Duke Energy
McGuire Nuclear Station
12700 Hagers Ferry Road
Huntersville, NC 28078

April 2, 2015

Ms. Elizabeth Werner
North Carolina Department of
Environment and Natural Resources
Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

Subject: Semi-annual Groundwater Monitoring Report – January 2015
Duke Energy Carolinas, LLC
McGuire Nuclear Station
Landfill #1 (Unlined), Permit #60-04

Dear Ms. Werner:

Duke Energy is providing the results of semi-annual groundwater monitoring for the unlined McGuire Nuclear Station Landfill #1, located in Huntersville, North Carolina.

On January 7, 2015, groundwater and surface water samples were collected in accordance with the SAP. Table 4 provides a summary of groundwater field and analytical results. Table 6 provides a summary of surface water field and analytical results. A table summarizing sampling results that equal or exceed NCAC 2L standards is provided as Table 5.

Duke Energy personnel sample designated groundwater and surface water locations at McGuire Nuclear Station's Landfill #1 (Unlined) semi-annually during January and July. The next landfill monitoring event is planned for July 2015 with a report of monitoring results to follow.

If you have any questions or concerns, please contact Sean DeNeale at 704-382-4761/ Sean.DeNeale@duke-energy.com or John Williamson at 980-875-5894/John.Williamson@duke-energy.com

Sincerely,

Charles J. Morris III
Duke Energy
McGuire Nuclear Station
Station Manager

Electronic cc: Mr. Ed Sullivan – Duke Energy Corporation
Mr. Tim Hunsucker – Duke Energy Corporation
Mr. Bill Miller – HDR Engineering, Inc.
Mr. Scott Spinner – HDR Engineering, Inc.

Mr. Sean DeNeale - Engineer I Duke Energy Environmental Services
Mr. John Williamson – McGuire Nuclear Station

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):

HDR Engineering, Inc. of the Carolinas (Consultant)

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

Name: Ian Holdeman Phone: (303) 319-4227

E-mail: ian.holdeman@hdrinc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Duke Energy Carolinas, LLC McGuire Nuclear Station Landfill #1 (Unlined	12700 Hagers Ferry Rd. Huntersville, NC 28078	6004	.0500	January 7, 2015

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.

Scott Spinner — Environmental Geologist — (704) 338-6797

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

Signature — April 2, 2015 — Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 2243 GEOLOGIST SCOTT A. SPINNER

440 S. Church Street Suite 1000, Charlotte, NC 28202

Facility Representative Address

F-0116

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

Revised 6/2009

McGuire Nuclear Station – Landfill #1 (Unlined) Permit No. 6004

Semiannual Groundwater Monitoring Report

January 2015 Sampling Event

April 02, 2015

DUKE ENERGY.

HDR

Report Verification

PROJECT: **SEMIANNUAL GROUNDWATER MONITORING REPORT**
MCGUIRE NUCLEAR STATION
LANDFILL #1 (UNLINED)
PERMIT NO. 6004

TITLE: **JANUARY 2015 SAMPLING EVENT**

This document has been reviewed for accuracy and quality commensurate with the intended application.

Prepared by: _____ Date: 04/02/2015

Checked by: _____ Date: April 2, 2015

Approved by: _____ Date: 4/2/15

Project Manager: Brooke Ahrens, PE

Professional Geologist Seal:

NORTH CAROLINA LICENSED SEAL 2243 GEOLOGIST SCOTT A. SPINNER

HDR Engineering, Inc. of the Carolinas
440 South Church St., Suite 1000
Charlotte, NC 28202
North Carolina Engineering Firm Number F-0116

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B. Laboratory Report and Chain-of-Custody Forms

Section 1 - Background

The McGuire Nuclear Station Landfill #1 (Unlined)[1] is located at the Duke Energy Carolinas, LLC (Duke Energy) McGuire Nuclear Station in Mecklenburg County, North Carolina. The landfill is closed and no longer accepts waste. The landfill and nearby area are depicted on Figure 1. The approximate limit of waste is shown on Figure 2.

The landfill is located south of NC Highway 73, east of the Catawba River, and to the west of Cashion Road. Cashion Road runs along a topographic divide with topography sloping away from Cashion Road to the northwest and to the southeast. Surface water to the northwest of Cashion Road drains towards the Catawba River. There are two surface water drainage features adjacent to the landfill. The surface water drainage feature located to the north of the landfill contains an unnamed perennial stream that drains to the northwest towards another perennial unnamed stream that flows to the Catawba River. The surface water drainage feature located to the south and west of the landfill also drains to an unnamed stream that flows to the Catawba River.

As described in the Sampling and Analysis Plan[2] (SAP), the monitoring system at the landfill consists of the following:

Monitoring Wells:	MW-1
	MW-1D
	MW-2A
	MW-2D
	MW-3
	MW-3D
	MW-4
	MW-4D
	MW-4R
	MW-4DR
	MW-11
	MW-11D
	MW-12
	MW-12D
Surface Water:	SW-1

The monitoring wells and the surface water sample location are shown on Figure 2. The wells were installed as well pairs with one shallow well and one deeper well adjacent to each other.

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[1] In response to the North Carolina Division of Public Health, Radiation Protection Section, November 17, 2006, letter to Duke Energy, LLC, Duke Energy offered to indicate the McGuire Nuclear Station Landfill #1 as (Unlined) in reports.

[2] McGuire Nuclear Station Landfill #1, Permit Number 60-04, Ground-Water Monitoring Program Sampling and Analysis Plan (SAP), September 14, 1996, Revised, November 24, 1997, March 9, 2001.

The well with the "D" designation is the deeper well in each well pair. The shallow wells are screened to intercept the water table. The deep wells are constructed so that the bottom of the screen is located in residual material just above auger refusal. Monitoring wells MW-1 and MW-1D are located up gradient of the landfill.

Monitoring wells MW-4R and MW-4DR are not included in the SAP. These wells were installed in December 2013 as replacement wells for MW-4 and MW-4D, respectively. Monitoring wells MW-4 and MW-4D are approximately 15 feet outside of the waste boundary. The replacement wells were installed in the vicinity of MW-4 and MW-4D and are located near the review boundary. Replacement monitoring well MW-4R was installed with the well screen from 43 feet to 28 feet below ground surface to intercept the water table. Monitoring well MW-4DR was installed with the well screen from 87.6 feet to 72.6 feet below ground surface. Table 1 presents well construction information for the landfill monitoring wells.

Section 2 - Methods

2.1 Sampling and Analysis Methods

The collection of samples and documentation of sampling was performed by Duke Energy personnel (Field Certification #5193) according to the North Carolina Solid Waste Management Guidelines. Copies of the field sampling forms are included in Appendix A. The parameters and constituents reported were selected by Duke Energy and the NCDENR Division of Solid Waste and were analyzed by TestAmerica Laboratories, Inc. (North Carolina Laboratory Certification #358) and the Duke Energy Analytical Laboratory (North Carolina Laboratory Certification #248).

The groundwater and surface water samples were analyzed for the following constituents in accordance with the SAP:

- Barium, chromium, and silver using US Environmental Protection Agency (EPA) Method 200.7
- Arsenic, cadmium, lead, and selenium using Solid Waste (SW) Method 6020A
- Mercury using EPA Method 245.1
- Sulfate using EPA Method 300.0
- Volatile organic compounds (VOCs) using SW846 Method 8260B

In addition, the following analyses were performed in accordance with the requirements of the Radioactive Materials License No. 060-0379-7 issued by the North Carolina Department of Health and Human Services Radiation Protection Section:

- Gross alpha radioactivity using EPA Method 900
- Gross beta radioactivity using EPA Method 900
- Tritium using EPA Method 906.0 Modified
- Gamma radioactivity for select isotopes

2.2 Statement of Work

HDR completed the following tasks:

- Received field sampling information provided by Duke Energy (performed by Duke Energy personnel) for monitoring wells MW-1, MW-1D, MW-2A, MW-2D, MW-3, MW-3D, MW-4, MW-4R, MW-4D, MW-4DR, MW-11, MW-11D, MW-12, and MW-12D. Data was also received for surface water sample location SW-1. The samples were collected on January 7, 2015, and HDR received the data on February 4, 2015. The field sampling forms are included in Appendix A.

- Reviewed the laboratory analytical results for the samples. The Electronic Data Deliverable (EDD) provided by Duke Energy was adapted to conform to the format requirements of the NCDENR EDD template. HDR added an italicized J data qualifier (*J*) to indicate a measured concentration that is equal to or greater than the laboratory's method reporting limit (MRL) but is less than the Solid Waste Section Limit[3] (SWSL). A copy of the original EDD is retained in HDR's files.

- Developed a generalized groundwater surface contour map using map data and groundwater elevation data supplied by Duke Energy. Calculated groundwater flow velocities based on groundwater surface contours.

- Prepared and submitted this Semiannual Groundwater Monitoring Report to Duke Energy.

[3] The Solid Waste Section Limit (SWSL) is defined by NCDENR as the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy. The SWSL is the concentration below which reported results must be qualified as estimated. NCDENR Division of Waste Management Memorandum dated February 23, 2007.

Section 3 - Results

3.1 Site Groundwater Flow

Generalized groundwater surface contours and groundwater flow direction arrows for the site are shown on Figure 3. These contours were developed using groundwater elevations measured at the shallow wells on the date of sampling. Calculated flow velocities are presented in Table 2.

Groundwater flow in the area of the landfill is generally from the southeast near MW-1/MW-1D and Cashion Road, toward the northwest, toward MW-3/MW-3D, MW-4/MW-4D, and MW-4R/MW-4DR.

3.2 Analytical Results

A summary of the field data is presented in Table 3.

The field and analytical results of groundwater samples collected from the monitoring wells are summarized in Table 4. The analytical results for these samples are compared to the groundwater standards found in Title 15A NCAC 02L .0202 (g) (2L Standards). Concentrations with values that attain or exceed the 2L Standards are noted on Table 4 by bold font. A summary of the field and analytical results that attain or exceed the 2L Standards and a preliminary analysis of the cause and significance of the exceedances are presented in Table 5.

Surface water sample location SW-1 is located on an unnamed stream. The unnamed stream is a tributary to the Catawba River which is classified by the NCDENR Division of Water Quality as Class WS-IV water at its confluence with the unnamed stream. As a result, the field and analytical results from this location are compared to Title 15A, North Carolina Administrative Code (NCAC), Subchapter 2B Standards (2B Standards) for Class WS-IV water. The field and analytical results of surface water sampling are summarized in Table 6.

The MDL was greater than the respective 2L Standard for the following constituents:

- 1,2,3-Trichloropropane
- 1,2-Dibromo-3-chloropropane
- 1,2-Dibromoethane (EDB)
- Vinyl chloride

The MDL was greater than the respective 2B Standard for the following constituents:

- 1,1,2,2-Tetrachloroethane
- 1,2,3-Trichloropropane
- 1,2-Dibromo-3-chloropropane

- 1,2-Dibromoethane (EDB)
- Acrylonitrile
- Silver
- Vinyl chloride

The MDLs for the listed constituents were all below their corresponding SWSLs as required by the February 23, 2007, NCDENR memo[4]. With the exception of the vinyl chloride concentration in the sample collected from monitoring well MW-4D, these constituents were not detected above the MDL in the analyzed samples and are not considered to exceed their respective 2L or 2B Standards.

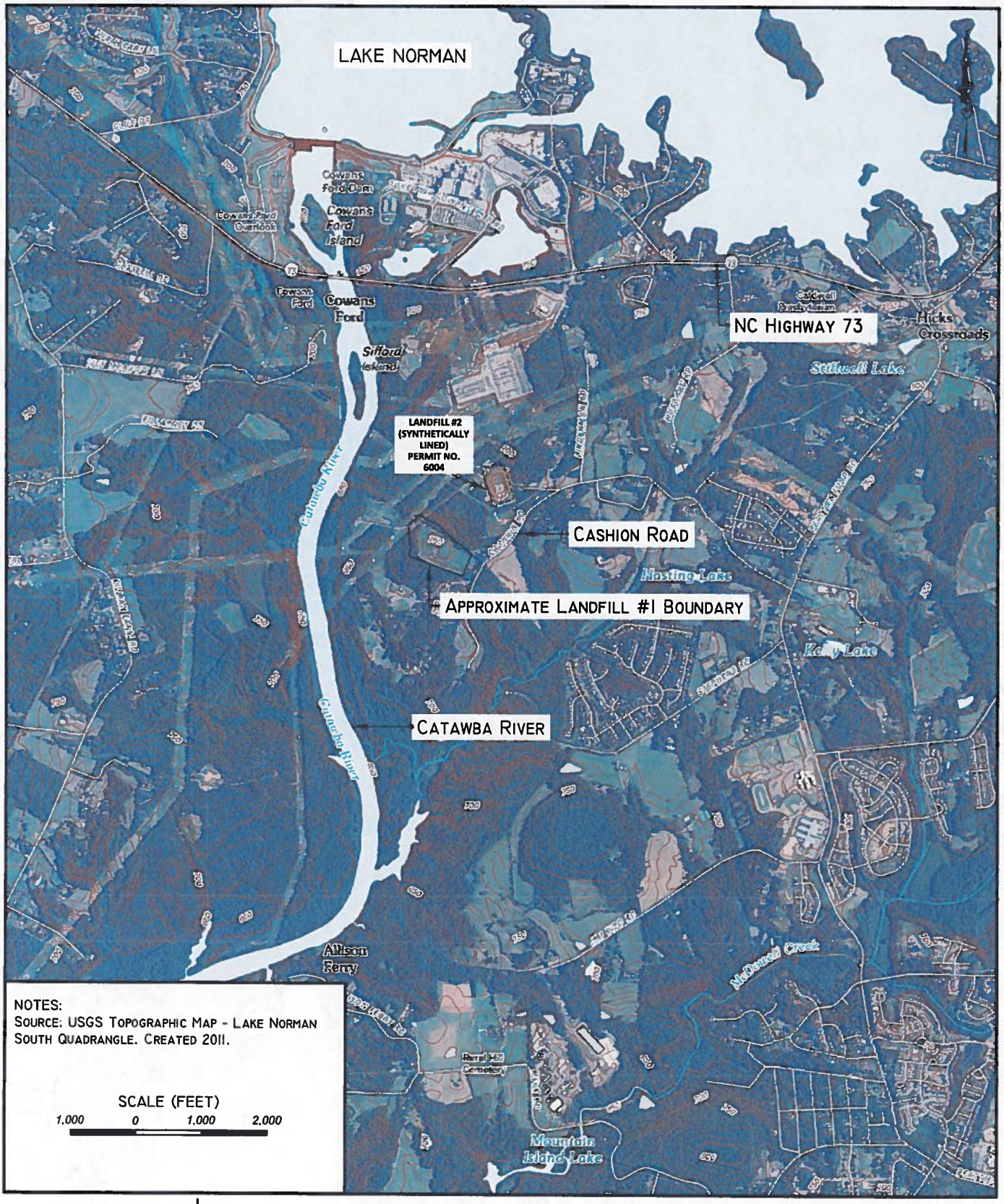
Analytical results with values that equal or are greater than the SWSLs are noted in Table 4 by gray cells.

The results of the radiological analysis are presented in Table 7. A copy of this report has been submitted to the North Carolina Department of Health and Human Services Radiation Protection Section for reference. HDR did not evaluate this data.

Select samples were diluted, as is normal laboratory practice, to bring samples within the calibrated range of the analysis. Specifics regarding the samples that were diluted, including the dilution amount, are reported in the EDD. The laboratory reports and chain-of-custody forms can be found in Appendix B.

[4] The Solid Waste Section Limit (SWSL) is defined by NCDENR as the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy. The SWSL is the concentration below which reported results must be qualified as estimated. NCDENR Division of Waste Management Memorandum dated February 23, 2007.

Figures



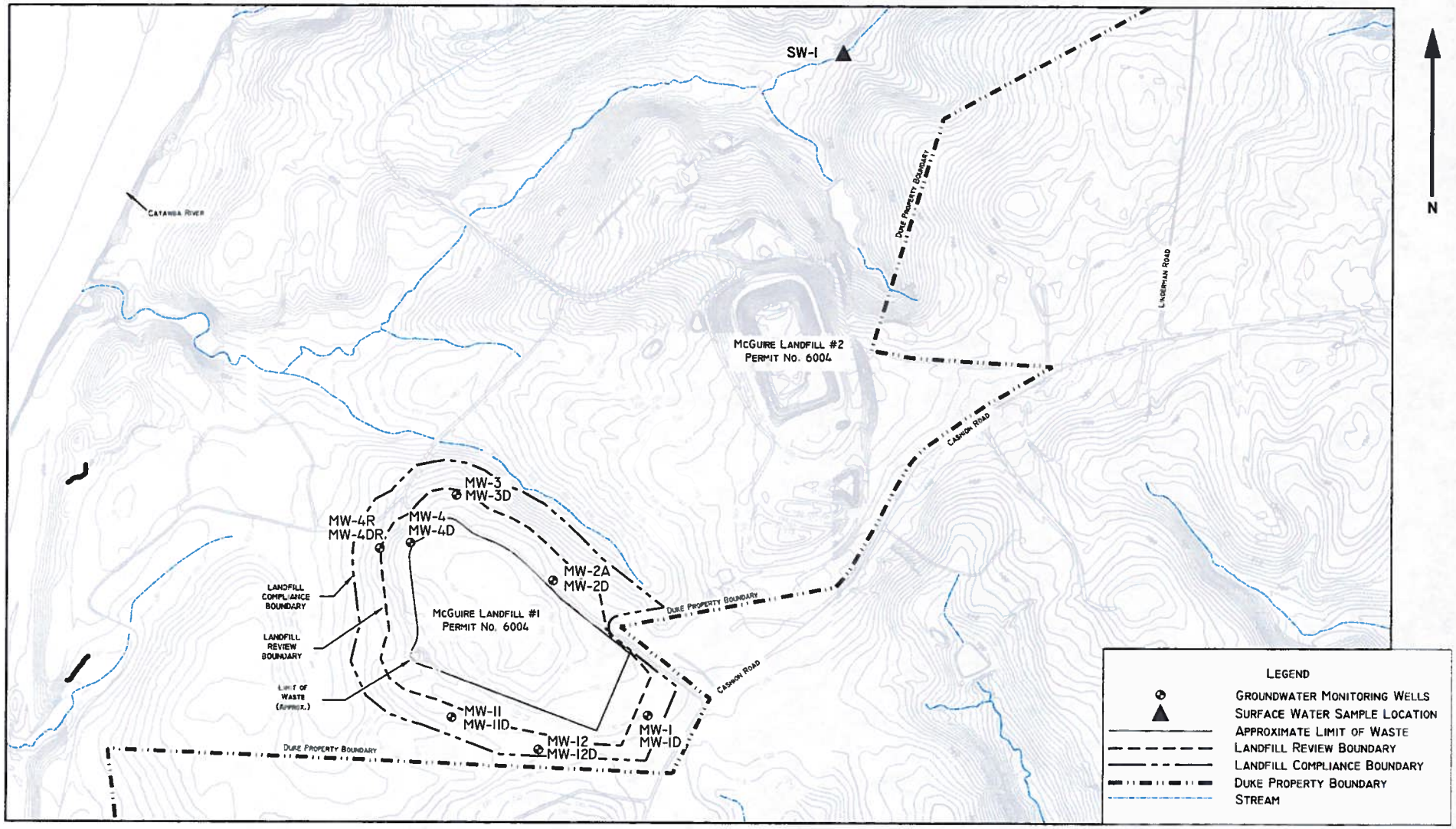
HDR

License Number: F-0116
440 South Church Street Charlotte, NC 28202

SITE LOCATION MAP
MCGUIRE NUCLEAR STATION
LANDFILL #1 (UNLINED)
PERMIT NO. 6004

DATE
APR. 02, 2015

FIGURE
1



Base Map and Stream Data Provided by Duke Energy Carolinas, LLC.

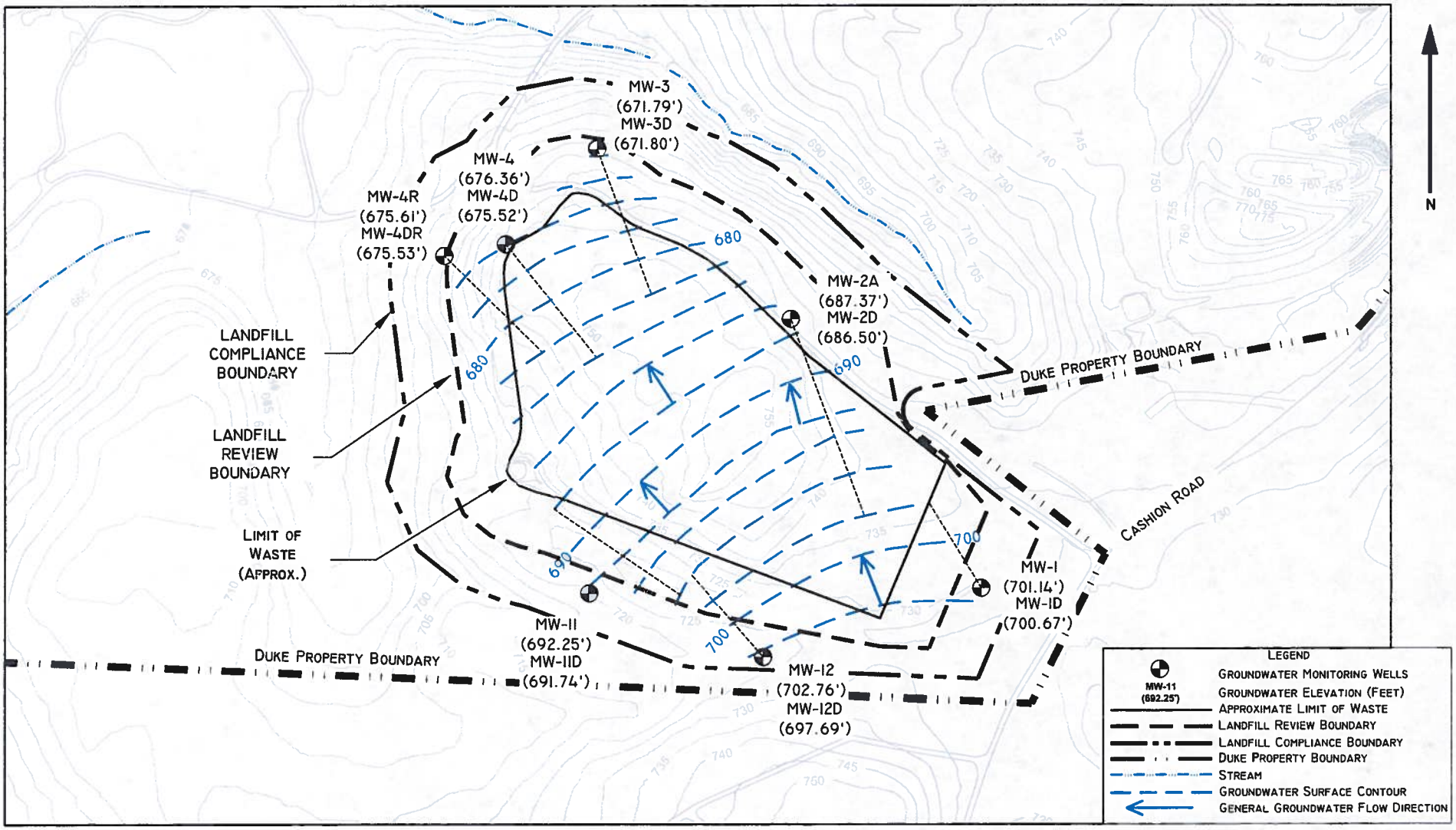
Scale (Feet)
200' 0 200 400'
1" = 400'

HDR

SAMPLE LOCATIONS
MCGUIRE NUCLEAR STATION
LANDFILL #1 (UNLINED)
PERMIT NO. 6004

Date
APR. 02, 2015

Figure
2



1. BASE MAP AND STREAM DATA PROVIDED BY DUKE ENERGY CAROLINAS, LLC.
2. GROUNDWATER ELEVATIONS MEASURED ON JANUARY 7, 2015.

