboratory Use Only

J16040076 | Matrix: GW_WW | Samples Originating From: NC_X__ SC___ OH___

Logged by: [illegible] | Date & Time: 4-14-16 759

Vendor: Pace PO 1115040 | 1.4

SAMPLE PROGRAM: Ground Water ____ NPDES ____ Other ____ Plant ____ RCRA Waste ____

DISTRIBUTION
ORIGINAL to LAB,
COPY to CLIENT

9729 3803

Customer must Complete

1)Project Name: Harris Nuclear Plant GW Monitoring		2)Phone No:
3)Client: John Toepfer, Fred Holt, Tim Hunsucker		4)Fax No:
5)Business Unit:	6)Project ID:	7)Mail Code:
8) Operating Unit: HRN1	9)Activity ID:	10)Process ID: BENVWT

Important: When specific accounting has been established and is not indicated above we need the following: 1) Enter correct accounting in all 5 accounting fields above, or 2) Provide correct accounting for Operating Unit and Process ID.

LOOK... Customer to complete all appropriate areas.

15 Preserv.: 1=HCL 2=H_2SO_4 3=HNO_3 4=Ice 5=None

16 Analyses Required

LAB USE ONLY — Customer to complete appropriate columns to right

11 Lab ID	12 Chem Desktop No.	13 Sample Description or ID	14 Collection Information: Date	Time	Signature	17 Comp.	18 Grab	1 8260 Appendix -1 (Pace)	3 8 RCRA Metals (Pace)	4 Sulfate (Pace)	20 Total # of Containers
2016009445		MW-1	4-13-16	~~907~~ 1082			X	X	X	X	001
2016009446		MW-2	4-13-16	1101			X	X	X	X	002
2016009447		MW-3	4-13-16	1200			X	X	X	X	003
2016009448		MW-6	4-13-16	907			X	X	X	X	004
2016009449		MW-7	4-13-16	943			X	X	X	X	005
2016009450		Dup. MW-6	4-13-16	907			X	X	X	X	006
2016009451		Field Blk	4-13-16				X	X	X	X	007
		edd needs to be in the state format									

21)Relinquished By: [signature]	Date/Time: 4-13-16 1530	Accepted By: [signature]	Date/Time: 4-13-16 1530
Relinquished By: Courier	Date/Time:	Accepted By: [signature]	Date/Time: 4-13-16 1610
Relinquished By: [signature]	Date/Time: 4-14-16 912	Accepted By: [signature]	Date/Time: 4-14-16 912
Sealed/Locked By: [signature]	Date/Time: 4-14-16 937	Sealed/Lock Opened By: [signature]	Date/Time: 4-14-16 0937

24)Comments: Report in respective units and not ND, report MDL for 8260 cpds., ensure all Appendix 1 cpds are being reported...thanks

22 Requested Turnaround
14 Days 4-28-16
*7 Days ____
*48 Hr ____
*Other ____ 24 Hr ____
* Add. Cost Will Apply

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

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(980) 875-5245
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Analytical Laboratory Use Only

J16040076 | Matrix: GW_WW | Samples Originating From: NC_X_ SC___ OH___

Logged by: GW | Date & Time: 4-14-16 759

Vendor: Pace PO 1115040 | PAGE 1.4

SAMPLE PROGRAM: Ground Water ___ NPDES ___ Other ___ Plant ___ RCRA Waste ___

Page 1 of 1

DISTRIBUTION
ORIGINAL to LAB, COPY to CLIENT

Customer must Complete

1)Project Name	Harris Nuclear Plant GW Monitoring	2)Phone No:	
3)Client	John Toepfer, Fred Holt, Tim Hunsucker	4)Fax No:	
5)Business Unit:		6)Project ID:	7)Mail Code:
8) Operating Unit:	HRN1	9)Activity ID:	10)Process ID: BENVWT

Important: When specific accounting has been established and is not indicated above we need the following: 1) Enter correct accounting in all 5 accounting fields above, or 2) Provide correct accounting for Operating Unit and Process ID.

LOOK... Customer to complete all appropriate areas.

15)Preserv.: 1=HCL 2=H_2SO_4 3=HNO_3 4=Ice 5=None

16)Analyses Required: 1 = 8260 Appendix -1 (Pace); 3 = 8 RCRA Metals (Pace); 4 = Sulfate (Pace)

Customer to complete appropriate columns to right

LAB USE ONLY 11)Lab ID	12)Chem Desktop No.	13)Sample Description or ID	14)Collection Information Date	Time	Signature	17)Comp.	18)Grab	1	3	4	20)Total # of Containers
2016009445		MW-1	4-13-16	~~907~~ 1022			X	X	X	X	
2016009446		MW-2	4-13-16	1101			X	X	X	X	
2016009447		MW-3	4-13-16	1200			X	X	X	X	
2016009448		MW-6	4-13-16	907			X	X	X	X	
2016009449		MW-7	4-13-16	943			X	X	X	X	
2016009450		Dup. MW-6	4-13-16	907			X	X	X	X	
2016009451		Field Blk	4-13-16				X	X	X	X	

edd needs to be in the state format

21)Relinquished By: [signature]	Date/Time: 4-13-16 1530	Accepted By: [signature]	Date/Time: 4-13-16 1530
Relinquished By: Courier	Date/Time:	Accepted By: [signature]	Date/Time: 4-13-16 1610
Relinquished By: [signature]	Date/Time: 4/14/16 912	Accepted By: [signature]	Date/Time: 4-14-16 912
Sealed/Locked By	Date/Time	Sealed/Lock Opened By	Date/Time

22)Requested Turnaround
14 Days 4-28-16
*7 Days ___
*48 Hr ___
*Other ___ 24 Hr ___
* Add. Cost Will Apply

24)Comments: Report in respective units and not ND, report MDL for 8260 cpds., ensure all Appendix 1 cpds are being reported...thanks