SCALE (FEET)
100' 0 100' 200'
1" = 200'

HDR

GENERALIZED GROUNDWATER SURFACE CONTOURS JANUARY 2015
MCGUIRE NUCLEAR STATION
LANDFILL #1 (UNLINED)
PERMIT NO. 6004

DATE
APR. 02, 2015

FIGURE
3

Tables

Table 1 - Well Construction Information
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill #1 (Unlined) - Permit No. 6004

Well ID	Well Installation Date	Coordinates		Well TOC Elevation (ft.)	Ground Surface Elevation (ft.)	Well Stick-up Height Above Ground Surface (ft.)	Groundwater Elevation (ft.)	Depth to Water below TOC (ft.)	Total Well Depth below TOC (ft.)	Depth to Top of Screen from TOC (ft.)	Screened Interval below TOC (ft.)	Geology of Screened Interval	Well Diameter (in.)	Casing Type
		Latitude	Longitude											
MW-1	7/18/1989	35.4114557	-80.9476078	730.23	729.58	0.65	701.14	29.09	68.55	58.55	58.55-68.55	Saprolite	2	PVC
MW-1D	7/20/1989	35.4114737	-80.9476047	730.61	729.75	0.86	700.67	29.94	88.22	78.22	78.22-88.22	Saprolite	2	PVC
MW-2A	7/21/1989	35.4130639	-80.9490517	739.67	736.96	2.71	687.37	52.30	77.57	67.57	67.57-77.57	Saprolite	2	PVC
MW-2D	7/20/1989	35.4130808	-80.9490920	740.77	737.41	3.36	686.50	54.27	108.82	98.82	98.82-108.82	Saprolite	2	PVC
MW-3	7/10/1989	35.4140705	-80.9504868	728.43	724.98	3.45	671.79	56.64	73.64	63.64	63.64-73.64	Saprolite	2	PVC
MW-3D	7/10/1989	35.4140681	-80.9505038	728.39	724.98	3.41	671.80	56.59	90.19	80.19	80.19-90.19	Saprolite	2	PVC
MW-4	7/6/1989	35.4134889	-80.9511533	741.13	738.40	2.73	676.36	64.77	74.15	64.15	64.15-74.15	Saprolite	2	PVC
MW-4D	7/6/1989	35.4134791	-80.9511665	740.58	738.25	2.33	675.52	65.06	102.24	92.24	92.24-102.24	Saprolite	2	PVC
MW-11	12/15/2004	35.4113829	-80.9504979	722.60	720.10	2.50	692.25	30.35	38.45	23.45	23.45-38.45	Saprolite	2	PVC
MW-11D	12/15/2004	35.4113885	-80.9504725	723.14	720.84	2.30	691.74	31.40	101.55	91.55	91.55-101.55	Saprolite	2	PVC
MW-12	12/15/2004	35.4110047	-80.9491723	724.81	722.21	2.60	702.76	22.05	29.49	14.49	14.49-29.49	Saprolite	2	PVC
MW-12D	12/15/2004	35.4110147	-80.9492093	724.77	722.21	2.56	697.69	27.08	68.42	58.42	58.42-68.42	PWR	2	PVC
MW-4R	12/4/2013	35.4134123	-80.9516105	713.87	711.15	2.72	675.61	38.26	45.72	30.72	30.72-45.72	Saprolite	2	PVC
MW-4DR	12/4/2013	35.4133969	-80.9516205	713.75	711.15	2.60	675.53	38.22	90.20	75.20	75.20-90.20	Saprolite	2	PVC

Notes:
1. TOC indicates top of casing.
2. ft. indicates feet.
3. in. indicates inches nominal diameter.
4. PVC indicates polyvinyl chloride.
5. PWR indicates partially weathered rock.
6. Horizontal datum NAD83.
7. Vertical datum is NAVD 88.
8. Depth to groundwater gauged on January 7, 2015.
9. Information provided by Duke Energy.
10. Well depths from 2015 depth confirmation
11. Top of Casing and Ground Surface Elevetions from 2015 resurvey by Providence Land Group

Table 2 - Groundwater Flow Velocities
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill #1 (Unlined) - Permit No. 6004

Well ID	Upgradient Groundwater Contour Elevation (ft)	Downgradient Groundwater Contour Elevation (ft)	Linear Distance Between Contours through Well (ft)	Hydraulic Gradient (ft/ft)	Hydraulic Conductivity (ft/day)	Effective Porosity (%/100)	Groundwater Velocity (ft/day)
MW-1	701	698	218	0.01	0.41	0.259	0.02
MW-1D	701	698	218	0.01	0.41	0.259	0.02
MW-2A	698	687	462	0.02	0.41	0.259	0.04
MW-2D	698	687	462	0.02	0.41	0.259	0.04
MW-3	682	672	342	0.03	0.41	0.259	0.05
MW-3D	682	672	342	0.03	0.41	0.259	0.05
MW-4	684	676	317	0.02	0.41	0.259	0.04
MW-4D	684	676	317	0.03	0.41	0.259	0.04
MW-11	696	688	335	0.02	0.41	0.259	0.04
MW-11D	696	688	335	0.02	0.41	0.259	0.04
MW-12	703	696	238	0.03	0.41	0.259	0.05
MW-12D	698	696	238	0.01	0.31	0.005	0.44
MW-4R	682	676	301	0.02	0.41	0.259	0.03
MW-4DR	682	676	301	0.02	0.41	0.259	0.03

Notes:

1. Linear distance measured through monitoring wells is generally perpendicular to groundwater contours.
2. At monitoring well locations where downgradient contours are not present, the groundwater elevation at the monitoring well is used as the downgradient groundwater elevation.
3. At monitoring well locations where upgradient contours are not present, the groundwater elevation at the monitoring well is used as the upgradient groundwater elevation.
4. Monitoring wells are not listed where insufficient groundwater contour information is available to calculate velocity.
5. Hydraulic gradients and groundwater velocities are approximate.
6. Hydraulic conductivity presented is the geometric mean of the conductivity data for the alluvium/soil/saprolite and PWR hydrostratigraphic layer in the HDR Conductivity Database (unpublished data from Piedmont Carolina sites with foliated/layered bedrock).
7. Effective porosity presented is the mean value of the alluvium/soil/saprolite and PWR hydrostratigraphic layer estimated from soil testing using Fetter/Bear Diagrams.

Table 3 - Field Data Parameters
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill #1 (Unlined) - Permit No. 6004

DATE	SAMPLE ID	WELL DEPTH (feet)	DEPTH TO WATER (feet)	WATER ELEV. (feet)	APPEARANCE	ODOR	PURGE METHOD	PUMP RATE (mL/min)	WELL VOLUME (gal)	EVAC VOLUME (gal)	EVAC (yes/no)	TEMP (deg C)	SPECIFIC CONDUCTANCE (umho/cm)	pH (SU)	TURBIDITY (NTU)	ORP (mV-NHE)	DO (mg/L)
1/7/2015	MW-1	68.55	29.15	701.14	Normal	None	CP	N/A	6.50	19.50	NO	15.48	112	6.1	3.4	257	0.47
1/7/2015	MW-1D	88.22	30.00	700.67	Normal	None	CP	N/A	9.56	30.00	NO	15.63	98	6.1	2.9	252	0.13
1/7/2015	MW-2A	77.57	52.88	687.37	Normal	None	CP	N/A	4.10	12.75	NO	15.61	82	6.3	1.6	353	5.80
1/7/2015	MW-2D	108.82	54.29	686.50	Normal	None	CP	N/A	9.10	27.75	NO	15.82	60	6.7	1.8	350	8.83
1/7/2015	MW-3	73.64	57.25	671.79	Normal	None	CP	N/A	2.24	9.00	NO	15.01	79	6.4	2.6	389	5.33
1/7/2015	MW-3D	90.19	56.63	671.80	Normal	None	CP	N/A	5.26	16.50	NO	15.06	128	6.7	2.0	373	2.68
1/7/2015	MW-4	74.15	64.88	676.36	Normal	None	EOP	N/A	1.48	0.55	N/A	15.75	152	5.7	3.5	447	1.42
1/7/2015	MW-4D	102.24	65.17	675.52	Normal	None	CP	N/A	5.92	18.00	NO	15.76	161	6.4	2.4	259	0.35
1/7/2015	MW-11	38.45	30.37	692.25	Normal	None	CP	N/A	1.33	3.25	NO	13.38	17	5.0	8.9	456	6.65
1/7/2015	MW-11D	101.55	31.42	691.74	Normal	None	CP	N/A	11.48	23.00	NO	14.79	30	5.6	4.1	422	6.32
1/7/2015	MW-12	29.49	22.07	702.76	Normal	None	CP	N/A	1.23	6.50	NO	13.11	23	5.0	28.0	473	8.90
1/7/2015	MW-12D	68.42	27.11	697.69	Normal	None	CP	N/A	6.76	13.50	NO	14.39	87	6.2	8.5	401	6.47
1/7/2015	SW-1	N/A	N/A	N/A	Normal	None	N/A	N/A	N/A	N/A	N/A	6.23	99	7.2	16.4	220	9.68
1/7/2015	MW-4R	45.72	39.10	675.61	Normal	None	CP	N/A	1.08	3.75	NO	14.27	131	6.2	7.6	348	4.46
1/7/2015	MW-4DR	90.20	38.77	675.53	Normal	None	CP	N/A	8.42	23.00	NO	15.03	141	7.3	3.3	350	4.82

Notes:

1. Purge Methods: LF=Low Flow, CP=Conventional Purge (3-5 well volumes), NP=No Purge (HydraSleeve), EOP=Equipment Only Purge. Pump rate applicable to LF purging only.
2. Field sampling performed by Duke Energy Carolinas, LLC personnel.
3. EVAC indicates whether the water level in the well was drawn down to the level of the pump during purging.
4. umho/cm indicates micro mhos per centimeter.
5. SU indicates Standard Units.
6. NTU indicates Nephelometric Turbidity Units.
7. mV-NHE indicates millivolts-Normal Hydrogen Electrode.
8. mg/L indicates milligrams per liter.
9. N/A indicates not applicable.
10. Information provided by Tim Hunsucker of Duke Energy Carolinas, LLC on February 4, 2015.

Table 4 - Groundwater Field and Analytical Results
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill #1 (Unlined) - Permit No. 6004

Sample Date: January 7, 2015

Laboratory Certificate Codes:
Duke Energy Carolinas Field #5193
Duke Energy Analytical Laboratory #248
TestAmerica Laboratories, Inc. #358

Field Sampling performed by Duke Energy Carolinas, LLC

Parameter	SWS ID	Units	Certificate Code	Monitoring Wells												MDL	SWSL	15A NCAC 2L Standard	Federal MCL
				6004 MW-1		6004 MW-1D		6004 MW-2A		6004 MW-2D		6004 MW-3							
Field pH	320	SU	5193	**6.1**		**6.1**		**6.3**		6.7		**6.4**				-	NE	6.5-8.5	6.5-8.5*
Specific Conductance	323	umho/cm	5193	112		98		82		60		79				-	NE	NE	NE
Temperature	325	°C	5193	15.48		15.63		15.61		15.82		15.01				-	NE	NE	NE
Top of Casing	328	feet	-	730.29		730.67		740.25		740.79		729.04				-	NE	NE	NE
Depth to Water	318	feet	-	29.15		30.00		52.88		54.29		57.25				-	NE	NE	NE
Water Elevation	427	feet	-	701.14		700.67		687.37		686.50		671.79				-	NE	NE	NE
Well Depth	411	feet	-	69.00		88.60		78.00		110.10		71.00				-	NE	NE	NE
Arsenic	14	µg/L	248	0.217	J	0.246	J	0.153	J	0.078	U	0.078	U			0.078	10	10	10
Barium	15	µg/L	248	219		92.7	*J'*	22.9	*J'*	13.3	*J'*	38	*J'*			0.1	100	700	2,000
Cadmium	34	µg/L	248	0.115	J	0.174	J	0.101	U	0.101	U	0.101	U			0.101	1	2	5
Chromium	51	µg/L	248	0.5	U	0.5	U	0.53	J	0.631	J	0.5	U			0.5	10	10	100
Lead	131	µg/L	248	0.089	J	0.113	J	0.318	J	0.065	U	1.78	*J'*			0.065	10	15	15
Mercury	132	µg/L	248	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U			0.006	0.2	1	2
Selenium	183	µg/L	248	0.131	J	0.226	J	0.092	U	0.092	U	0.172	J			0.092	10	20	50
Silver	184	µg/L	248	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U			0.7	10	20	100*
Sulfate	315	µg/L	248	283	*J'*	301	*J'*	611	*J'*	360	*J'*	435	*J'*			18	250,000	250,000	250,000*
Benzene	16	µg/L	358	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U			0.2	1	1	5
cis-1,2-Dichloroethene	78	µg/L	358	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U			0.21	5	70	70
Methylene chloride	140	µg/L	358	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U			0.22	1	5	NE
Tetrachloroethene	192	µg/L	358	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U			0.14	1	0.7	5
Trichloroethene	201	µg/L	358	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U			0.2	1	3	5
Trichlorofluoromethane	203	µg/L	358	0.21	U	0.21	U	0.21	U	0.21	U	0.22	J			0.21	1	2,000	NE
Vinyl chloride	211	µg/L	358	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U			0.18	1	0.03	2
Xylene (total)	346	µg/L	358	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U			0.38	5	500	10,000

Notes:

1. Concentrations presented in micrograms per liter (µg/L).
2. SWS ID is the Solid Waste Section Identification Number.
3. MDL is the laboratory method detection limit. The MDL values presented are for samples not diluted by the laboratory during analysis.
4. SWSL is the Solid Waste Section Limit. NCDENR defines the SWSL as the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
5. 15A NCAC 2L Standard refers to Class GA Standards as found in 15A NCAC 02L .0202 Groundwater Quality Standards, last amended on April 1, 2013.
6. MCL is the Federal Maximum Contaminant Level as found in 40 CFR, Subpart G, §141.62.
7. * Concentration listed is a secondary maximum contaminant level (SMCL). SMCLs are established by EPA in the National Secondary Drinking Water Regulations as found in 40 CFR §143.3.
8. NE indicates not established. NA indicates not analyzed. Blank cells indicate that there is no information relevant to the respective row.
9. Grayed values indicate values that equal or are greater than the SWSL.
10. Bold values indicate values that attain or exceed the 15A NCAC 2L Standard.
11. Qualifiers in non-italicized text are laboratory data qualifiers or "flags". "U" is used to identify results not detected at concentrations which equal the laboratory's MDL.
    "J" is used to identify estimated concentrations which equal or are greater than the MDL but are less than the laboratory's method reporting limit (MRL).
    An italicized *J'*-flag is a data qualifier, added by HDR to indicate concentrations which equal or are greater than the laboratory's MRL but are less than the SWSL.
12. B indicates that the parameter was detected in the method blank at a concentration that was greater than the MDL but below the MRL. These values should be considered estimated.
13. SU indicates Standard Units.
14. umho/cm indicates micromhos per centimeter.
15. Constituents listed below the bold line are EPA Method 8260 volatile organic compounds (VOCs) measured at concentrations which equal or are greater than their MDL in one or more samples.
    Results for all other EPA Method 8260 constituents were less than their MDLs.
16. Analytical results obtained from Electronic Data Deliverable (EDD) provided by Tim Hunsucker of Duke Energy Carolinas, LLC on February 4, 2015.

Table 4 - Groundwater Field and Analytical Results
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill #1 (Unlined) - Permit No. 6004

Sample Date: January 7, 2015

Laboratory Certificate Codes:
Duke Energy Carolinas Field #5193
Duke Energy Analytical Laboratory #248
TestAmerica Laboratories, Inc. #358

Field Sampling performed by Duke Energy Carolinas, LLC

Parameter	SWS ID	Units	Certificate Code	Monitoring Wells 6004 MW-3D	6004 MW-4	6004 MW-4R	6004 MW-4D	6004 MW-4DR	MDL	SWSL	15A NCAC 2L Standard	Federal MCL
Field pH	320	SU	5193	6.7	**5.7**	**6.2**	**6.4**	7.3	-	NE	6.5-8.5	6.5-8.5*
Specific Conductance	323	umho/cm	5193	128	152	131	161	141	-	NE	NE	NE
Temperature	325	°C	5193	15.06	15.75	14.27	15.76	15.03	-	NE	NE	NE
Top of Casing	328	feet	-	728.43	741.24	714.71	740.69	714.30	-	NE	NE	NE
Depth to Water	318	feet	-	56.63	64.88	39.10	65.17	38.77	-	NE	NE	NE
Water Elevation	427	feet	-	671.80	676.36	675.61	675.52	675.53	-	NE	NE	NE
Well Depth	411	feet	-	88.88	73.95	45.73	101.48	90.40	-	NE	NE	NE
Arsenic	14	µg/L	248	0.078 U	0.083 J	0.093 J	0.085 J	0.17 J	0.078	10	10	10
Barium	15	µg/L	248	25.4 *J'*	62.3 *J'*	15.7 *J'*	39.1 *J'*	13.1 *J'*	0.1	100	700	2,000
Cadmium	34	µg/L	248	0.101 U	0.101 U	0.101 U	0.101 U	0.101 U	0.101	1	2	5
Chromium	51	µg/L	248	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	10	10	100
Lead	131	µg/L	248	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065	10	15	15
Mercury	132	µg/L	248	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006	0.2	1	2
Selenium	183	µg/L	248	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U	0.092	10	20	50
Silver	184	µg/L	248	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7	10	20	100*
Sulfate	315	µg/L	248	968 *J'*	1,040 *J'*	383 *J'*	283 *J'*	1,380 *J'*	18	250,000	250,000	250,000*
Benzene	16	µg/L	358	0.2 U	0.2 U	0.2 U	0.76 J	0.2 U	0.2	1	1	5
cis-1,2-Dichloroethene	78	µg/L	358	0.21 U	1.49 *J'*	0.21 U	**11.1**	0.21 U	0.21	5	70	70
Methylene chloride	140	µg/L	358	0.608 J B	0.457 J B	0.22 U	**6.93** B	0.22 U	0.22	1	5	NE
Tetrachloroethene	192	µg/L	358	0.32 J	**2.3**	0.612 J	**1.39**	0.221 J	0.14	1	0.7	5
Trichloroethene	201	µg/L	358	0.622 J	**1.07**	0.2 U	**4.46**	0.2 U	0.2	1	3	5
Trichlorofluoromethane	203	µg/L	358	0.306 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21	1	2,000	NE
Vinyl chloride	211	µg/L	358	0.18 U	0.18 U	0.18 U	**0.492** J	0.18 U	0.18	1	0.03	2
Xylene (total)	346	µg/L	358	1.3 J	0.38 U	0.38 U	33.1	0.38 U	0.38	5	500	10,000

Notes:

1. Concentrations presented in micrograms per liter (µg/L).
2. SWS ID is the Solid Waste Section Identification Number.
3. MDL is the laboratory method detection limit. The MDL values presented are for samples not diluted by the laboratory during analysis.
4. SWSL is the Solid Waste Section Limit. NCDENR defines the SWSL as the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
5. 15A NCAC 2L Standard refers to Class GA Standards as found in 15A NCAC 02L .0202 Groundwater Quality Standards, last amended on April 1, 2013.
6. MCL is the Federal Maximum Contaminant Level as found in 40 CFR, Subpart G, §141.62.
7. * Concentration listed is a secondary maximum contaminant level (SMCL). SMCLs are established by EPA in the National Secondary Drinking Water Regulations as found in 40 CFR §143.3.
8. NE indicates not established. NA indicates not analyzed. Blank cells indicate that there is no information relevant to the respective row.
9. Grayed values indicate values that equal or are greater than the SWSL.
10. Bold values indicate values that attain or exceed the 15A NCAC 2L Standard.
11. Qualifiers in non-italicized text are laboratory data qualifiers or "flags". "U" is used to identify results not detected at concentrations which equal the laboratory's MDL.
    "J" is used to identify estimated concentrations which equal or are greater than the MDL but are less than the laboratory's method reporting limit (MRL).
    An italicized *J'*-flag is a data qualifier, added by HDR to indicate concentrations which equal or are greater than the laboratory's MRL but are less than the SWSL.
12. B indicates that the parameter was detected in the method blank at a concentration that was greater than the MDL but below the MRL. These values should be considered estimated.
13. SU indicates Standard Units.
14. umho/cm indicates micromhos per centimeter.
15. Constituents listed below the bold line are EPA Method 8260 volatile organic compounds (VOCs) measured at concentrations which equal or are greater than their MDL in one or more samples.
    Results for all other EPA Method 8260 constituents were less than their MDLs.
16. Analytical results obtained from Electronic Data Deliverable (EDD) provided by Tim Hunsucker of Duke Energy Carolinas, LLC on February 4, 2015.

Table 4 - Groundwater Field and Analytical Results
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill #1 (Unlined) - Permit No. 6004

Sample Date: January 7, 2015

Laboratory Certificate Codes:
Duke Energy Carolinas Field #5193
Duke Energy Analytical Laboratory #248
TestAmerica Laboratories, Inc. #358

Field Sampling performed by Duke Energy Carolinas, LLC

Parameter	SWS ID	Units	Certificate Code	Monitoring Wells 6004 MW-11	6004 MW-11D	6004 MW-12	6004 MW-12D	Trip Blank	Field Blank	MDL	SWSL	15A NCAC 2L Standard	Federal MCL
Field pH	320	SU	5193	5.0	5.6	5.0	6.2	-	-	-	NE	6.5-8.5	6.5-8.5*
Specific Conductance	323	umho/cm	5193	17	30	23	87	-	-	-	NE	NE	NE
Temperature	325	°C	5193	13.38	14.79	13.11	14.39	-	-	-	NE	NE	NE
Top of Casing	328	feet	-	722.62	723.16	724.83	724.80	-	-	-	NE	NE	NE
Depth to Water	318	feet	-	30.37	31.42	22.07	27.11	-	-	-	NE	NE	NE
Water Elevation	427	feet	-	692.25	691.74	702.76	697.69	-	-	-	NE	NE	NE
Well Depth	411	feet	-	38.54	101.80	29.59	68.56	-	-	-	NE	NE	NE
Arsenic	14	µg/L	248	0.078 U	0.078 U	0.237 J	0.115 J	NA	0.078 U	0.078	10	10	10
Barium	15	µg/L	248	6.49 *J'*	10.1 *J'*	11.8 *J'*	10.2 *J'*	NA	0.1 U	0.1	100	700	2,000
Cadmium	34	µg/L	248	0.101 U	0.101 U	0.101 U	0.101 U	NA	0.101 U	0.101	1	2	5
Chromium	51	µg/L	248	0.5 U	0.5 U	1.05 J	0.5 U	NA	0.5 U	0.5	10	10	100
Lead	131	µg/L	248	0.115 J	0.065 U	0.282 J	0.065 U	NA	0.065 U	0.065	10	15	15
Mercury	132	µg/L	248	0.006 U	0.006 U	0.006 U	0.006 U	NA	0.006 U	0.006	0.2	1	2
Selenium	183	µg/L	248	0.092 U	0.092 U	0.098 J	0.092 U	NA	0.092 U	0.092	10	20	50
Silver	184	µg/L	248	0.7 U	0.7 U	0.7 U	0.7 U	NA	0.7 U	0.7	10	20	100*
Sulfate	315	µg/L	248	383 *J'*	662 *J'*	172 *J'*	77.9 J	NA	18 U	18	250,000	250,000	250,000*
Benzene	16	µg/L	358	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2	1	1	5
cis-1,2-Dichloroethene	78	µg/L	358	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21	5	70	70
Methylene chloride	140	µg/L	358	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22	1	5	NE
Tetrachloroethene	192	µg/L	358	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14	1	0.7	5
Trichloroethene	201	µg/L	358	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2	1	3	5
Trichlorofluoromethane	203	µg/L	358	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21	1	2,000	NE
Vinyl chloride	211	µg/L	358	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18	1	0.03	2
Xylene (total)	346	µg/L	358	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38	5	500	10,000

Notes:

1. Concentrations presented in micrograms per liter (µg/L).
2. SWS ID is the Solid Waste Section Identification Number.
3. MDL is the laboratory method detection limit. The MDL values presented are for samples not diluted by the laboratory during analysis.
4. SWSL is the Solid Waste Section Limit. NCDENR defines the SWSL as the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
5. 15A NCAC 2L Standard refers to Class GA Standards as found in 15A NCAC 02L .0202 Groundwater Quality Standards, last amended on April 1, 2013.
6. MCL is the Federal Maximum Contaminant Level as found in 40 CFR, Subpart G, §141.62.
7. * Concentration listed is a secondary maximum contaminant level (SMCL). SMCLs are established by EPA in the National Secondary Drinking Water Regulations as found in 40 CFR §143.3.
8. NE indicates not established. NA indicates not analyzed. Blank cells indicate that there is no information relevant to the respective row.
9. Grayed values indicate values that equal or are greater than the SWSL.
10. Bold values indicate values that attain or exceed the 15A NCAC 2L Standard.
11. Qualifiers in non-italicized text are laboratory data qualifiers or "flags". "U" is used to identify results not detected at concentrations which equal the laboratory's MDL.
    "J" is used to identify estimated concentrations which equal or are greater than the MDL but are less than the laboratory's method reporting limit (MRL).
    An italicized *J'*-flag is a data qualifier, added by HDR to indicate concentrations which equal or are greater than the laboratory's MRL but are less than the SWSL.
12. B indicates that the parameter was detected in the method blank at a concentration that was greater than the MDL but below the MRL. These values should be considered estimated.
13. SU indicates Standard Units.
14. umho/cm indicates micromhos per centimeter.
15. Constituents listed below the bold line are EPA Method 8260 volatile organic compounds (VOCs) measured at concentrations which equal or are greater than their MDL in one or more samples.
    Results for all other EPA Method 8260 constituents were less than their MDLs.
16. Analytical results obtained from Electronic Data Deliverable (EDD) provided by Tim Hunsucker of Duke Energy Carolinas, LLC on February 4, 2015.

Table 5 - Field and Analytical Results that Equal or Exceed 15A NCAC 2L Groundwater Quality Standards
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill #1 (Unlined) - Permit No. 6004

Sample Date: January 7, 2015

Field sampling performed by Duke Energy Carolinas, LLC

Parameter	Sample ID	Result	Units	15A NCAC 2L Standard	Historical Concentrations	Cause and Significance
pH	MW-1	6.1	SU	6.5 - 8.5	5.9 - 7.0	pH consistent with historical readings at MW-1.
	MW-1D	6.1			5.9 - 7.0	pH is consistent with historical readings at MW-1D.
	MW-2A	6.3			5.7 - 7.4	pH is consistent with historical readings at MW-2A.
	MW-3	6.4			5.7 - 7.5	pH is consistent with historical readings at MW-3.
	MW-4	5.7			5.3 - 8.1	pH is consistent with historical readings at MW-4.
	MW-4R	6.2			5.9 - 6.3	pH is consistent with historical readings at MW-4R. This is the third sampling event at monitoring well MW-4R.
	MW-4D	6.4			6.0 - 7.1	pH is consistent with historical reading at MW-4D.
	MW-11	5.0			4.3 - 5.3	pH is consistent with historical readings at MW-11.
	MW-11D	5.6			5.3 - 6.2	pH is consistent with historical readings at MW-11D.
	MW-12	5.0			4.7 - 5.6	pH is consistent with historical readings at MW-12.
	MW-12D	6.2			6.1 - 7.4	pH is consistent with historical readings at MW-12D.
Methylene chloride	MW-4D	6.93 B	µg/L	5	0.53 - 6.93	MW-4D is located approximately 15 feet outside the waste boundary and approximately 110 feet within the landfill review boundary.
Tetracholorethene	MW-4	2.3	µg/L	0.7	0.88 - 2.3	MW-4 is located approximately 15 feet outside the waste boundary and approximately 110 feet within the landfill review boundary.
	MW-4D	1.39			0.52 - 1.39	MW-4D is located approximately 15 feet outside the waste boundary and approximately 110 feet within the landfill review boundary.
Trichloroethene	MW-4D	4.46	µg/L	3	0.58 - 4.46	MW-4D is located approximately 15 feet outside the waste boundary and approximately 110 feet within the landfill review boundary.
Vinyl chloride	MW-4D	0.492 J	µg/L	0.03	<1	MW-4D is located approximately 15 feet outside the waste boundary and approximately 110 feet within the landfill review boundary.

Notes:

1. 15A NCAC 2L Standard refers to Class GA Standards as found in 15A NCAC 02L .0202 Groundwater Quality Standards, last amended on April 1, 2013.
2. µg/L indicates micrograms per liter.
3. SU indicates Standard Units.
4. "J" indicates an estimated concentration which equals or is greater than the laboratory method detection limit (MDL) but is less than the laboratory method reporting limit (MRL).
5. "B" indicates that the parameter was detected in the method blank at a concentration that was greater than the MDL but below the MRL. These values should be considered estimated.
6. Historical concentrations based on data in Duke Energy Carolinas, LLC analytical results database.
7. Historical concentrations not measured at values which equal or are greater than the laboratory method reporting limit are presented as <MRL.
8. Analytical results obtained from Electronic Data Deliverable (EDD) provided by Tim Hunsucker of Duke Energy Carolinas, LLC on February 4, 2015.

Table 6 - Surface Water Field and Analytical Results
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill #1 (Unlined) - Permit No. 6004

Sample Date: January 7, 2015

Field Sampling performed by Duke Energy Carolinas, LLC

Laboratory Certificate Codes:
Duke Energy Carolinas Field #5193
Duke Energy Analytical Laboratory #248
TestAmerica Laboratories, Inc. #358

Parameter	SWS ID	Units	Certificate Code	SW-1		MDL	SWSL	15A NCAC 2B Standard	Federal MCL
Field pH	320	SU	5193	7.2		-	NE	6.0-9.0	6.5-8.5*
Specific Conductance	323	umho/cm	5193	99		-	NE	NE	NE
Temperature	325	°C	5193	6.23		-	NE	NE	NE
Arsenic	14	µg/L	248	0.217	J		10	10	10
Barium	15	µg/L	248	25.4	*J'*		100	1,000	2,000
Cadmium	34	µg/L	248	0.101	U	0.101	1	2.0	5
Chromium	51	µg/L	248	0.5	U	0.5	10	50	100
Lead	131	µg/L	248	0.065	U	0.065	10	25	15
Mercury	132	µg/L	248	0.006	U	0.006	0.2	0.012	2
Selenium	183	µg/L	248	0.095	J	0.095	10	5	50
Silver	184	µg/L	248	0.7	U	0.7	10	0.06**	100*
Sulfate	315	µg/L	248	1,850	*J'*		250,000	250,000	250,000*
EPA 8260B (VOCs)	SEE NOTE 16								

Notes:

1. Concentrations presented in micrograms per liter (µg/L).
2. SWS ID is the Solid Waste Section Identification Number.
3. MDL is the laboratory method detection limit. The MDL values presented are for samples not diluted by the laboratory during analysis.
4. SWSL is the Solid Waste Section Limit. NCDENR defines the SWSL as the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
5. 15A NCAC 2B Standard is from "North Carolina Administrative Code, Title 15A: Deparment of Environment and Natural Resources, Subchapter 2B - Surface Water and Wetland Standards," (last amended on May 1, 2007) for Class WS-IV water.
6. The unnamed tributary to the Catawba River is classified as WS-IV waters. Regulation 15A NCAC 02B .0216 provides water quality standards for WS-IV waters. Class C water quality standards also apply to WS-IV waters.
   Class C water quality standards are provided in regulation 15A NCAC 02B .0211. For parameters and consituents where standards exist for both classes, the more stringent is listed as the 2B Standard.
   Reference 15A NCAC 2B .0200 Classifications and Water Quality Standards Applicable to Surface Waters and Wetlands of N.C. Amended Effective: January 1, 2015.
7. MCL is the Federal Maximum Contaminant Level as found in 40 CFR, Subpart G, §141.62.
8. * Concentration listed is a secondary maximum contaminant level (SMCL). SMCLs are established by EPA in the National Secondary Drinking Water Regulations as found in 40 CFR §143.3.
9. ** Concentration listed is an Action Level found in Regulation 15A NCAC 02B .0211.
10. NE indicates not established. Blank cells indicate that there is no information relevant to the respective row.
11. Grayed values indicate values that equal or are greater than the SWSL.
12. Bold values indicate values that attain or exceed the 15A NCAC 2B Standard.
13. Qualifiers in non-italicized text are laboratory data qualifiers or "flags". "U" is used to identify results not detected at concentrations which equal the laboratory's MDL.
    "J" is used to identify estimated concentrations which equal or are greater than the MDL but are less than the laboratory's method reporting limit (MRL).
    An italicized *J'*-flag is a data qualifier, added by HDR to indicate concentrations which equal or are greater than the laboratory's MRL but are less than the SWSL.
14. SU indicetes Standard Units.
15. umho/cm indicates micromhos per centimeter.
16. No EPA Method 8260B volatile organic compounds (VOCs) were measured at concentrations which equal or are greater than their MDL.
17. Analytical results obtained from Electronic Data Deliverable (EDD) provided by Tim Hunsucker of Duke Energy Carolinas on February 4, 2015.

Table 7 - Radiological Analytical Results
Duke Energy Carolinas, LLC/McGuire Nuclear Station
Landfill # 1 (Unlined) - Permit No. 6004

Sample Date: January 7, 2015

Laboratory Certification Code
Duke Energy Analytical Laboratory #248

Field Sampling Performed by Duke Energy Carolinas, LLC

Parameter	Units	Certificate Code	Monitoring Wells														
			MW-1	MW-1D	MW-2A	MW-2D	MW-3	MW-3D	MW-4	MW-4R	MW-4D	MW-4DR	MW-11	MW-11D	MW-12	MW-12D	SW-1
Alpha	pCi/L	248	<0.0445	<-0.0048	<-0.0015	<-0.05	<-0.14	<-0.16	<-0.33	<-0.42	<-0.057	<-0.22	<0.118	<-0.25	<0.158	<-0.38	<-0.2
BaLa-140	pCi/L	248	<9.36	<5.7	<7.36	<5.44	<6.08	<10.2	<6.43	<6.03	<5.94	<1.43	<7.79	<6.67	<8.85	<6.59	<3.88
Be-7	pCi/L	248	<39.5	<34.2	<28.2	<28	<47.3	<36.8	<28.7	<48.3	<40.7	<26.9	<32.6	<32.8	<46.6	<32.6	<28.6
Beta	pCi/L	248	1.29	1.24	<0.393	0.73	<0.518	<0.284	<0.342	<0.256	0.717	1.17	<-0.15	<-0.018	<-0.054	<-0.093	1.28
Co-58	pCi/L	248	<5.37	<4.32	<3.24	<3.23	<5.39	<6.49	<3.58	<5.38	<4.81	<3.72	<4.05	<2.96	<5.64	<4.05	<3.57
Co-60	pCi/L	248	<6.2	<3.91	<3.03	<3.91	<6.59	<5.37	<5.09	<3.86	<5.38	<3.51	<4.07	<4.89	<6.24	<4.45	<3.15
Cs-134	pCi/L	248	<5.45	<5.77	<4.06	<3.54	<7.03	<6.08	<3.93	<7.42	<5.24	<4.29	<3	<4.51	<5.1	<4.42	<4.18
Cs-137	pCi/L	248	<5.83	<3.13	<4.16	<4.5	<6.16	<5.07	<4.45	<4.95	<4.45	<4.81	<4.27	<4.16	<6.16	<4.61	<3.46
Fe-59	pCi/L	248	<11.6	<8.8	<10	<6.57	<11	<8.2	<8.56	<9.8	<6.91	<8.79	<5.34	<7.19	<6.52	<8.1	<7.44
H3GW	pCi/L	248	<-35	<32.9	<5.06	<-10	<-60	<-78	<-51	<2.54	<-18	<62.4	<-120	<-46	<-25	<7.62	<-7.6
I-131	pCi/L	248	<8.45	<8.79	<5.02	<5.76	<8.37	<8.11	<6.45	<7.14	<7.2	<6.31	<6.15	<7.26	<8.8	<5.91	<4.67
K-40	pCi/L	248	<77.5	<63.1	<54	<72.8	216	85.5	<79.4	155	48.8	<61	52.2	<54	122	44.3	<75.8
Mn-54	pCi/L	248	<5.93	<4.84	<3.15	<2.59	<4.26	<5.81	<3.72	<5.68	<4.5	<3.82	<3.25	<4.19	<6.08	<4.32	<3.93
Nb-95	pCi/L	248	<5.98	<4.92	<4.19	<3.94	<5.87	<5.44	<5.17	<5.42	<5.22	<4.75	<3.66	<3.95	<8.2	<4.11	<4.45
Zn-65	pCi/L	248	<8.17	<7.69	<7.68	<8.79	<14	<9.49	<7.3	<11.2	<6.55	<8.27	<8.58	<7.03	<8.94	<8.58	<6.53
Zr-95	pCi/L	248	<10.6	<5.72	<7.24	<7.2	<10.2	<9.74	<6.28	<7.63	<7.81	<6.54	<7.81	<6.1	<9.08	<8.12	<7.05

Notes:

1. Concentrations presented in picocuries per liter (pCi/L).
2. Analytical results obtained from EnRad Laboratory Report Job: MNS_4DEC2014_A McGuire Landfill 1 Groundwaters provided by Tim Hunsucker of Duke Energy Carolinas on February 4, 2015.

A

Appendix A

Field Sampling Forms

FIELD SAMPLING CALIBRATION FORM

STUDY:	McGUIRE NUCLEAR STATION - LANDFILL 1 GROUNDWATER MONITORING		
DATE (s):	January 7, 2015	SURFACE UNIT READER:	LDC
COLLECTORS:	LDC, PSP	SURFACE UNIT SERIAL #:	S0205
ANALYZER MODEL#:	MS5	ANALYZER SERIAL #:	66121
OTHER EQUIPMENT:	TURBIDIMETER NO.2 - 3260-GW	WEATHER CONDITIONS:	Clouds & sun, calm & breezy, 27 to 37 deg F

PROCEDURE #: HYDROLAB 3210.5 VALIDATED BY: LDC 1/8/15

Calibration Date / Time		DATE: 7-Jan-15		TIME: 5:05		DATE: 8-Jan-15		TIME: 5:40	
		BP (mmHg)		744.5		BP (mmHg)		756.1	
Parameter	Calibation Standard	Instrument Value		Standard Value	Calibration Results	Instrument Value		Standard Value	Calibration Results
SPEC. COND. (uS/cm)	SS	0.0	—/—▶	0.0	Instrument Zeroed	0.0	—/—▶	0.0	Zero Pass
	SS	220.7	—▶	227	Calibration Accepted	226.2	—/—▶	227	Calibration Pass
	SS	74.2	—/—▶	75	Calibration Accepted	73.9	—/—▶	75	Calibration Pass
pH (units)	B (7.00)	7.03	—▶	7.02	Calibration Accepted	7.02	—/—▶	7.02	Calibration Pass
	B (4.00)	4.00	—▶	4.00	Calibration Accepted	4.00	—/—▶	4.00	Calibration Pass
	B (10.00)	10.03	—/—▶	10.04	Calibration Accepted	10.04	—/—▶	10.07	Calibration Pass
		Buffer Temp.		21.30		Buffer Temp.		18.72	
Mid-Day Ck	B (7.00)		—▶						
Time:		Buffer Temp.							
☑ ORP (mV)	SS (7.00)	286	—▶	292	Calibration Accepted	289	—/—▶	298	Calibration Pass
	SS (4.00)	N/A	—/—▶	468		N/A	—/—▶	473	
☑ DO (mg/L)	W			8.90				8.90	
	W			8.80				8.80	
	AW	8.89	—▶	8.85	Calibration Accepted	8.91	—/—▶	8.85	Calibration Pass
☑ TURB (ntu)	SS	52.9	—/—▶	53.4	Calibration Accepted	52.7	—/—▶	53.4	Calibration Accepted
Temp Cert Device #									
TEMP (deg C)	NIST	N/A	—/—▶	N/A	Adjustment Not Available	N/A	—/—▶	N/A	Adjustment Not Available
AMMONIUM (mg/L)	SS	N/A	—/—▶	N/A		N/A	—/—▶	N/A	
	SS	N/A	—/—▶	N/A		N/A	—/—▶	N/A	

INSTRUMENT MAINTENANCE	DATE / TIME		
Conductance Subsystem		*pH Subsystem*	
☐ Cleaned Electrodes		☐ Cleaned Electrodes	
☐ Tested - OK		☐ Replaced ref Electrode KCL	
☐ See Notes		☐ Replaced Ref. Electrode Tip	
		☐ Tested - OK	☐ See Notes
Dissolved Oxygen Subsystem		*Ammonium Subsystem*	
☐ Replaced Teflon Membrane		☐ Cleaned Electrode Tip	
☐ Replaced DO electrolyte		☐ Installed New Electrode	
☐ Cleaned Electrode		☐ Removed Electrode / Installed Plug	
☐ See Notes		☐ Tested - OK	☐ See Notes
Oxidation Reduction Subsystem		*Turbidity Subsystem*	
☐ Cleaned Electrode		☐ Cleaned Electrode & Wiper	
☐ Tested - OK	☐ See Notes	☐ Tested - OK	☐ See Notes
Temperature Subsystem		*Depth Subsystem*	
☐ Cleaned Electrode		☐ Reset / Calibrated	
☐ Tested - OK	☐ See Notes	☐ Tested - OK	☐ See Notes

KEY: B = Buffer; SS = Standard solution; W = Winkler; AW = Average Winkler; —▶ = Adjusted To; —/—▶ = Not Adjusted To; N/A = Not Applicable

NOTES:

FIELD SAMPLING CALIBRATION FORM

STUDY:	McGUIRE NUCLEAR STATION - LANDFILL 1 GROUNDWATER MONITORING		
DATE (s):	January 7, 2015	SURFACE UNIT READER:	PSP
COLLECTORS:	LDC, PSP	SURFACE UNIT SERIAL #:	S05042
ANALYZER MODEL#:	MS5	ANALYZER SERIAL #:	66120
OTHER EQUIPMENT:	TURBIDIMETER NO.1 - 3260-GW	WEATHER CONDITIONS:	Clouds & sun, calm & breezy, 27 to 37 deg F

PROCEDURE #: HYDROLAB 3210.5 VALIDATED BY: LDC 1/8/15

Calibration Date / Time		DATE: 7-Jan-15		TIME: 5:25		DATE: 8-Jan-15		TIME: 5:55	
		BP (mmHg)		744.5		BP (mmHg)		756.1	
Parameter	Calibation Standard	Instrument Value		Standard Value	Calibration Results	Instrument Value		Standard Value	Calibration Results
SPEC. COND. (uS/cm)	SS	0.0	—/—▶	0.0	Instrument Zeroed	0.0	—/—▶	0.0	Zero Pass
	SS	225.1	—▶	227	Calibration Accepted	226.8	—/—▶	227	Calibration Pass
	SS	74.2	—/—▶	75	Calibration Accepted	74.1	—/—▶	75	Calibration Pass
pH (units)	B (7.00)	7.03	—▶	7.02	Calibration Accepted	7.66	—/—▶	7.03	Calibration Fail
	B (4.00)	3.99	—▶	4.00	Calibration Accepted	4.72	—/—▶	4.00	Calibration Fail
	B (10.00)	10.03	—/—▶	10.04	Calibration Accepted	10.82	—/—▶	10.08	Calibration Fail
		Buffer Temp.		21.18		Buffer Temp.		18.19	
Mid-Day Ck	B (7.00)		—▶						
Time:		Buffer Temp.							
☑ ORP (mV)	SS (7.00)	285	—▶	293	Calibration Accepted	250	—/—▶	298	Calibration Pass
	SS (4.00)	N/A	—/—▶	468		N/A	—/—▶	472	
☑ DO (mg/L)	W			8.90				8.90	
	W			8.80				8.80	
	AW	8.90	—▶	8.85	Calibration Accepted	8.81	—/—▶	8.85	Calibration Pass
☑ TURB (ntu)	SS	52.6	—/—▶	53.3	Calibration Accepted	52.7	—/—▶	53.3	Calibration Accepted
Temp Cert Device #									
TEMP (deg C)	NIST	N/A	—/—▶	N/A	Adjustment Not Available	N/A	—/—▶	N/A	Adjustment Not Available
AMMONIUM (mg/L)	SS	N/A	—/—▶	N/A		N/A	—/—▶	N/A	
	SS	N/A	—/—▶	N/A		N/A	—/—▶	N/A	

INSTRUMENT MAINTENANCE	DATE / TIME
Conductance Subsystem	*pH Subsystem*
☐ Cleaned Electrodes	☐ Cleaned Electrodes
☐ Tested - OK	☐ Replaced ref Electrode KCL
☐ See Notes	☐ Replaced Ref. Electrode Tip
	☐ Tested - OK ☐ See Notes
Dissolved Oxygen Subsystem	*Ammonium Subsystem*
☐ Replaced Teflon Membrane	☐ Cleaned Electrode Tip
☐ Replaced DO electrolyte	☐ Installed New Electrode
☐ Cleaned Electrode	☐ Removed Electrode / Installed Plug
☐ See Notes	☐ Tested - OK ☐ See Notes
Oxidation Reduction Subsystem	*Turbidity Subsystem*
☐ Cleaned Electrode	☐ Cleaned Electrode & Wiper
☐ Tested - OK ☐ See Notes	☐ Tested - OK ☐ See Notes
Temperature Subsystem	*Depth Subsystem*
☐ Cleaned Electrode	☐ Reset / Calibrated
☐ Tested - OK ☐ See Notes	☐ Tested - OK ☐ See Notes

KEY: B = Buffer; SS = Standard solution; W = Winkler; AW = Average Winkler; —▶ = Adjusted To; —/—▶ = Not Adjusted To; N/A = Not Applicable

NOTES:

TSH 2/4/15 post caloibration for pH failed. For effected wells, samples were submitted for laboratory pH analysis (MW-3, MW-3D, MW-4, MW-4D, MW-4R, MW-4DR, AND SW-1)

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-1		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	730.29	MIDDLE OF WETTED SCREEN (ft toc)			64.00
WELL DEPTH (ft TOC)	69.00	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)			68.00
SCREEN LENGTH (ft)	10.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	59.00	TO	69.00

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28650	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	35	(psi)	RECHARGE	9	(sec)	DISCHARGE	6	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	29.15	WATER COLUMN (ft)	39.85	*Well Volume = water column X conversion factor*
WATER ELEVATION (ft msl)	701.14	WELL VOLUME (gal)	6.50	(Conversion factor dependent on well diameter and selected well volume units)
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 6.50 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
6.50		NO	15.46	114	6.09	7.3	264	0.84	
6.50		NO	15.31	112	6.09	3.9	260	0.57	
6.50		NO	15.48	112	6.05	3.4	257	0.47	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
19.50		LDC	1/7/2015	@	0845	0

QC By: LDC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

SAMPLING NOTES

QC for rad collected.

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-1D		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	730.67	MIDDLE OF WETTED SCREEN (ft toc)	82.10		
WELL DEPTH (ft TOC)	88.60	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)	87.60		
SCREEN LENGTH (ft)	13.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	75.60	TO	88.60

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28650	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	42	(psi)	RECHARGE	5	(sec)	DISCHARGE	10	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	30.00	WATER COLUMN (ft)	58.60
WATER ELEVATION (ft msl)	700.67	WELL VOLUME (gal)	9.56
DETECTED ODOR	None	CONVERSION FACTOR	0.1631
APPEARANCE	Normal		

Well Volume = water column X conversion factor
(Conversion factor dependent on well diameter and selected well volume units)

PURGE VOLUME 9.56 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
10.00		NO	15.57	98	6.11	3.7	260	0.16	
10.00		NO	15.56	98	6.09	2.5	255	0.13	
10.00		NO	15.63	98	6.07	2.9	252	0.13	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
30.00		LDC	1/7/2015	@	0900	0

QC By: LDC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

SAMPLING NOTES

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-2A		

MONITORING WELL INFORMATION

WELL DIAMETER (In)	2	TOC ELEV (ft msl)	740.25	MIDDLE OF WETTED SCREEN (ft toc)			71.50
WELL DEPTH (ft TOC)	78.00	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)			77.00
SCREEN LENGTH (ft)	13.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	65.00	TO	78.00

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28650	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	48	(psi)	RECHARGE	14	(sec)	DISCHARGE	6	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	52.88	WATER COLUMN (ft)	25.12
WATER ELEVATION (ft msl)	687.37	WELL VOLUME (gal)	4.10
DETECTED ODOR	None	CONVERSION FACTOR	0.1631
APPEARANCE	Normal		

Well Volume = water column X conversion factor
(Conversion factor dependent on well diameter and selected well volume units)

PURGE VOLUME 4.10 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
4.25		NO	15.68	81	6.47	1.7	367	6.60	
4.25		NO	15.55	82	6.34	1.5	370	5.17	
4.25		NO	15.61	82	6.27	1.6	353	5.80	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
12.75		LDC	1/7/2015	@	1415	0

QC By: LDC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

SAMPLING NOTES

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-2D		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	740.79	MIDDLE OF WETTED SCREEN (ft toc)	102.60		
WELL DEPTH (ft TOC)	110.10	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)	109.10		
SCREEN LENGTH (ft)	15.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	95.10	TO	110.10

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28650	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS								
PRESSURE	50	(psi)	RECHARGE	8	(sec)	DISCHARGE	7	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	54.29	WATER COLUMN (ft)	55.81
WATER ELEVATION (ft msl)	686.50	WELL VOLUME (gal)	9.10
DETECTED ODOR	None	CONVERSION FACTOR	0.1631
APPEARANCE	Normal		

Well Volume = water column X conversion factor
(Conversion factor dependent on well diameter and selected well volume units)

PURGE VOLUME 9.10 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
9.25		NO	15.81	61	6.75	2.7	349	10.63	
9.25		NO	15.78	60	6.69	2.4	345	9.32	
9.25		NO	15.82	60	6.67	1.8	350	8.83	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
27.75		LDC	1/7/2015	@	1445	0

QC By: LDC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

SAMPLING NOTES

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-3		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	729.04	MIDDLE OF WETTED SCREEN (ft toc)			66.00
WELL DEPTH (ft TOC)	71.00	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)			70.00
SCREEN LENGTH (ft)	10.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	61.00	TO	71.00

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28652	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	38	(psi)	RECHARGE	10	(sec)	DISCHARGE	10	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	57.25	WATER COLUMN (ft)	13.75	*Well Volume = water column X conversion factor* (Conversion factor dependent on well diameter and selected well volume units)
WATER ELEVATION (ft msl)	671.79	WELL VOLUME (gal)	2.24	
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 2.24 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
2.25		NO	15.07	70	6.23	4.4	387	3.92	
2.25		NO	15.04	76	6.31	3.7	382	3.88	
2.25		NO	15.04	78	6.34	2.9	386	5.12	
2.25		NO	15.01	79	6.39	2.6	389	5.33	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
9.00		PSP	1/7/2015	@	1005	0

QC By: VJC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

Lid needs repairing

SAMPLING NOTES

900 ml/min

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-3D		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	728.43	MIDDLE OF WETTED SCREEN (ft toc)	83.88		
WELL DEPTH (ft TOC)	88.88	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)	87.88		
SCREEN LENGTH (ft)	10.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	78.88	TO	88.88

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28652	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	48	(psi)	RECHARGE	14	(sec)	DISCHARGE	6	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	56.63	WATER COLUMN (ft)	32.25	*Well Volume = water column X conversion factor* (Conversion factor dependent on well diameter and selected well volume units)
WATER ELEVATION (ft msl)	671.80	WELL VOLUME (gal)	5.26	
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 5.26 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
5.50		NO	15.02	133	6.64	2.2	356	1.85	
5.50		NO	15.08	134	6.65	2.2	364	2.06	
5.50		NO	15.06	128	6.67	2.0	373	2.68	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
16.50		PSP	1/7/2015	@	1045	0

QC By: LDC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

Lid needs repairing

SAMPLING NOTES

810 ml/min

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR EQUIPMENT PURGE ONLY SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-4		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	741.24	MIDDLE OF WETTED SCREEN (ft toc)	69.42		
WELL DEPTH (ft TOC)	73.95	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)	72.95		
SCREEN LENGTH (ft)	10.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	63.95	TO	73.95

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28652	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Equip. Only Purge	

PUMP CONTROLLER SETTINGS								
PRESSURE	45	(psi)	RECHARGE	45	(sec)	DISCHARGE	15	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	64.88	WATER COLUMN (ft)	9.07	*Well Volume = water column X conversion factor* (Conversion factor dependent on well diameter and selected well volume units)
WATER ELEVATION (ft msl)	676.36	WELL VOLUME (gal)	1.48	
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

INITIAL WATER LEVEL (ft)	FLOW RATE (ml/min)	FINAL WATER LEVEL (ft)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐
64.88	480	70.23	15.75	152	5.68	3.5	447	1.42	N/A

Tubing Volume	1584	(ml)	removed 0.75		
Pump (Bladder) Volume	495	(ml)			
Total Purge Volume	2079	(ml)	=	0.55	(gal)

EQUIPMENT PURGE ONLY SAMPLE				CHLORINE (mg/l)
SAMPLE COLLECTED BY	DATE		TIME	
PSP	1/7/2015	@	0800	0

QC By: WC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

SAMPLING NOTES

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-4D		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	740.69	MIDDLE OF WETTED SCREEN (ft toc)			96.48
WELL DEPTH (ft TOC)	101.48	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)			100.48
SCREEN LENGTH (ft)	10.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	91.48	TO	101.48

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28652	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	60	(psi)	RECHARGE	10	(sec)	DISCHARGE	10	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	65.17	WATER COLUMN (ft)	36.31	*Well Volume = water column X conversion factor* (Conversion factor dependent on well diameter and selected well volume units)
WATER ELEVATION (ft msl)	675.52	WELL VOLUME (gal)	5.92	
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 5.92 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
6.00		NO	15.74	158	6.36	2.5	323	0.70	
6.00		NO	15.74	160	6.38	2.3	263	0.37	
6.00		NO	15.76	161	6.39	2.4	259	0.35	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
18.00		PSP	1/7/2015	@	0845	0

QC By: VDC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

SAMPLING NOTES

1500 ml/min

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-4R		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	714.71	MIDDLE OF WETTED SCREEN (ft toc)	42.42
WELL DEPTH (ft TOC)	45.73	GS ELEV (ft msl)	711.56	PUMP INTAKE DEPTH (ft TOC)	45.23
SCREEN LENGTH (ft)	15.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	28.00 TO 43.00

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28652	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	30	(psi)	RECHARGE	13	(sec)	DISCHARGE	7	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	39.10	WATER COLUMN (ft)	6.63
WATER ELEVATION (ft msl)	675.61	WELL VOLUME (gal)	1.08
DETECTED ODOR	None	CONVERSION FACTOR	0.1631
APPEARANCE	Normal		

Well Volume = water column X conversion factor
(Conversion factor dependent on well diameter and selected well volume units)

PURGE VOLUME 1.08 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV -NEH)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
1.25		NO	14.82	140	6.21	24.5	328	4.58	
1.25		NO	14.68	138	6.20	25.0	347	4.61	
1.25		NO	14.27	131	6.19	7.6	348	4.46	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED			CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE	TIME	
3.75		PSP	1/7/2015 @	1140	0

QC By: VDC 1/8/15

WELL CONDITION			ADDITIONAL WELL CONDITION NOTES
PROTECTIVE CASING	Good Condition		
WELL PAD	Good Condition		
WELL CASING	Good Condition		
WELL TAG	Good Tag		

SAMPLING NOTES

720 ml/min

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-4DR		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	714.30	MIDDLE OF WETTED SCREEN (ft toc)	82.90		
WELL DEPTH (ft TOC)	90.40	GS ELEV (ft msl)	711.66	PUMP INTAKE DEPTH (ft TOC)	89.90		
SCREEN LENGTH (ft)	15.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	72.60	TO	87.60

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28652	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS								
PRESSURE	60	(psi)	RECHARGE	10	(sec)	DISCHARGE	5	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	38.77	WATER COLUMN (ft)	51.63	*Well Volume = water column X conversion factor*
WATER ELEVATION (ft msl)	675.53	WELL VOLUME (gal)	8.42	(Conversion factor dependent on well diameter and selected well volume units)
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 8.42 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV -NEH)	☐ DISSOLVED OXYGEN (mg/L)	☑ (gal) WELL VOL (recalculates on current water level)
9.50		NO	15.18	142	7.02	7.3	337	4.59	
8.50	60.20	NO	15.15	137	7.21	4.5	348	4.76	4.93
5.00		NO	15.03	141	7.25	3.3	350	4.82	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
23.00		PSP	1/7/2015	@	1220	0

QC By: vc 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

SAMPLING NOTES

1840 ml/min

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-11		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	722.62	MIDDLE OF WETTED SCREEN (ft toc)			34.46
WELL DEPTH (ft TOC)	38.54	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)			37.54
SCREEN LENGTH (ft)	15.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	23.54	TO	38.54

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28650	SAMPLING EQUIPMENT	QED T1200			PURGE METHOD			
		TUBING DIAMETER (In)	1/2 OD			Conventional			
		PUMP CONTROLLER SETTINGS							
		PRESSURE	25	(psi)	RECHARGE	13	(sec)	DISCHARGE	7 (sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	30.37	WATER COLUMN (ft)	8.17	*Well Volume = water column X conversion factor* (Conversion factor dependent on well diameter and selected well volume units)
WATER ELEVATION (ft msl)	692.25	WELL VOLUME (gal)	1.33	
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 1.33 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☑ (gal) WELL VOL (recalculates on current water level)
1.50	33.46	NO	14.04	17	5.03	7.9	438	7.31	0.83
1.00	35.07	NO	13.52	17	5.02	6.9	451	6.80	0.57
0.75		NO	13.38	17	5.03	8.9	456	6.65	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
3.25		LDC	1/7/2015	@	1005	0

QC By: VDC 1/8/15

WELL CONDITION			ADDITIONAL WELL CONDITION NOTES
PROTECTIVE CASING	Good Condition		
WELL PAD	Good Condition		
WELL CASING	Good Condition		
WELL TAG	Good Tag		

SAMPLING NOTES

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-11D		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	723.16	MIDDLE OF WETTED SCREEN (ft toc)	96.80
WELL DEPTH (ft TOC)	101.80	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)	100.80
SCREEN LENGTH (ft)	10.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	91.80 TO 101.80

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28650	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
See note below		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	50	(psi)	RECHARGE	8	(sec)	DISCHARGE	7	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	31.42	WATER COLUMN (ft)	70.38	*Well Volume = water column X conversion factor*
WATER ELEVATION (ft msl)	691.74	WELL VOLUME (gal)	11.48	(Conversion factor dependent on well diameter and selected well volume units)
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 11.48 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☑ (gal) WELL VOL (recalculates on current water level)
11.50	64.96	NO	14.76	29	5.66	8.3	415	6.47	6.01
6.25	70.13	NO	14.82	29	5.66	5.4	418	6.38	5.17
5.25		NO	14.79	30	5.64	4.1	422	6.32	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
23.00		SAMPLE COLLECTED BY	DATE		TIME	
		LDC	1/7/2015	@	1035	0

QC By: LDC 1/8/15

WELL CONDITION			ADDITIONAL WELL CONDITION NOTES
PROTECTIVE CASING	Good Condition		
WELL PAD	Good Condition		
WELL CASING	Good Condition		
WELL TAG	Good Tag		

SAMPLING NOTES

After initial well volume is removed - WL drops to 65 ft - recalculate well volume and use for subsequent readings.

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-12		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	724.83	MIDDLE OF WETTED SCREEN (ft toc)	25.83
WELL DEPTH (ft TOC)	29.59	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)	28.59
SCREEN LENGTH (ft)	15.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	14.59 TO 29.59

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28650	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	18	(psi)	RECHARGE	14	(sec)	DISCHARGE	6	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	22.07	WATER COLUMN (ft)	7.52	*Well Volume = water column X conversion factor*
WATER ELEVATION (ft msl)	702.76	WELL VOLUME (gal)	1.23	(Conversion factor dependent on well diameter and selected well volume units)
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 1.23 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☐ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐ (gal) WELL VOL (recalculates on current water level)
1.50		NO	13.88	23	4.97	20.5	473	9.33	
1.25		NO	13.53	23	4.96	41.1	478	9.06	
1.25		NO	13.26	23	5.00	44.5	476	8.98	
1.25		NO	13.13	24	5.03	32.9	460	8.90	
1.25		NO	13.11	23	4.96	28.0	473	8.90	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
6.50		LDC	1/7/2015	@	1220	0

QC By: LDC 1/8/15

WELL CONDITION			ADDITIONAL WELL CONDITION NOTES
PROTECTIVE CASING	Good Condition		
WELL PAD	Good Condition		
WELL CASING	Good Condition		
WELL TAG	Good Tag		

SAMPLING NOTES

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET FOR CONVENTIONAL SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	MW-12D		

MONITORING WELL INFORMATION

WELL DIAMETER (in)	2	TOC ELEV (ft msl)	724.80	MIDDLE OF WETTED SCREEN (ft toc)	63.56
WELL DEPTH (ft TOC)	68.56	GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)	67.56
SCREEN LENGTH (ft)	10.00	ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	58.56 TO 68.56

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	28650	SAMPLING EQUIPMENT	QED T1200	PURGE METHOD	
		TUBING DIAMETER (in)	1/2 OD	Conventional	

PUMP CONTROLLER SETTINGS

PRESSURE	35	(psi)	RECHARGE	10	(sec)	DISCHARGE	10	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	27.11	WATER COLUMN (ft)	41.45	*Well Volume = water column X conversion factor* (Conversion factor dependent on well diameter and selected well volume units)
WATER ELEVATION (ft msl)	697.69	WELL VOLUME (gal)	6.76	
DETECTED ODOR	None	CONVERSION FACTOR	0.1631	
APPEARANCE	Normal			

PURGE VOLUME 6.76 (gal)	WATER LEVEL AFTER PURGE * (ft)	COMPLETE EVACUATION (YES/NO)	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☑ (gal) WELL VOL (recalculates on current water level)
7.00	49.74	NO	14.28	87	6.25	7.1	407	6.46	3.07
3.25		NO	14.40	88	6.26	6.1	393	6.43	
3.25		NO	14.39	87	6.23	8.5	401	6.47	

TOTAL PURGE VOLUME	* Optional measurement to recalculate well volume when purging results in substantial drawdown of water column	COLLECT SAMPLE - SAMPLE CRITERIA SATISFIED				CHLORINE (mg/l)
		SAMPLE COLLECTED BY	DATE		TIME	
13.50		LDC	1/7/2015	@	1210	0

QC By: LDC 1/8/15

WELL CONDITION

PROTECTIVE CASING	Good Condition	
WELL PAD	Good Condition	
WELL CASING	Good Condition	
WELL TAG	Good Tag	

ADDITIONAL WELL CONDITION NOTES

SAMPLING NOTES

DUKE ENERGY

GROUNDWATER MONITORING DATA SHEET
FOR NO PURGE SAMPLING

PROCEDURE NO	3175.2

SITE NAME	McGUIRE NUCLEAR STATION	PERMIT #	60-04	SITE ID	N/A
PROJECT NAME	LANDFILL 1 GROUNDWATER MONITORING	FIELD CREW	LDC, PSP		
SAMPLING DATE(s)	☑ 7-Jan-2015 ☐ ☐ ☐	WELL/LOCATION NAME	SW-1		

MONITORING WELL INFORMATION

WELL DIAMETER (in)		TOC ELEV (ft msl)	N/A	MIDDLE OF WETTED SCREEN (ft toc)	
WELL DEPTH (ft TOC)		GS ELEV (ft msl)		PUMP INTAKE DEPTH (ft TOC)	N/A
SCREEN LENGTH (ft)		ELEV REF	NAVD 88	SCREEN INTERVAL (ft TOC)	0.00 TO 0.00

EQUIPMENT INFORMATION

LEVEL METER SERIAL#	N/A	SAMPLING EQUIPMENT	PERISTALTIC PUMP	PURGE METHOD
		TUBING DIAMETER (in)	3/8 OD	No Purge

PUMP CONTROLLER SETTINGS								
PRESSURE	N/A	(psi)	RECHARGE	N/A	(sec)	DISCHARGE	N/A	(sec)

SAMPLING INFORMATION

INITIAL DEPTH TO WATER (ft TOC)	N/A	WATER COLUMN (ft)		*Well Volume = water column X conversion factor* (Conversion factor dependent on well diameter and selected well volume units)
WATER ELEVATION (ft msl)		WELL VOLUME (gal)		
DETECTED ODOR	None	CONVERSION FACTOR		
APPEARANCE	Normal			

HYDRASLEEVE LENGTH (inches)	DEPLOYED DEPTH (top) (ft TOC)	DATE DEPLOYED	☑ TEMP (deg C)	☑ SPECIFIC COND. (umho/cm)	☑ pH (SU)	☑ TURBIDITY (NTU)	☐ ORP (mV-NHE)	☐ DISSOLVED OXYGEN (mg/L)	☐
N/A	N/A	N/A	6.23	99	7.22	16.4	220	9.68	N/A

Deployed Top Weight	Water Column In Screen Above Top Of Hydrasleeve	NO PURGE SAMPLE			CHLORINE (mg/l)
	(ft) = (in)	SAMPLE COLLECTED BY	DATE	TIME	
		PSP	1/7/2015 @	1325	0

QC By: USC 11/8/15

WELL CONDITION			ADDITIONAL WELL CONDITION NOTES
PROTECTIVE CASING			
WELL PAD			
WELL CASING			
WELL TAG			

SAMPLING NOTES

NORTH CAROLINA GROUNDWATER SAMPLING SITE CHECKLIST

LOCATION / SITE McGUIRE NUCLEAR STATION - LANDFILL #1 GROUNDWATER MONITORING
SITE CONTACT John Williamson, Bill Spencer
WEATHER Clouds ot sun, calm to breezy, 27 to 37 deg F.
PAGE 1 OF 1

PERMIT # 60-04
SAMPLE DATE January 7, 2015
FIELD CREW LDC, PSP

	MW-1	MW-1D	MW-2	MW-2D	MW-3	MW-3D	MW-4	MW-4D	MW-11	MW-11D	MW-12	MW-12D	SW-1	MW-4R	MW-4PR
ACCESS TO WELLS															
Access cleared into well	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Access cleared around well	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Tall grass or weeds - needs mowing															
Road washing out / muddy / needs grading															
Fallen tree blocking access															
WELL SECURITY															
Well found locked	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	N/A	YES	YES
Well found unlocked															
WELL LOCK CONDITION															
Lock in good condition	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	N/A	YES	YES
Lock rusted, difficult to open / needs replacing															
Replaced damaged lock															
WELL CASINGS															
Casing in good condition	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	N/A	YES	YES
Damaged casing / still functional															
Damaged casing / repair required															
CONCRETE PADS															
Pad in good condition	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	N/A	YES	YES
Minor cracks															
Major cracks / broken / repair required															
Undermined / washing out															
Fire ants around concrete pad															
WELL PROTECTIVE CASINGS															
Casing in good condition	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	N/A	YES	YES
Damaged casing / still functional															
Damaged casing / repair required															
Broken hinge on protective lid															
Wasp nest inside protective casing															
Ants inside protective casing															
WELL CAPS															
Well cap in good conditon	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	N/A	YES	YES
Damaged / needs replacement															
Replaced damaged well cap															
FLUSH MOUNT WELLS															
Vault in good condition	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	N/A	YES	YES
Water inside vault															
Vault bolt holes broken or stripped															
Bolts stripped															
Vault lid cracked or broken															
WELL ID TAGS															
Well tag in good condition	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	N/A	YES	YES
Well tag missing															
Well tag damaged / illegible															
Lacks required information - Driller Reg #															
Lacks required information - Completion date															
Lacks required information - Total well depth															
Lacks required information - Depth to screen															
Lacks required information - Non potable tag															

NOTE:

McGUIRE NUCLEAR STATION
LANDFILL 1 GROUNDWATER MONITORING
GROUNDWATER MONITORING FIELD DATA
PERMIT # 60-04

DATE	WELL NO.	WELL DEPTH (feet-toc)	DEPTH TO WATER (feet-toc)	WATER ELEV. (feet)	APPEARANCE	ODOR	Purge Method	AVG * PMP RATE (ml/min)	WELL VOL (gal)	EVAC VOL (gal)	EVAC (yes/no)	TEMP (deg C)	SPECIFIC CONDUCTANCE (umho/cm)	pH (units)	TURBIDITY (NTU)	ORP (mV-NHE)	DO (mg/l)
1/7/2015	MW-1	69.00	29.15	701.14	Normal	None	C	N/A	6.50	19.50	NO	15.48	112	6.1	3.4	257	0.47
1/7/2015	MW-1D	88.60	30.00	700.67	Normal	None	C	N/A	9.56	30.00	NO	15.63	98	6.1	2.9	252	0.13
1/7/2015	MW-2A	78.00	52.88	687.37	Normal	None	C	N/A	4.10	12.75	NO	15.61	82	6.3	1.6	353	5.80
1/7/2015	MW-2D	110.10	54.29	686.50	Normal	None	C	N/A	9.10	27.75	NO	15.82	60	6.7	1.8	350	8.83
1/7/2015	MW-3	71.00	57.25	671.79	Normal	None	C	N/A	2.24	9.00	NO	15.01	79	6.4	2.6	389	5.33
1/7/2015	MW-3D	88.88	56.63	671.80	Normal	None	C	N/A	5.26	16.50	NO	15.06	128	6.7	2.0	373	2.68
1/7/2015	MW-4	73.95	64.88	676.36	Normal	None	EOP	N/A	1.48	0.55	N/A	15.75	152	5.7	3.5	447	1.42
1/7/2015	MW-4D	101.48	65.17	675.52	Normal	None	C	N/A	5.92	18.00	NO	15.76	161	6.4	2.4	259	0.35
1/7/2015	MW-11	38.54	30.37	692.25	Normal	None	C	N/A	1.33	3.25	NO	13.38	17	5.0	8.9	456	6.65
1/7/2015	MW-11D	101.80	31.42	691.74	Normal	None	C	N/A	11.48	23.00	NO	14.79	30	5.6	4.1	422	6.32
1/7/2015	MW-12	29.59	22.07	702.76	Normal	None	C	N/A	1.23	6.50	NO	13.11	23	5.0	28.0	473	8.90
1/7/2015	MW-12D	68.56	27.11	697.69	Normal	None	C	N/A	6.76	13.50	NO	14.39	87	6.2	8.5	401	6.47
1/7/2015	SW-1	N/A	N/A	N/A	Normal	None	NP	N/A	N/A	N/A	N/A	6.23	99	7.2	16.4	220	9.68
1/7/2015	MW-4R	45.73	39.10	675.61	Normal	None	C	N/A	1.08	3.75	NO	14.27	131	6.2	7.6	348	4.46
1/7/2015	MW-4DR	90.40	38.77	675.53	Normal	None	C	N/A	8.42	23.00	NO	15.03	141	7.3	3.3	350	4.82

Purge Methods
LF = Low Flow
LF(M) = Low Flow (Mod.)
C = Connventional
NP = No Purge
EOP = Equip. Only Purge
LO = Level Only

* = Applicable to LF & LF(M) Purging Only

B

Appendix B

Laboratory Report and Chain-of-Custody Forms

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: **J14120369**

Project Name: MCGUIRE LANDFILL ONE - PERMIT 60-04

Customer Name(s): TIM HUNSUCKER, C Campbell

Customer Address: 13225 Hagers Ferry Rd
Mail Code: MG01CH
Huntersville, NC 28078-8985

Lab Contact: Jason C Perkins Phone: 980-875-5348

Report Authorized By: (Signature) _____ **Date:** 1/28/2015
Jason C Perkins

Program Comments:

Please contact the Program Manager (Jason C Perkins) 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
2014034385	MCGUIRE	07-Jan-15 4:30 AM	LDC	TRIP BLANK
2014034386	MCGUIRE	07-Jan-15 8:45 AM	LDC	MW-1
2014034387	MCGUIRE	07-Jan-15 9:00 AM	LDC	MW-1D
2014034388	MCGUIRE	07-Jan-15 2:15 PM	LDC	MW-2A
2014034389	MCGUIRE	07-Jan-15 2:45 PM	LDC	MW-2D
2014034390	MCGUIRE	07-Jan-15 10:05 AM	PSP	MW-3
2014034391	MCGUIRE	07-Jan-15 10:45 AM	PSP	MW-3D
2014034392	MCGUIRE	07-Jan-15 8:00 AM	PSP	MW-4
2014034393	MCGUIRE	07-Jan-15 8:45 AM	PSP	MW-4D
2014034394	MCGUIRE	07-Jan-15 10:05 AM	LDC	MW-11
2014034395	MCGUIRE	07-Jan-15 10:35 AM	LDC	MW-11D
2014034396	MCGUIRE	07-Jan-15 12:20 PM	LDC	MW-12
2014034397	MCGUIRE	07-Jan-15 12:10 PM	LDC	MW-12D
2014034398	MCGUIRE	07-Jan-15 1:25 PM	PSP	SW-1
2014034399	MCGUIRE	07-Jan-15 11:40 AM	PSP	MW-4R
2014034400	MCGUIRE	07-Jan-15 12:20 PM	PSP	MW-4DR
2014034401	MCGUIRE	07-Jan-15 2:50 PM	PSP	FIELD BLANK

17 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: 1/28/2015

Certificate of Laboratory Analysis

This report shall not be reproduced, except in full.

Order # J14120369

Site: TRIP BLANK

Collection Date: 07-Jan-15 4:30 AM

Sample #: **2014034385**

Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
VOLATILES - (Analysis Performed by Test America)								
Benzene	**Complete**					Vendor Method		V_T. America

Certificate of Laboratory Analysis

This report shall not be reproduced, except in full.

Order # J14120369

Site: MW-1
Collection Date: 07-Jan-15 8:45 AM

Sample #: **2014034386**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	58	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	1.6	mg/L		0.1	1	EPA 300.0	01/08/2015 12:27	BGN9034
Sulfate	0.28	mg/L		0.1	1	EPA 300.0	01/08/2015 12:27	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:20	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.219	mg/L		0.005	1	EPA 200.7	01/14/2015 13:36	MHH7131
Calcium (Ca)	7.15	mg/L		0.01	1	EPA 200.7	01/14/2015 13:36	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 13:36	MHH7131
Magnesium (Mg)	3.06	mg/L		0.005	1	EPA 200.7	01/14/2015 13:36	MHH7131
Potassium (K)	1.12	mg/L		0.1	1	EPA 200.7	01/14/2015 13:36	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 13:36	MHH7131
Sodium (Na)	6.04	mg/L		0.05	1	EPA 200.7	01/14/2015 13:36	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 12:39	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 12:39	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 12:39	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 12:39	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

Certificate of Laboratory Analysis

This report shall not be reproduced, except in full.

Order # J14120369

Site: MW-1D

Collection Date: 07-Jan-15 9:00 AM

Sample #: **2014034387**

Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	48	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	1.4	mg/L		0.1	1	EPA 300.0	01/08/2015 13:21	BGN9034
Sulfate	0.30	mg/L		0.1	1	EPA 300.0	01/08/2015 13:21	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:27	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.093	mg/L		0.005	1	EPA 200.7	01/14/2015 13:50	MHH7131
Calcium (Ca)	7.26	mg/L		0.01	1	EPA 200.7	01/14/2015 13:50	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 13:50	MHH7131
Magnesium (Mg)	2.33	mg/L		0.005	1	EPA 200.7	01/14/2015 13:50	MHH7131
Potassium (K)	1.08	mg/L		0.1	1	EPA 200.7	01/14/2015 13:50	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 13:50	MHH7131
Sodium (Na)	6.61	mg/L		0.05	1	EPA 200.7	01/14/2015 13:50	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 12:55	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 12:55	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 12:55	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 12:55	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

Certificate of Laboratory Analysis

This report shall not be reproduced, except in full.

Order # J14120369

Site: MW-2A
Collection Date: 07-Jan-15 2:15 PM

Sample #: **2014034388**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	36	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	1.3	mg/L		0.1	1	EPA 300.0	01/08/2015 13:39	BGN9034
Sulfate	0.61	mg/L		0.1	1	EPA 300.0	01/08/2015 13:39	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:29	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.023	mg/L		0.005	1	EPA 200.7	01/14/2015 13:54	MHH7131
Calcium (Ca)	8.16	mg/L		0.01	1	EPA 200.7	01/14/2015 13:54	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 13:54	MHH7131
Magnesium (Mg)	2.26	mg/L		0.005	1	EPA 200.7	01/14/2015 13:54	MHH7131
Potassium (K)	0.409	mg/L		0.1	1	EPA 200.7	01/14/2015 13:54	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 13:54	MHH7131
Sodium (Na)	5.89	mg/L		0.05	1	EPA 200.7	01/14/2015 13:54	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:01	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:01	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:01	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:01	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

Certificate of Laboratory Analysis

This report shall not be reproduced, except in full.

Order # J14120369

Site: MW-2D
Collection Date: 07-Jan-15 2:45 PM

Sample #: **2014034389**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
LOW LEVEL ALKALINITY (FIXED END POINT)								
Alkalinity (mg/L CaCO3)	24	mg/L (CaCO3)		5	1	SM 2320B4d	01/09/2015 13:21	TJA7067
INORGANIC IONS BY IC								
Chloride	1.2	mg/L		0.1	1	EPA 300.0	01/08/2015 13:56	BGN9034
Sulfate	0.36	mg/L		0.1	1	EPA 300.0	01/08/2015 13:56	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:31	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.013	mg/L		0.005	1	EPA 200.7	01/14/2015 13:58	MHH7131
Calcium (Ca)	5.36	mg/L		0.01	1	EPA 200.7	01/14/2015 13:58	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 13:58	MHH7131
Magnesium (Mg)	1.48	mg/L		0.005	1	EPA 200.7	01/14/2015 13:58	MHH7131
Potassium (K)	0.341	mg/L		0.1	1	EPA 200.7	01/14/2015 13:58	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 13:58	MHH7131
Sodium (Na)	5.22	mg/L		0.05	1	EPA 200.7	01/14/2015 13:58	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:06	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:06	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:06	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:06	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: MW-3
Collection Date: 07-Jan-15 10:05 AM

Sample #: **2014034390**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	38	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	1.4	mg/L		0.1	1	EPA 300.0	01/08/2015 14:14	BGN9034
Sulfate	0.44	mg/L		0.1	1	EPA 300.0	01/08/2015 14:14	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:34	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.038	mg/L		0.005	1	EPA 200.7	01/14/2015 14:02	MHH7131
Calcium (Ca)	7.54	mg/L		0.01	1	EPA 200.7	01/14/2015 14:02	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:02	MHH7131
Magnesium (Mg)	2.96	mg/L		0.005	1	EPA 200.7	01/14/2015 14:02	MHH7131
Potassium (K)	0.671	mg/L		0.1	1	EPA 200.7	01/14/2015 14:02	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:02	MHH7131
Sodium (Na)	4.09	mg/L		0.05	1	EPA 200.7	01/14/2015 14:02	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:11	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:11	JAHERMA
Lead (Pb)	1.78	ug/L		1	1	SW 6020A	01/09/2015 13:11	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:11	JAHERMA
PH IN WATER (NON-COMPLIANCE ANALYSIS)								
pH	6.6	SI Units	H3	0.1	1	SM4500B	01/08/2015 14:05	TJA7067
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: MW-3D
Collection Date: 07-Jan-15 10:45 AM

Sample #: **2014034391**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	62	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	1.5	mg/L		0.1	1	EPA 300.0	01/08/2015 14:32	BGN9034
Sulfate	0.97	mg/L		0.1	1	EPA 300.0	01/08/2015 14:32	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:36	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.025	mg/L		0.005	1	EPA 200.7	01/14/2015 14:06	MHH7131
Calcium (Ca)	13.4	mg/L		0.01	1	EPA 200.7	01/14/2015 14:06	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:06	MHH7131
Magnesium (Mg)	4.31	mg/L		0.005	1	EPA 200.7	01/14/2015 14:06	MHH7131
Potassium (K)	0.890	mg/L		0.1	1	EPA 200.7	01/14/2015 14:06	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:06	MHH7131
Sodium (Na)	6.24	mg/L		0.05	1	EPA 200.7	01/14/2015 14:06	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:16	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:16	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:16	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:16	JAHERMA
PH IN WATER (NON-COMPLIANCE ANALYSIS)								
pH	6.6	SI Units	H3	0.1	1	SM4500B	01/08/2015 14:05	TJA7067
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: MW-4
Collection Date: 07-Jan-15 8:00 AM

Sample #: **2014034392**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	87	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	2.4	mg/L		0.4	2	EPA 300.0	01/14/2015 12:41	BGN9034
Sulfate	1.0	mg/L		0.1	1	EPA 300.0	01/14/2015 12:41	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:38	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.062	mg/L		0.005	1	EPA 200.7	01/14/2015 14:10	MHH7131
Calcium (Ca)	13.7	mg/L		0.01	1	EPA 200.7	01/14/2015 14:10	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:10	MHH7131
Magnesium (Mg)	13.1	mg/L		0.005	1	EPA 200.7	01/14/2015 14:10	MHH7131
Potassium (K)	0.635	mg/L		0.1	1	EPA 200.7	01/14/2015 14:10	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:10	MHH7131
Sodium (Na)	2.53	mg/L		0.05	1	EPA 200.7	01/14/2015 14:10	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:22	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:22	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:22	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:22	JAHERMA
PH IN WATER (NON-COMPLIANCE ANALYSIS)								
pH	6.0	SI Units	H3	0.1	1	SM4500B	01/08/2015 14:05	TJA7067
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: MW-4D
Collection Date: 07-Jan-15 8:45 AM

Sample #: **2014034393**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	80	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	1.8	mg/L		0.1	1	EPA 300.0	01/08/2015 15:08	BGN9034
Sulfate	0.28	mg/L		0.1	1	EPA 300.0	01/08/2015 15:08	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:41	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.039	mg/L		0.005	1	EPA 200.7	01/14/2015 14:14	MHH7131
Calcium (Ca)	17.2	mg/L		0.01	1	EPA 200.7	01/14/2015 14:14	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:14	MHH7131
Magnesium (Mg)	7.77	mg/L		0.005	1	EPA 200.7	01/14/2015 14:14	MHH7131
Potassium (K)	0.630	mg/L		0.1	1	EPA 200.7	01/14/2015 14:14	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:14	MHH7131
Sodium (Na)	3.62	mg/L		0.05	1	EPA 200.7	01/14/2015 14:14	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:27	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:27	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:27	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:27	JAHERMA
PH IN WATER (NON-COMPLIANCE ANALYSIS)								
pH	6.4	SI Units	H3	0.1	1	SM4500B	01/08/2015 14:05	TJA7067
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: MW-11
Collection Date: 07-Jan-15 10:05 AM

Sample #: **2014034394**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
LOW LEVEL ALKALINITY (FIXED END POINT)								
Alkalinity (mg/L CaCO3)	< 5	mg/L (CaCO3)		5	1	SM 2320B4d	01/09/2015 13:21	TJA7067
INORGANIC IONS BY IC								
Chloride	1.5	mg/L		0.1	1	EPA 300.0	01/08/2015 15:26	BGN9034
Sulfate	0.38	mg/L		0.1	1	EPA 300.0	01/08/2015 15:26	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:43	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.006	mg/L		0.005	1	EPA 200.7	01/14/2015 14:18	MHH7131
Calcium (Ca)	0.744	mg/L		0.01	1	EPA 200.7	01/14/2015 14:18	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:18	MHH7131
Magnesium (Mg)	0.634	mg/L		0.005	1	EPA 200.7	01/14/2015 14:18	MHH7131
Potassium (K)	< 0.1	mg/L		0.1	1	EPA 200.7	01/14/2015 14:18	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:18	MHH7131
Sodium (Na)	1.12	mg/L		0.05	1	EPA 200.7	01/14/2015 14:18	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:32	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:32	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:32	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:32	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: MW-11D

Collection Date: 07-Jan-15 10:35 AM

Sample #: **2014034395**

Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
LOW LEVEL ALKALINITY (FIXED END POINT)								
Alkalinity (mg/L CaCO3)	8.0	mg/L (CaCO3)		5	1	SM 2320B4d	01/09/2015 13:21	TJA7067
INORGANIC IONS BY IC								
Chloride	1.3	mg/L		0.1	1	EPA 300.0	01/08/2015 15:44	BGN9034
Sulfate	0.66	mg/L		0.1	1	EPA 300.0	01/08/2015 15:44	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:46	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.010	mg/L		0.005	1	EPA 200.7	01/14/2015 14:22	MHH7131
Calcium (Ca)	1.60	mg/L		0.01	1	EPA 200.7	01/14/2015 14:22	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:22	MHH7131
Magnesium (Mg)	0.989	mg/L		0.005	1	EPA 200.7	01/14/2015 14:22	MHH7131
Potassium (K)	0.168	mg/L		0.1	1	EPA 200.7	01/14/2015 14:22	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:22	MHH7131
Sodium (Na)	2.93	mg/L		0.05	1	EPA 200.7	01/14/2015 14:22	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:38	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:38	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:38	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:38	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: MW-12
Collection Date: 07-Jan-15 12:20 PM

Sample #: **2014034396**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
LOW LEVEL ALKALINITY (FIXED END POINT)								
Alkalinity (mg/L CaCO3)	< 5	mg/L (CaCO3)		5	1	SM 2320B4d	01/09/2015 13:21	TJA7067
INORGANIC IONS BY IC								
Chloride	4.2	mg/L		0.1	1	EPA 300.0	01/08/2015 16:56	BGN9034
Sulfate	0.17	mg/L		0.1	1	EPA 300.0	01/08/2015 16:56	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 11:53	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.012	mg/L		0.005	1	EPA 200.7	01/14/2015 14:35	MHH7131
Calcium (Ca)	0.967	mg/L		0.01	1	EPA 200.7	01/14/2015 14:35	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:35	MHH7131
Magnesium (Mg)	0.528	mg/L		0.005	1	EPA 200.7	01/14/2015 14:35	MHH7131
Potassium (K)	0.386	mg/L		0.1	1	EPA 200.7	01/14/2015 14:35	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:35	MHH7131
Sodium (Na)	1.72	mg/L		0.05	1	EPA 200.7	01/14/2015 14:35	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:59	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:59	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:59	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 13:59	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: MW-12D
Collection Date: 07-Jan-15 12:10 PM

Sample #: **2014034397**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	40	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	2.8	mg/L		0.1	1	EPA 300.0	01/08/2015 17:49	BGN9034
Sulfate	< 0.1	mg/L		0.1	1	EPA 300.0	01/08/2015 17:49	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 12:00	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.010	mg/L		0.005	1	EPA 200.7	01/14/2015 14:39	MHH7131
Calcium (Ca)	8.87	mg/L		0.01	1	EPA 200.7	01/14/2015 14:39	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:39	MHH7131
Magnesium (Mg)	1.35	mg/L		0.005	1	EPA 200.7	01/14/2015 14:39	MHH7131
Potassium (K)	0.339	mg/L		0.1	1	EPA 200.7	01/14/2015 14:39	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:39	MHH7131
Sodium (Na)	8.64	mg/L		0.05	1	EPA 200.7	01/14/2015 14:39	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:04	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:04	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:04	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:04	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

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Order # J14120369

Site: SW-1
Collection Date: 07-Jan-15 1:25 PM

Sample #: **2014034398**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	43	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	2.4	mg/L		0.1	1	EPA 300.0	01/08/2015 18:07	BGN9034
Sulfate	1.9	mg/L		0.1	1	EPA 300.0	01/08/2015 18:07	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 12:02	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.025	mg/L		0.005	1	EPA 200.7	01/14/2015 14:43	MHH7131
Calcium (Ca)	8.96	mg/L		0.01	1	EPA 200.7	01/14/2015 14:43	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:43	MHH7131
Magnesium (Mg)	3.60	mg/L		0.005	1	EPA 200.7	01/14/2015 14:43	MHH7131
Potassium (K)	1.03	mg/L		0.1	1	EPA 200.7	01/14/2015 14:43	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:43	MHH7131
Sodium (Na)	5.04	mg/L		0.05	1	EPA 200.7	01/14/2015 14:43	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:09	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:09	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:09	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:09	JAHERMA
PH IN WATER (NON-COMPLIANCE ANALYSIS)								
pH	6.7	SI Units	H3	0.1	1	SM4500B	01/08/2015 14:05	TJA7067
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

Certificate of Laboratory Analysis

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Order # J14120369

Site: MW-4R
Collection Date: 07-Jan-15 11:40 AM

Sample #: **2014034399**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	67	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	2.7	mg/L		0.1	1	EPA 300.0	01/08/2015 18:25	BGN9034
Sulfate	0.38	mg/L		0.1	1	EPA 300.0	01/08/2015 18:25	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 12:04	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.016	mg/L		0.005	1	EPA 200.7	01/14/2015 14:52	MHH7131
Calcium (Ca)	12.2	mg/L		0.01	1	EPA 200.7	01/14/2015 14:52	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:52	MHH7131
Magnesium (Mg)	8.68	mg/L		0.005	1	EPA 200.7	01/14/2015 14:52	MHH7131
Potassium (K)	0.408	mg/L		0.1	1	EPA 200.7	01/14/2015 14:52	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:52	MHH7131
Sodium (Na)	2.88	mg/L		0.05	1	EPA 200.7	01/14/2015 14:52	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:14	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:14	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:14	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:14	JAHERMA
PH IN WATER (NON-COMPLIANCE ANALYSIS)								
pH	6.2	SI Units	H3	0.1	1	SM4500B	01/08/2015 14:05	TJA7067
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

Certificate of Laboratory Analysis

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Order # J14120369

Site: MW-4DR
Collection Date: 07-Jan-15 12:20 PM

Sample #: **2014034400**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	66	mg/L (CaCO3)		20	1	SM2320B	01/09/2015 15:07	TJA7067
INORGANIC IONS BY IC								
Chloride	1.7	mg/L		0.1	1	EPA 300.0	01/08/2015 18:43	BGN9034
Sulfate	1.4	mg/L		0.1	1	EPA 300.0	01/08/2015 18:43	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 12:07	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	0.013	mg/L		0.005	1	EPA 200.7	01/14/2015 14:56	MHH7131
Calcium (Ca)	14.9	mg/L		0.01	1	EPA 200.7	01/14/2015 14:56	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:56	MHH7131
Magnesium (Mg)	4.36	mg/L		0.005	1	EPA 200.7	01/14/2015 14:56	MHH7131
Potassium (K)	0.931	mg/L		0.1	1	EPA 200.7	01/14/2015 14:56	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 14:56	MHH7131
Sodium (Na)	6.83	mg/L		0.05	1	EPA 200.7	01/14/2015 14:56	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:20	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:20	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:20	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:20	JAHERMA
PH IN WATER (NON-COMPLIANCE ANALYSIS)								
pH	7.0	SI Units	H3	0.1	1	SM4500B	01/08/2015 14:05	TJA7067
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

Certificate of Laboratory Analysis

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Order # J14120369

Site: FIELD BLANK
Collection Date: 07-Jan-15 2:50 PM

Sample #: **2014034401**
Matrix: GW_RCRA

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
LOW LEVEL ALKALINITY (FIXED END POINT)								
Alkalinity (mg/L CaCO3)	< 5	mg/L (CaCO3)		5	1	SM 2320B4d	01/09/2015 13:21	TJA7067
INORGANIC IONS BY IC								
Chloride	< 0.1	mg/L		0.1	1	EPA 300.0	01/08/2015 19:01	BGN9034
Sulfate	< 0.1	mg/L		0.1	1	EPA 300.0	01/08/2015 19:01	BGN9034
MERCURY (COLD VAPOR) IN WATER								
Mercury (Hg)	< 0.05	ug/L		0.05	1	EPA 245.1	01/27/2015 12:09	TLINN
TOTAL RECOVERABLE METALS BY ICP								
Barium (Ba)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 15:00	MHH7131
Calcium (Ca)	< 0.01	mg/L		0.01	1	EPA 200.7	01/14/2015 15:00	MHH7131
Chromium (Cr)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 15:00	MHH7131
Magnesium (Mg)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 15:00	MHH7131
Potassium (K)	< 0.1	mg/L		0.1	1	EPA 200.7	01/14/2015 15:00	MHH7131
Silver (Ag)	< 0.005	mg/L		0.005	1	EPA 200.7	01/14/2015 15:00	MHH7131
Sodium (Na)	< 0.05	mg/L		0.05	1	EPA 200.7	01/14/2015 15:00	MHH7131
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:25	JAHERMA
Cadmium (Cd)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:25	JAHERMA
Lead (Pb)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:25	JAHERMA
Selenium (Se)	< 1	ug/L		1	1	SW 6020A	01/09/2015 14:25	JAHERMA
VOLATILES - (Analysis Performed by Test America)								
Benzene	Complete					Vendor Method		V_T. America

Qualifiers:

H3 pH sample analyzed outside of the EPA hold time of 15 minutes. Analyzed at the request of the client.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-70140-1
Client Project/Site: MNS Landfill #1 J14120369
Revision: 1

For:
Duke Energy Corporation
13339 Hagers Ferry Road
Huntersville, North Carolina 28078

Attn: Lab Customer

Authorized for release by:
1/23/2015 4:17:36 PM
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LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-70140-1	TRIP BLANK	Water	01/07/15 09:30	01/09/15 08:45
490-70140-2	MW-1	Water	01/07/15 08:45	01/09/15 08:45
490-70140-3	MW-1D	Water	01/07/15 09:00	01/09/15 08:45
490-70140-4	MW-2A	Water	01/07/15 14:15	01/09/15 08:45
490-70140-5	MW-2D	Water	01/07/15 14:45	01/09/15 08:45
490-70140-6	MW-3	Water	01/07/15 10:05	01/09/15 08:45
490-70140-7	MW-3D	Water	01/07/15 10:45	01/09/15 08:45
490-70140-8	MW-4	Water	01/07/15 08:00	01/09/15 08:45
490-70140-9	MW-4D	Water	01/07/15 08:45	01/09/15 08:45
490-70140-10	MW-11	Water	01/07/15 10:05	01/09/15 08:45
490-70140-11	MW-11D	Water	01/07/15 10:35	01/09/15 08:45
490-70140-12	MW-12	Water	01/07/15 12:20	01/09/15 08:45
490-70140-13	MW-12D	Water	01/07/15 12:10	01/09/15 08:45
490-70140-14	SW-1	Water	01/07/15 13:25	01/09/15 08:45
490-70140-15	MW-4R	Water	01/07/15 11:40	01/09/15 08:45
490-70140-16	MW-4DR	Water	01/07/15 12:20	01/09/15 08:45
490-70140-17	FIELD BLANK	Water	01/07/15 14:50	01/09/15 08:45

CASE NARRATIVE

Client: Duke Energy Corporation

Project: MNS Landfill #1 J14120369

Report Number: 490-70140-1

Revised Report
This is a revised report to correct the volatile results and reporting limits. This replaces the original final report.

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Nashville attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 01/09/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.1 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples TRIP BLANK (490-70140-1), MW-1 (490-70140-2), MW-1D (490-70140-3), MW-2A (490-70140-4), MW-2D (490-70140-5), MW-3 (490-70140-6), MW-3D (490-70140-7), MW-4 (490-70140-8), MW-4D (490-70140-9), MW-11 (490-70140-10), MW-11D (490-70140-11), MW-12 (490-70140-12), MW-12D (490-70140-13), SW-1 (490-70140-14), MW-4R (490-70140-15), MW-4DR (490-70140-16) and FIELD BLANK (490-70140-17) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 01/14/2015.

Methylene Chloride was detected in method blank MB 490-220087/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. This target analyte concentration was less than the reporting limit (RL); therefore,

Job ID: 490-70140-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: TRIP BLANK

Date Collected: 01/07/15 09:30
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 01:49	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 01:49	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 01:49	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 01:49	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 01:49	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 01:49	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 01:49	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 01:49	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 01:49	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 01:49	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 01:49	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 01:49	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 01:49	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 01:49	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 01:49	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 01:49	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 01:49	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 01:49	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 01:49	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 01:49	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 01:49	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 01:49	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 01:49	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 01:49	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 01:49	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 01:49	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 01:49	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 01:49	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 01:49	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 01:49	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 01:49	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 01:49	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 01:49	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 01:49	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 01:49	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 01:49	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 01:49	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 01:49	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 01:49	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 01:49	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 01:49	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 01:49	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 01:49	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 01:49	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 01:49	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 01:49	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 01:49	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: TRIP BLANK

Date Collected: 01/07/15 09:30
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-1
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130		01/14/15 01:49	1
Dibromofluoromethane (Surr)	106		70 - 130		01/14/15 01:49	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		01/14/15 01:49	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 01:49	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-1

Date Collected: 01/07/15 08:45
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 02:46	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 02:46	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 02:46	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 02:46	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 02:46	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 02:46	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 02:46	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 02:46	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 02:46	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 02:46	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 02:46	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 02:46	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 02:46	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 02:46	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 02:46	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 02:46	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 02:46	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 02:46	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 02:46	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 02:46	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 02:46	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 02:46	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 02:46	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 02:46	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 02:46	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 02:46	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 02:46	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 02:46	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 02:46	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 02:46	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 02:46	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 02:46	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 02:46	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 02:46	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 02:46	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 02:46	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 02:46	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 02:46	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 02:46	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 02:46	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 02:46	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 02:46	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 02:46	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 02:46	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 02:46	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 02:46	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 02:46	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-1

Date Collected: 01/07/15 08:45
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		01/14/15 02:46	1
Dibromofluoromethane (Surr)	104		70 - 130		01/14/15 02:46	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		01/14/15 02:46	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 02:46	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-1D

Date Collected: 01/07/15 09:00
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 03:14	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 03:14	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 03:14	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 03:14	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 03:14	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 03:14	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 03:14	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 03:14	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 03:14	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 03:14	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 03:14	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 03:14	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 03:14	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 03:14	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 03:14	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 03:14	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 03:14	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 03:14	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 03:14	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 03:14	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 03:14	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 03:14	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 03:14	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 03:14	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 03:14	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 03:14	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 03:14	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 03:14	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 03:14	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 03:14	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 03:14	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 03:14	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 03:14	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 03:14	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 03:14	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 03:14	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 03:14	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 03:14	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 03:14	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 03:14	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 03:14	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 03:14	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 03:14	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 03:14	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 03:14	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 03:14	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 03:14	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-1D

Date Collected: 01/07/15 09:00
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-3

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130		01/14/15 03:14	1
Dibromofluoromethane (Surr)	107		70 - 130		01/14/15 03:14	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		01/14/15 03:14	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 03:14	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-2A

Date Collected: 01/07/15 14:15
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 03:42	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 03:42	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 03:42	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 03:42	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 03:42	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 03:42	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 03:42	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 03:42	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 03:42	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 03:42	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 03:42	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 03:42	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 03:42	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 03:42	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 03:42	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 03:42	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 03:42	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 03:42	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 03:42	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 03:42	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 03:42	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 03:42	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 03:42	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 03:42	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 03:42	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 03:42	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 03:42	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 03:42	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 03:42	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 03:42	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 03:42	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 03:42	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 03:42	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 03:42	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 03:42	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 03:42	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 03:42	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 03:42	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 03:42	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 03:42	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 03:42	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 03:42	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 03:42	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 03:42	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 03:42	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 03:42	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 03:42	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-2A

Date Collected: 01/07/15 14:15
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-4
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130		01/14/15 03:42	1
Dibromofluoromethane (Surr)	105		70 - 130		01/14/15 03:42	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		01/14/15 03:42	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 03:42	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-2D

Date Collected: 01/07/15 14:45
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 04:11	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 04:11	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 04:11	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 04:11	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 04:11	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 04:11	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 04:11	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 04:11	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 04:11	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 04:11	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 04:11	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 04:11	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 04:11	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 04:11	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 04:11	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 04:11	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 04:11	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 04:11	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 04:11	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 04:11	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 04:11	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 04:11	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 04:11	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 04:11	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 04:11	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 04:11	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 04:11	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 04:11	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 04:11	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 04:11	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 04:11	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 04:11	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 04:11	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 04:11	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 04:11	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 04:11	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 04:11	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 04:11	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 04:11	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 04:11	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 04:11	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 04:11	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 04:11	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 04:11	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 04:11	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 04:11	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 04:11	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-2D

Date Collected: 01/07/15 14:45
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-5

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130		01/14/15 04:11	1
Dibromofluoromethane (Surr)	108		70 - 130		01/14/15 04:11	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		01/14/15 04:11	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 04:11	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-3

Date Collected: 01/07/15 10:05
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 04:39	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 04:39	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 04:39	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 04:39	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 04:39	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 04:39	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 04:39	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 04:39	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 04:39	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 04:39	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 04:39	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 04:39	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 04:39	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 04:39	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 04:39	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 04:39	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 04:39	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 04:39	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 04:39	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 04:39	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 04:39	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 04:39	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 04:39	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 04:39	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 04:39	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 04:39	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 04:39	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 04:39	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 04:39	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 04:39	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 04:39	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 04:39	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 04:39	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 04:39	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 04:39	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 04:39	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 04:39	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 04:39	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 04:39	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 04:39	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 04:39	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 04:39	1
Trichlorofluoromethane	0.220	J	1.00	0.210	ug/L			01/14/15 04:39	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 04:39	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 04:39	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 04:39	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 04:39	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-3

Date Collected: 01/07/15 10:05
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-6
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		01/14/15 04:39	1
Dibromofluoromethane (Surr)	105		70 - 130		01/14/15 04:39	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		01/14/15 04:39	1
Toluene-d8 (Surr)	105		70 - 130		01/14/15 04:39	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-3D

Date Collected: 01/07/15 10:45
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 05:08	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 05:08	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 05:08	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 05:08	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 05:08	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 05:08	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 05:08	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 05:08	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 05:08	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 05:08	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 05:08	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 05:08	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 05:08	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 05:08	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 05:08	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 05:08	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 05:08	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 05:08	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 05:08	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 05:08	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 05:08	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 05:08	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 05:08	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 05:08	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 05:08	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 05:08	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 05:08	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 05:08	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 05:08	1
Methylene Chloride	**0.608**	**J B**	5.00	0.220	ug/L			01/14/15 05:08	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 05:08	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 05:08	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 05:08	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 05:08	1
Tetrachloroethene	**0.320**	**J**	1.00	0.140	ug/L			01/14/15 05:08	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 05:08	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 05:08	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 05:08	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 05:08	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 05:08	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 05:08	1
Trichloroethene	**0.622**	**J**	1.00	0.200	ug/L			01/14/15 05:08	1
Trichlorofluoromethane	**0.306**	**J**	1.00	0.210	ug/L			01/14/15 05:08	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 05:08	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 05:08	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 05:08	1
Xylenes, Total	**1.30**	**J**	2.00	0.380	ug/L			01/14/15 05:08	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-3D

Date Collected: 01/07/15 10:45
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-7
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		01/14/15 05:08	1
Dibromofluoromethane (Surr)	115		70 - 130		01/14/15 05:08	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 130		01/14/15 05:08	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 05:08	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-4

Date Collected: 01/07/15 08:00
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 05:36	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 05:36	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 05:36	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 05:36	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 05:36	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 05:36	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 05:36	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 05:36	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 05:36	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 05:36	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 05:36	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 05:36	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 05:36	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 05:36	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 05:36	1
cis-1,2-Dichloroethene	**1.49**		1.00	0.210	ug/L			01/14/15 05:36	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 05:36	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 05:36	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 05:36	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 05:36	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 05:36	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 05:36	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 05:36	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 05:36	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 05:36	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 05:36	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 05:36	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 05:36	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 05:36	1
Methylene Chloride	**0.457**	**J B**	5.00	0.220	ug/L			01/14/15 05:36	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 05:36	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 05:36	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 05:36	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 05:36	1
Tetrachloroethene	**2.30**		1.00	0.140	ug/L			01/14/15 05:36	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 05:36	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 05:36	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 05:36	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 05:36	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 05:36	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 05:36	1
Trichloroethene	**1.07**		1.00	0.200	ug/L			01/14/15 05:36	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 05:36	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 05:36	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 05:36	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 05:36	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 05:36	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-4

Date Collected: 01/07/15 08:00
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-8

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130		01/14/15 05:36	1
Dibromofluoromethane (Surr)	106		70 - 130		01/14/15 05:36	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		01/14/15 05:36	1
Toluene-d8 (Surr)	105		70 - 130		01/14/15 05:36	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-4D

Date Collected: 01/07/15 08:45
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 06:05	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 06:05	1
Benzene	**0.760**	**J**	1.00	0.200	ug/L			01/14/15 06:05	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 06:05	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 06:05	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 06:05	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 06:05	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 06:05	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 06:05	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 06:05	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 06:05	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 06:05	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 06:05	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 06:05	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 06:05	1
cis-1,2-Dichloroethene	**11.1**		1.00	0.210	ug/L			01/14/15 06:05	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 06:05	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 06:05	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 06:05	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 06:05	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 06:05	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 06:05	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 06:05	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 06:05	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 06:05	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 06:05	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 06:05	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 06:05	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 06:05	1
Methylene Chloride	**6.93**	**B**	5.00	0.220	ug/L			01/14/15 06:05	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 06:05	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 06:05	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 06:05	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 06:05	1
Tetrachloroethene	**1.39**		1.00	0.140	ug/L			01/14/15 06:05	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 06:05	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 06:05	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 06:05	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 06:05	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 06:05	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 06:05	1
Trichloroethene	**4.46**		1.00	0.200	ug/L			01/14/15 06:05	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 06:05	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 06:05	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 06:05	1
Vinyl chloride	**0.492**	**J**	1.00	0.180	ug/L			01/14/15 06:05	1
Xylenes, Total	**33.1**		2.00	0.380	ug/L			01/14/15 06:05	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-4D

Date Collected: 01/07/15 08:45
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-9

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		01/14/15 06:05	1
Dibromofluoromethane (Surr)	110		70 - 130		01/14/15 06:05	1
1,2-Dichloroethane-d4 (Surr)	105		70 - 130		01/14/15 06:05	1
Toluene-d8 (Surr)	106		70 - 130		01/14/15 06:05	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-11

Date Collected: 01/07/15 10:05
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-10
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 06:33	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 06:33	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 06:33	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 06:33	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 06:33	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 06:33	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 06:33	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 06:33	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 06:33	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 06:33	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 06:33	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 06:33	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 06:33	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 06:33	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 06:33	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 06:33	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 06:33	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 06:33	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 06:33	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 06:33	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 06:33	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 06:33	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 06:33	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 06:33	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 06:33	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 06:33	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 06:33	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 06:33	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 06:33	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 06:33	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 06:33	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 06:33	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 06:33	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 06:33	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 06:33	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 06:33	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 06:33	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 06:33	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 06:33	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 06:33	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 06:33	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 06:33	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 06:33	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 06:33	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 06:33	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 06:33	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 06:33	1

Client Sample Results

TestAmerica Job ID: 490-70140-1

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

Client Sample ID: MW-11

Date Collected: 01/07/15 10:05
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-10
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		01/14/15 06:33	1
Dibromofluoromethane (Surr)	103		70 - 130		01/14/15 06:33	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		01/14/15 06:33	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 06:33	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-11D

Date Collected: 01/07/15 10:35
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 07:01	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 07:01	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 07:01	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 07:01	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 07:01	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 07:01	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 07:01	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 07:01	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 07:01	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 07:01	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 07:01	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 07:01	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 07:01	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 07:01	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 07:01	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 07:01	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 07:01	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 07:01	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 07:01	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 07:01	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 07:01	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 07:01	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 07:01	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 07:01	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 07:01	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 07:01	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 07:01	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 07:01	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 07:01	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 07:01	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 07:01	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 07:01	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 07:01	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 07:01	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 07:01	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 07:01	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 07:01	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 07:01	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 07:01	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 07:01	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 07:01	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 07:01	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 07:01	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 07:01	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 07:01	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 07:01	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 07:01	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-11D

Date Collected: 01/07/15 10:35
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-11

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130		01/14/15 07:01	1
Dibromofluoromethane (Surr)	105		70 - 130		01/14/15 07:01	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		01/14/15 07:01	1
Toluene-d8 (Surr)	105		70 - 130		01/14/15 07:01	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-12

Date Collected: 01/07/15 12:20
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-12
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 07:30	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 07:30	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 07:30	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 07:30	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 07:30	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 07:30	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 07:30	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 07:30	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 07:30	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 07:30	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 07:30	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 07:30	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 07:30	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 07:30	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 07:30	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 07:30	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 07:30	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 07:30	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 07:30	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 07:30	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 07:30	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 07:30	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 07:30	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 07:30	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 07:30	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 07:30	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 07:30	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 07:30	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 07:30	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 07:30	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 07:30	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 07:30	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 07:30	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 07:30	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 07:30	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 07:30	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 07:30	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 07:30	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 07:30	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 07:30	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 07:30	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 07:30	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 07:30	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 07:30	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 07:30	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 07:30	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 07:30	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-12

Date Collected: 01/07/15 12:20
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-12

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130		01/14/15 07:30	1
Dibromofluoromethane (Surr)	108		70 - 130		01/14/15 07:30	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		01/14/15 07:30	1
Toluene-d8 (Surr)	105		70 - 130		01/14/15 07:30	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-12D

Date Collected: 01/07/15 12:10
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-13
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 07:58	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 07:58	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 07:58	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 07:58	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 07:58	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 07:58	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 07:58	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 07:58	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 07:58	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 07:58	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 07:58	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 07:58	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 07:58	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 07:58	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 07:58	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 07:58	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 07:58	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 07:58	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 07:58	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 07:58	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 07:58	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 07:58	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 07:58	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 07:58	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 07:58	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 07:58	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 07:58	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 07:58	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 07:58	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 07:58	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 07:58	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 07:58	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 07:58	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 07:58	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 07:58	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 07:58	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 07:58	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 07:58	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 07:58	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 07:58	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 07:58	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 07:58	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 07:58	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 07:58	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 07:58	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 07:58	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 07:58	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-12D

Date Collected: 01/07/15 12:10
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-13

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130		01/14/15 07:58	1
Dibromofluoromethane (Surr)	106		70 - 130		01/14/15 07:58	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		01/14/15 07:58	1
Toluene-d8 (Surr)	106		70 - 130		01/14/15 07:58	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: SW-1

Date Collected: 01/07/15 13:25
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-14
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 08:27	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 08:27	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 08:27	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 08:27	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 08:27	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 08:27	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 08:27	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 08:27	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 08:27	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 08:27	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 08:27	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 08:27	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 08:27	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 08:27	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 08:27	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 08:27	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 08:27	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 08:27	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 08:27	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 08:27	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 08:27	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 08:27	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 08:27	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 08:27	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 08:27	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 08:27	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 08:27	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 08:27	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 08:27	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 08:27	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 08:27	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 08:27	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 08:27	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 08:27	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 08:27	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 08:27	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 08:27	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 08:27	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 08:27	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 08:27	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 08:27	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 08:27	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 08:27	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 08:27	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 08:27	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 08:27	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 08:27	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: SW-1

Date Collected: 01/07/15 13:25
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-14

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130		01/14/15 08:27	1
Dibromofluoromethane (Surr)	107		70 - 130		01/14/15 08:27	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		01/14/15 08:27	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 08:27	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-4R

Date Collected: 01/07/15 11:40
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-15
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 08:55	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 08:55	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 08:55	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 08:55	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 08:55	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 08:55	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 08:55	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 08:55	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 08:55	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 08:55	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 08:55	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 08:55	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 08:55	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 08:55	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 08:55	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 08:55	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 08:55	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 08:55	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 08:55	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 08:55	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 08:55	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 08:55	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 08:55	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 08:55	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 08:55	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 08:55	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 08:55	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 08:55	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 08:55	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 08:55	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 08:55	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 08:55	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 08:55	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 08:55	1
Tetrachloroethene	**0.612**	**J**	1.00	0.140	ug/L			01/14/15 08:55	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 08:55	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 08:55	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 08:55	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 08:55	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 08:55	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 08:55	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 08:55	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 08:55	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 08:55	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 08:55	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 08:55	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 08:55	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-4R

Date Collected: 01/07/15 11:40
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-15
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130		01/14/15 08:55	1
Dibromofluoromethane (Surr)	112		70 - 130		01/14/15 08:55	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		01/14/15 08:55	1
Toluene-d8 (Surr)	105		70 - 130		01/14/15 08:55	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-4DR

Date Collected: 01/07/15 12:20
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-16
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 09:24	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 09:24	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 09:24	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 09:24	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 09:24	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 09:24	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 09:24	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 09:24	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 09:24	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 09:24	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 09:24	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 09:24	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 09:24	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 09:24	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 09:24	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 09:24	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 09:24	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 09:24	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 09:24	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 09:24	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 09:24	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 09:24	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 09:24	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 09:24	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 09:24	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 09:24	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 09:24	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 09:24	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 09:24	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 09:24	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 09:24	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 09:24	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 09:24	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 09:24	1
Tetrachloroethene	**0.221**	**J**	1.00	0.140	ug/L			01/14/15 09:24	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 09:24	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 09:24	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 09:24	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 09:24	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 09:24	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 09:24	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 09:24	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 09:24	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 09:24	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 09:24	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 09:24	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 09:24	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-4DR

Date Collected: 01/07/15 12:20
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-16

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130		01/14/15 09:24	1
Dibromofluoromethane (Surr)	105		70 - 130		01/14/15 09:24	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		01/14/15 09:24	1
Toluene-d8 (Surr)	104		70 - 130		01/14/15 09:24	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: FIELD BLANK

Lab Sample ID: 490-70140-17
Matrix: Water

Date Collected: 01/07/15 14:50
Date Received: 01/09/15 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 02:17	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 02:17	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 02:17	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 02:17	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 02:17	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 02:17	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 02:17	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 02:17	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 02:17	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 02:17	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 02:17	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 02:17	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 02:17	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 02:17	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 02:17	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 02:17	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 02:17	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 02:17	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 02:17	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 02:17	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 02:17	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 02:17	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 02:17	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 02:17	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 02:17	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 02:17	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 02:17	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 02:17	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 02:17	1
Methylene Chloride	ND		5.00	0.220	ug/L			01/14/15 02:17	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 02:17	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 02:17	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 02:17	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 02:17	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 02:17	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 02:17	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 02:17	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 02:17	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 02:17	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 02:17	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 02:17	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 02:17	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 02:17	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 02:17	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 02:17	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 02:17	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 02:17	1

Client Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: FIELD BLANK

Date Collected: 01/07/15 14:50
Date Received: 01/09/15 08:45

Lab Sample ID: 490-70140-17
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130		01/14/15 02:17	1
Dibromofluoromethane (Surr)	105		70 - 130		01/14/15 02:17	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		01/14/15 02:17	1
Toluene-d8 (Surr)	106		70 - 130		01/14/15 02:17	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-220087/5
Matrix: Water
Analysis Batch: 220087

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	2.66	ug/L			01/14/15 01:20	1
Acrylonitrile	ND		10.0	0.500	ug/L			01/14/15 01:20	1
Benzene	ND		1.00	0.200	ug/L			01/14/15 01:20	1
Bromochloromethane	ND		1.00	0.150	ug/L			01/14/15 01:20	1
Bromodichloromethane	ND		1.00	0.170	ug/L			01/14/15 01:20	1
Bromoform	ND		1.00	0.290	ug/L			01/14/15 01:20	1
Bromomethane	ND		1.00	0.350	ug/L			01/14/15 01:20	1
2-Butanone (MEK)	ND		50.0	2.64	ug/L			01/14/15 01:20	1
Carbon disulfide	ND		1.00	0.220	ug/L			01/14/15 01:20	1
Carbon tetrachloride	ND		1.00	0.180	ug/L			01/14/15 01:20	1
Chlorobenzene	ND		1.00	0.180	ug/L			01/14/15 01:20	1
Chlorodibromomethane	ND		1.00	0.250	ug/L			01/14/15 01:20	1
Chloroethane	ND		1.00	0.360	ug/L			01/14/15 01:20	1
Chloroform	ND		1.00	0.230	ug/L			01/14/15 01:20	1
Chloromethane	ND		1.00	0.360	ug/L			01/14/15 01:20	1
cis-1,2-Dichloroethene	ND		1.00	0.210	ug/L			01/14/15 01:20	1
cis-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 01:20	1
1,2-Dibromo-3-Chloropropane	ND		10.0	0.940	ug/L			01/14/15 01:20	1
1,2-Dibromoethane (EDB)	ND		1.00	0.210	ug/L			01/14/15 01:20	1
Dibromomethane	ND		1.00	0.450	ug/L			01/14/15 01:20	1
1,2-Dichlorobenzene	ND		1.00	0.190	ug/L			01/14/15 01:20	1
1,4-Dichlorobenzene	ND		1.00	0.170	ug/L			01/14/15 01:20	1
1,1-Dichloroethane	ND		1.00	0.240	ug/L			01/14/15 01:20	1
1,2-Dichloroethane	ND		1.00	0.200	ug/L			01/14/15 01:20	1
1,1-Dichloroethene	ND		1.00	0.250	ug/L			01/14/15 01:20	1
1,2-Dichloropropane	ND		1.00	0.250	ug/L			01/14/15 01:20	1
Ethylbenzene	ND		1.00	0.190	ug/L			01/14/15 01:20	1
2-Hexanone	ND		10.0	1.28	ug/L			01/14/15 01:20	1
Iodomethane	ND		10.0	1.50	ug/L			01/14/15 01:20	1
Methylene Chloride	0.4504	J	5.00	0.220	ug/L			01/14/15 01:20	1
4-Methyl-2-pentanone (MIBK)	ND		10.0	0.810	ug/L			01/14/15 01:20	1
Styrene	ND		1.00	0.280	ug/L			01/14/15 01:20	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.150	ug/L			01/14/15 01:20	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.190	ug/L			01/14/15 01:20	1
Tetrachloroethene	ND		1.00	0.140	ug/L			01/14/15 01:20	1
Toluene	ND		1.00	0.170	ug/L			01/14/15 01:20	1
trans-1,4-Dichloro-2-butene	ND		5.00	0.460	ug/L			01/14/15 01:20	1
trans-1,2-Dichloroethene	ND		1.00	0.230	ug/L			01/14/15 01:20	1
trans-1,3-Dichloropropene	ND		1.00	0.170	ug/L			01/14/15 01:20	1
1,1,1-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 01:20	1
1,1,2-Trichloroethane	ND		1.00	0.190	ug/L			01/14/15 01:20	1
Trichloroethene	ND		1.00	0.200	ug/L			01/14/15 01:20	1
Trichlorofluoromethane	ND		1.00	0.210	ug/L			01/14/15 01:20	1
1,2,3-Trichloropropane	ND		1.00	0.230	ug/L			01/14/15 01:20	1
Vinyl acetate	ND		10.0	1.71	ug/L			01/14/15 01:20	1
Vinyl chloride	ND		1.00	0.180	ug/L			01/14/15 01:20	1
Xylenes, Total	ND		2.00	0.380	ug/L			01/14/15 01:20	1

QC Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-220087/5
Matrix: Water
Analysis Batch: 220087

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130		01/14/15 01:20	1
Dibromofluoromethane (Surr)	108		70 - 130		01/14/15 01:20	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		01/14/15 01:20	1
Toluene-d8 (Surr)	105		70 - 130		01/14/15 01:20	1

Lab Sample ID: LCS 490-220087/3
Matrix: Water
Analysis Batch: 220087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	182.2		ug/L		73	54 - 145
Acrylonitrile	500	356.8		ug/L		71	61 - 140
Benzene	50.0	50.79		ug/L		102	80 - 121
Bromochloromethane	50.0	51.68		ug/L		103	78 - 129
Bromodichloromethane	50.0	51.83		ug/L		104	75 - 129
Bromoform	50.0	50.21		ug/L		100	46 - 145
Bromomethane	50.0	42.08		ug/L		84	41 - 150
2-Butanone (MEK)	250	213.0		ug/L		85	62 - 133
Carbon disulfide	50.0	41.61		ug/L		83	77 - 126
Carbon tetrachloride	50.0	46.09		ug/L		92	64 - 147
Chlorobenzene	50.0	52.84		ug/L		106	80 - 120
Chlorodibromomethane	50.0	52.70		ug/L		105	69 - 133
Chloroethane	50.0	47.04		ug/L		94	72 - 120
Chloroform	50.0	48.09		ug/L		96	73 - 129
Chloromethane	50.0	45.15		ug/L		90	12 - 150
cis-1,2-Dichloroethene	50.0	48.98		ug/L		98	76 - 125
cis-1,3-Dichloropropene	50.0	52.17		ug/L		104	74 - 140
1,2-Dibromo-3-Chloropropane	50.0	50.08		ug/L		100	54 - 125
1,2-Dibromoethane (EDB)	50.0	48.90		ug/L		98	80 - 129
Dibromomethane	50.0	50.07		ug/L		100	71 - 125
1,2-Dichlorobenzene	50.0	53.58		ug/L		107	80 - 121
1,4-Dichlorobenzene	50.0	51.26		ug/L		103	80 - 120
1,1-Dichloroethane	50.0	44.21		ug/L		88	78 - 125
1,2-Dichloroethane	50.0	47.28		ug/L		95	77 - 121
1,t-Dichloroethene	50.0	45.24		ug/L		90	79 - 124
1,2-Dichloropropane	50.0	49.52		ug/L		99	75 - 120
Ethylbenzene	50.0	54.36		ug/L		109	80 - 130
2-Hexanone	250	229.1		ug/L		92	60 - 142
Iodomethane	50.0	50.10		ug/L		100	40 - 150
Methylene Chloride	50.0	40.95		ug/L		82	79 - 123
4-Methyl-2-pentanone (MIBK)	250	231.3		ug/L		93	60 - 137
Styrene	50.0	54.91		ug/L		110	80 - 127
1,1,1,2-Tetrachloroethane	50.0	52.30		ug/L		105	74 - 135
1,1,2,2-Tetrachloroethane	50.0	47.35		ug/L		95	69 - 131
Tetrachloroethene	50.0	55.15		ug/L		110	80 - 126
Toluene	50.0	54.48		ug/L		109	80 - 126
trans-1,4-Dichloro-2-butene	50.0	51.10		ug/L		102	41 - 147
trans-1,2-Dichloroethene	50.0	42.06		ug/L		84	79 - 126

QC Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-220087/3
Matrix: Water
Analysis Batch: 220087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	50.0	51.25		ug/L		102	63 - 134
1,1,1-Trichloroethane	50.0	50.87		ug/L		102	78 - 135
1,1,2-Trichloroethane	50.0	50.15		ug/L		100	80 - 124
Trichloroethene	50.0	54.48		ug/L		109	80 - 123
Trichlorofluoromethane	50.0	48.21		ug/L		96	65 - 124
1,2,3-Trichloropropane	50.0	51.54		ug/L		103	70 - 131
Vinyl acetate	100	55.74		ug/L		56	54 - 139
Vinyl chloride	50.0	47.20		ug/L		94	68 - 120
Xylenes, Total	100	108.8		ug/L		109	80 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
Dibromofluoromethane (Surr)	*109*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: 490-70140-2 MS
Matrix: Water
Analysis Batch: 220087

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		250	184.3		ug/L		74	45 - 141
Acrylonitrile	ND		500	363.2		ug/L		73	50 - 148
Benzene	ND		50.0	50.96		ug/L		102	75 - 133
Bromochloromethane	ND		50.0	51.48		ug/L		103	67 - 139
Bromodichloromethane	ND		50.0	53.83		ug/L		108	70 - 140
Bromoform	ND		50.0	52.75		ug/L		105	42 - 147
Bromomethane	ND		50.0	38.42		ug/L		77	16 - 163
2-Butanone (MEK)	ND		250	207.3		ug/L		83	50 - 138
Carbon disulfide	ND		50.0	36.44		ug/L		73	48 - 152
Carbon tetrachloride	ND		50.0	53.90		ug/L		108	62 - 164
Chlorobenzene	ND		50.0	56.95		ug/L		114	80 - 129
Chlorodibromomethane	ND		50.0	55.22		ug/L		110	66 - 140
Chloroethane	ND		50.0	44.25		ug/L		89	58 - 137
Chloroform	ND		50.0	50.78		ug/L		102	66 - 138
Chloromethane	ND		50.0	38.83		ug/L		78	10 - 169
cis-1,2-Dichloroethene	ND		50.0	50.50		ug/L		101	68 - 138
cis-1,3-Dichloropropene	ND		50.0	53.46		ug/L		107	71 - 141
1,2-Dibromo-3-Chloropropane	ND		50.0	50.93		ug/L		102	52 - 126
1,2-Dibromoethane (EDB)	ND		50.0	49.95		ug/L		100	75 - 137
Dibromomethane	ND		50.0	51.36		ug/L		103	58 - 140
1,2-Dichlorobenzene	ND		50.0	56.59		ug/L		113	79 - 128
1,4-Dichlorobenzene	ND		50.0	54.98		ug/L		110	78 - 126
1,1-Dichloroethane	ND		50.0	46.90		ug/L		94	71 - 139
1,2-Dichloroethane	ND		50.0	49.39		ug/L		99	64 - 136
1,1-Dichloroethene	ND		50.0	50.37		ug/L		101	70 - 142
1,2-Dichloropropane	ND		50.0	50.16		ug/L		100	67 - 131
Ethylbenzene	ND		50.0	58.83		ug/L		118	79 - 139

QC Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-70140-2 MS
Matrix: Water
Analysis Batch: 220087

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	ND		250	218.6		ug/L		87	50 - 150
Iodomethane	ND		50.0	49.55		ug/L		99	34 - 191
Methylene Chloride	ND		50.0	43.72		ug/L		87	64 - 139
4-Methyl-2-pentanone (MIBK)	ND		250	223.2		ug/L		89	50 - 147
Styrene	ND		50.0	58.81		ug/L		118	61 - 148
1,1,1,2-Tetrachloroethane	ND		50.0	56.58		ug/L		113	73 - 141
1,1,2,2-Tetrachloroethane	ND		50.0	48.38		ug/L		97	56 - 143
Tetrachloroethene	ND		50.0	60.26		ug/L		121	72 - 145
Toluene	ND		50.0	56.71		ug/L		113	75 - 136
trans-1,4-Dichloro-2-butene	ND		50.0	54.58		ug/L		109	29 - 156
trans-1,2-Dichloroethene	ND		50.0	43.61		ug/L		87	66 - 143
trans-1,3-Dichloropropene	ND		50.0	52.54		ug/L		105	59 - 135
1,1,1-Trichloroethane	ND		50.0	54.45		ug/L		109	76 - 149
1,1,2-Trichloroethane	ND		50.0	51.86		ug/L		104	74 - 134
Trichloroethene	ND		50.0	56.49		ug/L		113	73 - 144
Trichlorofluoromethane	ND		50.0	51.59		ug/L		103	58 - 139
1,2,3-Trichloropropane	ND		50.0	52.41		ug/L		105	53 - 144
Vinyl acetate	ND		100	60.05		ug/L		60	37 - 154
Vinyl chloride	ND		50.0	44.90		ug/L		90	56 - 129
Xylenes, Total	ND		100	116.9		ug/L		117	74 - 141

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
Dibromofluoromethane (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: 490-70140-2 MSD
Matrix: Water
Analysis Batch: 220087

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		250	194.9		ug/L		78	45 - 141	6	21
Acrylonitrile	ND		500	371.6		ug/L		74	50 - 148	2	18
Benzene	ND		50.0	53.31		ug/L		107	75 - 133	5	17
Bromochloromethane	ND		50.0	52.19		ug/L		104	67 - 139	1	17
Bromodichloromethane	ND		50.0	56.66		ug/L		113	70 - 140	5	18
Bromoform	ND		50.0	54.36		ug/L		109	42 - 147	3	16
Bromomethane	ND		50.0	47.21		ug/L		94	16 - 163	21	50
2-Butanone (MEK)	ND		250	207.0		ug/L		83	50 - 138	0	19
Carbon disulfide	ND		50.0	40.66		ug/L		81	48 - 152	11	21
Carbon tetrachloride	ND		50.0	53.77		ug/L		108	62 - 164	0	19
Chlorobenzene	ND		50.0	59.01		ug/L		118	80 - 129	4	14
Chlorodibromomethane	ND		50.0	57.98		ug/L		116	66 - 140	5	15
Chloroethane	ND		50.0	48.78		ug/L		98	58 - 137	10	20
Chloroform	ND		50.0	49.44		ug/L		99	66 - 138	3	18
Chloromethane	ND		50.0	42.60		ug/L		85	10 - 169	9	31
cis-1,2-Dichloroethene	ND		50.0	49.55		ug/L		99	68 - 138	2	17

QC Sample Results

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-70140-2 MSD
Matrix: Water
Analysis Batch: 220087

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	ND		50.0	55.69		ug/L		111	71 - 141	4	15
1,2-Dibromo-3-Chloropropane	ND		50.0	54.20		ug/L		108	52 - 126	6	24
1,2-Dibromoethane (EDB)	ND		50.0	51.57		ug/L		103	75 - 137	3	15
Dibromomethane	ND		50.0	53.32		ug/L		107	58 - 140	4	16
1,2-Dichlorobenzene	ND		50.0	58.67		ug/L		117	79 - 128	4	15
1,4-Dichlorobenzene	ND		50.0	56.89		ug/L		114	78 - 126	3	15
1,1-Dichloroethane	ND		50.0	47.09		ug/L		94	71 - 139	0	17
1,2-Dichloroethane	ND		50.0	50.76		ug/L		102	64 - 136	3	17
1,1-Dichloroethene	ND		50.0	54.08		ug/L		108	70 - 142	7	17
1,2-Dichloropropane	ND		50.0	52.79		ug/L		106	67 - 131	5	17
Ethylbenzene	ND		50.0	61.28		ug/L		123	79 - 139	4	15
2-Hexanone	ND		250	232.4		ug/L		93	50 - 150	6	15
Iodomethane	ND		50.0	54.63		ug/L		109	34 - 191	10	23
Methylene Chloride	ND		50.0	46.82		ug/L		94	64 - 139	7	17
4-Methyl-2-pentanone (MIBK)	ND		250	237.0		ug/L		95	50 - 147	6	17
Styrene	ND		50.0	61.62		ug/L		123	61 - 148	5	24
1,1,1,2-Tetrachloroethane	ND		50.0	58.43		ug/L		117	73 - 141	3	16
1,1,2,2-Tetrachloroethane	ND		50.0	50.03		ug/L		100	56 - 143	3	20
Tetrachloroethene	ND		50.0	62.79		ug/L		126	72 - 145	4	16
Toluene	ND		50.0	59.34		ug/L		119	75 - 136	5	15
trans-1,4-Dichloro-2-butene	ND		50.0	56.68		ug/L		113	29 - 156	4	26
trans-1,2-Dichloroethene	ND		50.0	44.58		ug/L		89	66 - 143	2	16
trans-1,3-Dichloropropene	ND		50.0	55.75		ug/L		112	59 - 135	6	14
1,1,1-Trichloroethane	ND		50.0	54.62		ug/L		109	76 - 149	0	17
1,1,2-Trichloroethane	ND		50.0	53.92		ug/L		108	74 - 134	4	15
Trichloroethene	ND		50.0	59.19		ug/L		118	73 - 144	5	17
Trichlorofluoromethane	ND		50.0	51.81		ug/L		104	58 - 139	0	18
1,2,3-Trichloropropane	ND		50.0	54.49		ug/L		109	53 - 144	4	19
Vinyl acetate	ND		100	60.97		ug/L		61	37 - 154	2	21
Vinyl chloride	ND		50.0	48.14		ug/L		96	56 - 129	7	17
Xylenes, Total	ND		100	121.5		ug/L		121	74 - 141	4	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

QC Association Summary

TestAmerica Job ID: 490-70140-1

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

GC/MS VOA

Analysis Batch: 220087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-70140-1	TWP KLAN5	Total/NA	R ater	B260K	
490-70140-2	MR -1	Total/NA	R ater	B260K	
490-70140-2 MS	MR -1	Total/NA	R ater	B260K	
490-70140-2 MSD	MR -1	Total/NA	R ater	B260K	
490-70140-3	MR -1D	Total/NA	R ater	B260K	
490-70140-4	MR -2A	Total/NA	R ater	B260K	
490-70140-8	MR -2D	Total/NA	R ater	B260K	
490-70140-6	MR -3	Total/NA	R ater	B260K	
490-70140-7	MR -3D	Total/NA	R ater	B260K	
490-70140-B	MR -4	Total/NA	R ater	B260K	
490-70140-9	MR -4D	Total/NA	R ater	B260K	
490-70140-10	MR -11	Total/NA	R ater	B260K	
490-70140-11	MR -11D	Total/NA	R ater	B260K	
490-70140-12	MR -12	Total/NA	R ater	B260K	
490-70140-13	MR -12D	Total/NA	R ater	B260K	
490-70140-14	SR -1	Total/NA	R ater	B260K	
490-70140-18	MR -4W	Total/NA	R ater	B260K	
490-70140-16	MR -4DW	Total/NA	R ater	B260K	
490-70140-17	FIELD KLAN5	Total/NA	R ater	B260K	
LCS 490-220087/3	Lab Control Sample	Total/NA	R ater	B260K	
MK 490-220087/8	Method Klank	Total/NA	R ater	B260K	

Lab Chronicle

TestAmerica Job ID: 490-70140-1

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

Client Sample ID: TRIP BLANK

Lab Sample ID: 490-70140-1
Matrix: Water

Date Collected: 01/07/15 09:30
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 01:49	JMG	TAL NSH

Client Sample ID: MW-1

Lab Sample ID: 490-70140-2
Matrix: Water

Date Collected: 01/07/15 08:45
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 02:46	JMG	TAL NSH

Client Sample ID: MW-1D

Lab Sample ID: 490-70140-3
Matrix: Water

Date Collected: 01/07/15 09:00
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 03:14	JMG	TAL NSH

Client Sample ID: MW-2A

Lab Sample ID: 490-70140-4
Matrix: Water

Date Collected: 01/07/15 14:15
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 03:42	JMG	TAL NSH

Client Sample ID: MW-2D

Lab Sample ID: 490-70140-5
Matrix: Water

Date Collected: 01/07/15 14:45
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 04:11	JMG	TAL NSH

Client Sample ID: MW-3

Lab Sample ID: 490-70140-6
Matrix: Water

Date Collected: 01/07/15 10:05
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 04:39	JMG	TAL NSH

Lab Chronicle

TestAmerica Job ID: 490-70140-1

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

Client Sample ID: MW-3D
Lab Sample ID: 490-70140-7
Matrix: Water
Date Collected: 01/07/15 10:45
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 05:08	JMG	TAL NSH

Client Sample ID: MW-4
Lab Sample ID: 490-70140-8
Matrix: Water
Date Collected: 01/07/15 08:00
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 05:36	JMG	TAL NSH

Client Sample ID: MW-4D
Lab Sample ID: 490-70140-9
Matrix: Water
Date Collected: 01/07/15 08:45
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 06:05	JMG	TAL NSH

Client Sample ID: MW-11
Lab Sample ID: 490-70140-10
Matrix: Water
Date Collected: 01/07/15 10:05
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 06:33	JMG	TAL NSH

Client Sample ID: MW-11D
Lab Sample ID: 490-70140-11
Matrix: Water
Date Collected: 01/07/15 10:35
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 07:01	JMG	TAL NSH

Client Sample ID: MW-12
Lab Sample ID: 490-70140-12
Matrix: Water
Date Collected: 01/07/15 12:20
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 07:30	JMG	TAL NSH

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Client Sample ID: MW-12D
Lab Sample ID: 490-70140-13
Date Collected: 01/07/15 12:10
Matrix: Water
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 07:58	JMG	TAL NSH

Client Sample ID: SW-1
Lab Sample ID: 490-70140-14
Date Collected: 01/07/15 13:25
Matrix: Water
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 08:27	JMG	TAL NSH

Client Sample ID: MW-4R
Lab Sample ID: 490-70140-15
Date Collected: 01/07/15 11:40
Matrix: Water
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 08:55	JMG	TAL NSH

Client Sample ID: MW-4DR
Lab Sample ID: 490-70140-16
Date Collected: 01/07/15 12:20
Matrix: Water
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 09:24	JMG	TAL NSH

Client Sample ID: FIELD BLANK
Lab Sample ID: 490-70140-17
Date Collected: 01/07/15 14:50
Matrix: Water
Date Received: 01/09/15 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	220087	01/14/15 02:17	JMG	TAL NSH

Laboratory References:
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Duke Energy Corporation
Project/Site: MNS Landfill #1 J14120369

TestAmerica Job ID: 490-70140-1

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
North Carolina (WW/SW)	State Program	4	387	12-31-15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-70140 Chain of Custody

Cooler Received/Opened On 1/9/2015 @ 0845

1. Tracking # 9971 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 94660220

2. Temperature of rep. sample or temp blank when opened: 0.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES..NO...NA

   If yes, how many and where: (1) Front

5. Were the seals intact, signed, and dated correctly? YES..NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) MDM

7. Were custody seals on containers: YES NO and intact YES...NO...NA

   Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES..NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES..NO...NA

12. Did all container labels and tags agree with custody papers? YES..NO...NA

13a. Were VOA vials received? YES..NO...NA

   b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES..NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) MDM

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO...NA

   b. Did the bottle labels indicate that the correct preservatives were used YES..NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) MDM

17. Were custody papers properly filled out (ink, signed, etc)? YES..NO...NA

18. Did you sign the custody papers in the appropriate place? YES..NO...NA

19. Were correct containers used for the analysis requested? YES..NO...NA

20. Was sufficient amount of sample sent in each container? YES..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) MDM

I certify that I attached a label with the unique LIMS number to each container (intial) MDM

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 11/28/12

Loc: 490
70140
1/23/2015

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

DUKE ENERGY

Duke Energy Analytical Laboratories
Mail Code MG03A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(980) 875-5245
Fax: (980) 875-5038

Analytical Laboratory Use Only

LIMS#J14120369 | MATRIX: GW-RCRA | Samples Originating From | NC SC

Logged By: JM | Date & Time: 1/8/15 805 | Cooler Temp (C): 0.5

Vendor: TAMERICA TEST AMERICA

PO#: 1115151

MR #

SAMPLE PROGRAM: Ground Water ✓ | Water | RCRA Waste | NPDES | Drinking | UST

[12]Page 1 of 1
DISTRIBUTION
ORIGINAL to LAB
COPY to CLIENT

1)Project Name: MNS LANDFILL #1 PERMIT # 66-04
2)Phone No: 980-875-5257
3)Client: T. Hunsucker / Chuck Campbell
4)Fax No:
5)Business Unit: 20036
6)Process: BLDFLGN
7)Resp. To: MC00
8)Task ID:
9)Activity ID:
10)Mail Code: MG03A3

Customer must Complete

Customer to complete all appropriate NON-SHADED areas.

[15]Preserv.: 1=HCL 2=H_2SO_4 3=HNO_3 4=ice 5=None

[16]Analysis Required

LAB USE ONLY [17]Lab ID	[13]Sample Description or ID	[14]Collection Information Date	Time	Signature	[18]Grab	AlK_4_FIX, SO4, Cl (IC)	Metals Prep - TRM (ICP-EPA 200.7) Al, Ba, Ca, Cr, K, Mg, Na (7), Hg (7470) (1), (IMS-EPA 200.8) As, Cd, Pb, Se (4)	ALK_FIX4.5, SO4, Cl (IC)	VOCs (EPA 8260B) (See Attached List) - TAmerica				CHLORINE (PPM) TEST STRIP		
						500 mL 4	500 mL 2	500 mL 4	40 mL 1-4				N/A	N/A	
2014034385	TRIP BLANK	1/7/15	0430	WC	X				3				N/A	3	1
2014034386	MW-1	1/7/15	0845	WC	X		1	1	3				✓	5	2
2014034387	MW-1D	1/7/15	0900	WC	X		1	1	3				✓	5	3
2014034388	MW-2A	1/7/15	1415	WC	X		1	1	3				✓	5	4
2014034389	MW-2D	1/7/15	1445	WC	X	1	1		3				✓	5	5
2014034390	MW-3	1/7/15	1005	PSP	X		1	1	3				✓	5	6
2014034391	MW-3D	1/7/15	1045	PSP	X		1	1	3				✓	5	7
2014034392	MW-4	1/7/15	0900	PSP	X		1	1	3				✓	5	8
2014034393	MW-4D	1/7/15	0845	PSP	X		1	1	3				✓	5	9
2014034394	MW-11	1/7/15	1005	WC	X	1	1		3				✓	5	10
2014034395	MW-11D	1/7/15	1035	WC	X	1	1		3				✓	5	11
2014034396	MW-12	1/7/15	1220	WC	X	1	1		3				✓	5	12
2014034397	MW-12D	1/7/15	1210	WC	X		1	1	3				✓	5	13

Customer to complete appropriate columns to right

Customer to sign & date below

[21]Relinquished By	Date/Time	Accepted By	Date/Time
Paul Purcell	1/8/15 0445	[illegible]	1/8/15 730
[illegible]	1/8/15	[illegible]	Date/Time
[illegible]	Date/Time	Accepted By	Date/Time
[illegible]	1/8/15 1200	Sealed/Lock Opened By [illegible]	Date/Time 1-9-15@ 0845

[24]Comments:

Customer, important please indicate desired turnaround

[22]Requested Turnaround
14 Days 1/22/15
7 Days
48 Hr
*Other
Cost Will Apply
*Add

1/23/2015

Loc: 490
70140
#1
A

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

DUKE ENERGY

Duke Energy Analytical Laboratories
Mail Code MG03A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N.C. 28078
(980) 875-5245
Fax: (980) 875-5038

Analytical Laboratory Use Only

LIMS # J14120369 | MATRIX: GW-RCRA | Samples Originating From | NC SC

Logged By: DM | Date & Time: 1/8/15 | Cooler Temp (C): 0.6

SAMPLE PROGRAM: Ground Water ___ NPDES ___ Drinking Water ___ UST ___ RCRA Waste ___

Page DIST ORIG COP

Customer must Complete

1)Project Name: MNS LANDFILL #1 PERMIT # 66-04
2)Phone No: 980-875-5257
3)Client: T. Hunsucker / Chuck Campbell
4)Fax No:
5)Business Unit: 20036
6)Process: BLDFLGN
7)Resp. To: MC00
8)Task ID:
9)Activity ID.
10)Mail Code: MG03A3

Vendor: TEST AMERICA 1115151

PO #:

MR #:

Customer to complete all appropriate NON-SHADED areas.

LAB USE ONLY

Customer to complete appropriate columns to right

11 Lab ID	13 Sample Description or ID	14 Collection Date	Time	Signature	15 Grab	16 Preserv.: 1=HCL 2=H_2SO_4 3=HNO_3 4=Ice 5=None	Volume	18 Analyte Required	ALK_LL_FIX, SO4, Cl (IC)	Metals Prep - TRM (ICP-EPA 200.7) Ag, Ba, Ca, Cr, K, Mg, Na (7), Hg (7470) (1), (IMS-EPA 200.8) As, Cd, Pb, Se (4)	ALK_FIX4.5, SO4, Cl (IC)	VOCs (EPA 8260B) (See Attached List) - TAmerica				CHLORINE (PPM) TEST STRIP	
									4	3	4	4				N/A	
2014034398	SW-1	1/7/15	1325	PSP	X					1	1	3				Ø	5
2014034399	MW-4R	1/7/15	1140	PSP	X					1	1	3				Ø	5
2014034400	MW-4DR	1/7/15	1220	PSP	X					1	1	3				Ø	5
2014034401	FIELD BLANK	1/7/15	1450	PSP	X				1	1		3				N/A	5

Customer to sign & date below

	Date/Time		Date/Time
21)Relinquished By: Paul Purcell	1/8/15 0445	Accepted By: [signature]	1/8/15 730
21)Relinquished By: [signature]	1/8/15	Accepted By: FED EX	Date/Time
21)Relinquished By: [signature]	Date/Time	Accepted By:	Date/Time
23)Seal/Locked By: [signature]	1/8/15 1200	Sealed/Lock Opened By: [signature]	1-9-15 @ 0845 0°C

24)Comments:

Customer, important please indicate desired turnaround

22 Requested Turnaround
14 Days 1/21/15
*7 Days
*48 Hr
*Other
Cost Will Apply
*Add

McGuire Landfill #1

COMPOUNDS REQUIRED FOR 8260 ANALYSES

COMPOUND	CASS No.
Acetone	67-64-1
Acrylonitrile	107-13-1
Benzene	71-43-2
Bromochloromethane	74-97-5
Bromodichloromethane	75-27-4
Bromoform; Tribromomethane	75-25-2
Carbon disulfide	75-15-0
Carbon tetrachloride	56-23-5
Chlorobenzene	108-90-7
Chloroethane; Ethyl chloride	75-00-3
Chloroform; Trichloromethane	67-66-3
Dibromochloromethane; Chlorodibromomethane	124-48-1
1,2-Dibromo-3-chlorpropane; DBCP	96-12-8
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7
trans-1,4-Dichloro-2-butene	110-57-6
1,1-Dichloroethane; Ethylidene chloride	75-34-3
1,2-Dichloroethane; Ethlyene dichloride	107-06-2
1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5
1,2-Dichlorpropane; Propylene dichloride	78-87-5
cis-1,3-Dichlorpropene	10061-01-5
trans-1,3-Dichlorpropene	10061-02-6
Ethylbenzene	100-41-4
2-hexanone; Methyl butyl ketone	591-78-6
Methyl bromide; Bromomethane	74-83-9
Methyl chloride; Chloromethane	74-87-3
Methylene bromide Dibromomethane	74-95-3
Methylene chloride; Dichloromethane	75-09-2
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3
Methyl iodide; Iodomethane	74-88-4
4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1
Styrene	100-42-5
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4
Toluene	108-88-3
1,1,1-Trochlorethane; Methylchloroform	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethylene; Trichlorethene	79-01-6
Trichlorofluoromethane; CFC-11	75-69-4
1,2,3-Trichloropropane	96-18-4
Vinyl acetate	108-05-4
Vinyl chloride	75-01-4
Xylenes	1330-20-7

Login Sample Receipt Checklist

Job Number: 490-70140-1

Client: Duke Energy Corporation

List Source: TestAmerica Nashville

Login Number: 70140
List Number: 1
Creator: McBride, Mike

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

DUKE ENERGY

Duke Energy Analytical Laboratories
Mail Code MG03A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(980) 875-5245
Fax: (980) 875-5038

Analytical Laboratory Use Only

LIMS #J14120369 | MATRIX: GW-RCRA

Logged By: DM | Date & Time: 1/8/15 805

Vendor: TEST AMERICA
TEST AMERICA
1115151

PO #

MR #

Page 1 of 2

DISTRIBUTION
ORIGINAL to LAB,
COPY to CLIENT

Revised 12/02/2014

1)Project Name: MNS LANDFILL #1 PERMIT # 66-04
2)Phone No: 980 875 5257
3)Client: T. Hunsucker / Chuck Campbell
4)Fax No:
5)Business Unit: 20038
6)Process: BLDFLGN
7)Resp To: MG00
8)Task ID:
9)Activity ID:
10)Mail Code: MG03A3

Customer must complete

Customer to complete all appropriate non shaded areas.

Lab ID	Sample Description or ID	Collection Date	Collection Time	Signature	Matrix	Preservative	Volume	500 ML	500 ML	500 ML	40 ML				N/A	Total # of containers
							Tests to be Analyzed (Check Required)	AL_LL_FIX_SO4, Cl (IC)	Metals Prep - TRM (CP-EPA 200.7) Ag, Ba, Ca, Cr, K, Mg, Na (7), Hg (7-47.0) 1.1) (NAE-EPA-200.8) As, Cd, Pb, Se (4)	ALK_FIX4 S_S04 Cl (IC)	VOCs (EPA 8260B) (See Attached List) TAmerica				CHLORINE (PP & TEST STRIP)	
2014034385	TRIP BLANK	1/7/15	0430	VOC	1	X					3				N/A	3
2014034386	MW-1	1/7/15	0845	VOC	6	X			1	1	3					5
2014034387	MW-1D	1/7/15	0900	VOC	6	X			1	1	3					5
2014034388	MW-2A	1/7/15	1415	VOC	6	X			1	1	3					5
2014034389	MW-2D	1/7/15	1445	VOC	6	X		1	1		3					5
2014034390	MW-3	1/7/15	1000	PSP	6	X			1	1	3					5
2014034391	MW-3D	1/7/15	1015	PSP	6	X			1	1	3					5
2014034392	MW-4	1/7/15	0900	PSP	6	X			1	1	3					5
2014034393	MW-4D	1/7/15	0945	PSP	6	X			1	1	3					5
2014034394	MW-11	1/7/15	1005	VOC	6	X		1	1		3					5
2014034395	MW-11D	1/7/15	1035	VOC	6	X		1	1		3					5
2014034396	MW-12	1/7/15	1220	VOC	6	X		1	1	1	3					5
2014034397	MW-12D	1/7/15	1210	VOC	6	X										

Customer to sign & date below

Relinquished By	Date/Time	Accepted By	Date/Time
Paul Purcell	1/8/15 0445	[illegible]	1/8/15 730
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1/8/15 1200	[illegible]	[illegible]

24)Comments: Regulatory Agency: NCDENR/DWM - SW Section - State EDD Format Required / Permit # 66-04 Use indicated or compatible analytical methods

Customer: Important please indicate desired turnaround

Requested Turnaround
14 Days 5
7 Days
48 Hr

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-1_ML1 [MNS Landfill 1 / MW-1 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363872
Collection Start: 1/7/2015 08:45:00
Collection End: 1/7/2015 08:45:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<4.45E-02	0.00E+00	9.30E-01				
Beta	1.29E+00	7.61E-01	1.22E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<5.93E+00	0.00E+00	5.93E+00	<15		<1000	LLD OK
Co-58	<5.37E+00	0.00E+00	5.37E+00	<15		<1000	LLD OK
Fe-59	<1.16E+01	0.00E+00	1.16E+01	<30		<400	LLD OK
Co-60	<6.20E+00	0.00E+00	6.20E+00	<15		<300	LLD OK
Zn-65	<8.17E+00	0.00E+00	8.17E+00	<30		<300	LLD OK
Zr-95	<1.06E+01	0.00E+00	1.06E+01	<15		<400	LLD OK
Nb-95	<5.98E+00	0.00E+00	5.98E+00	<15		<400	LLD OK
I-131	<8.45E+00	0.00E+00	8.45E+00	<15			LLD OK
Cs-134	<5.45E+00	0.00E+00	5.45E+00	<15		<30	LLD OK
Cs-137	<5.83E+00	0.00E+00	5.83E+00	<18		<50	LLD OK
BaLa-140	<9.36E+00	0.00E+00	9.36E+00	<15		<200	LLD OK
Be-7	<3.95E+01	0.00E+00	3.95E+01				
K-40	<7.75E+01	0.00E+00	7.75E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-3.5E+01	0.00E+00	2.00E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-1D_ML1 [MNS Landfill 1 / MW-1D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363873
Collection Start: 1/7/2015 09:00:00
Collection End: 1/7/2015 09:00:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-4.8E-03	0.00E+00	9.28E-01				
Beta	1.24E+00	7.58E-01	1.22E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<4.84E+00	0.00E+00	4.84E+00	<15		<1000	LLD OK
Co-58	<4.32E+00	0.00E+00	4.32E+00	<15		<1000	LLD OK
Fe-59	<8.80E+00	0.00E+00	8.80E+00	<30		<400	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-1D_ML1 [MNS Landfill 1 / MW-1D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363873
Collection Start: 1/7/2015 09:00:00
Collection End: 1/7/2015 09:00:00

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Co-60	<3.91E+00	0.00E+00	3.91E+00	<15		<300	LLD OK
Zn-65	<7.69E+00	0.00E+00	7.69E+00	<30		<300	LLD OK
Zr-95	<5.72E+00	0.00E+00	5.72E+00	<15		<400	LLD OK
Nb-95	<4.92E+00	0.00E+00	4.92E+00	<15		<400	LLD OK
I-131	<8.79E+00	0.00E+00	8.79E+00	<15			LLD OK
Cs-134	<5.77E+00	0.00E+00	5.77E+00	<15		<30	LLD OK
Cs-137	<3.13E+00	0.00E+00	3.13E+00	<18		<50	LLD OK
BaLa-140	<5.70E+00	0.00E+00	5.70E+00	<15		<200	LLD OK
Be-7	<3.42E+01	0.00E+00	3.42E+01				
K-40	<6.31E+01	0.00E+00	6.31E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<3.29E+01	0.00E+00	2.00E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-2A_ML1 [MNS Landfill 1 / MW-2A (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363874
Collection Start: 1/7/2015 14:15:00
Collection End: 1/7/2015 14:15:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-1.5E-03	0.00E+00	9.16E-01				
Beta	<3.93E-01	0.00E+00	1.22E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<3.15E+00	0.00E+00	3.15E+00	<15		<1000	LLD OK
Co-58	<3.24E+00	0.00E+00	3.24E+00	<15		<1000	LLD OK
Fe-59	<1.00E+01	0.00E+00	1.00E+01	<30		<400	LLD OK
Co-60	<3.03E+00	0.00E+00	3.03E+00	<15		<300	LLD OK
Zn-65	<7.68E+00	0.00E+00	7.68E+00	<30		<300	LLD OK
Zr-95	<7.24E+00	0.00E+00	7.24E+00	<15		<400	LLD OK
Nb-95	<4.19E+00	0.00E+00	4.19E+00	<15		<400	LLD OK
I-131	<5.02E+00	0.00E+00	5.02E+00	<15			LLD OK
Cs-134	<4.06E+00	0.00E+00	4.06E+00	<15		<30	LLD OK
Cs-137	<4.16E+00	0.00E+00	4.16E+00	<18		<50	LLD OK
BaLa-140	<7.36E+00	0.00E+00	7.36E+00	<15		<200	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-2A_ML1 [MNS Landfill 1 / MW-2A (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363874
Collection Start: 1/7/2015 14:15:00
Collection End: 1/7/2015 14:15:00

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Be-7	<2.82E+01	0.00E+00	2.82E+01				
K-40	<5.40E+01	0.00E+00	5.40E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<5.06E+00	0.00E+00	2.00E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-2D_ML1 [MNS Landfill 1 / MW-2D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363875
Collection Start: 1/7/2015 14:45:00
Collection End: 1/7/2015 14:45:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-5.0E-02	0.00E+00	8.88E-01				
Beta	7.30E-01	7.27E-01	1.21E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<2.59E+00	0.00E+00	2.59E+00	<15		<1000	LLD OK
Co-58	<3.23E+00	0.00E+00	3.23E+00	<15		<1000	LLD OK
Fe-59	<6.57E+00	0.00E+00	6.57E+00	<30		<400	LLD OK
Co-60	<3.91E+00	0.00E+00	3.91E+00	<15		<300	LLD OK
Zn-65	<8.79E+00	0.00E+00	8.79E+00	<30		<300	LLD OK
Zr-95	<7.20E+00	0.00E+00	7.20E+00	<15		<400	LLD OK
Nb-95	<3.94E+00	0.00E+00	3.94E+00	<15		<400	LLD OK
I-131	<5.76E+00	0.00E+00	5.76E+00	<15			LLD OK
Cs-134	<3.54E+00	0.00E+00	3.54E+00	<15		<30	LLD OK
Cs-137	<4.50E+00	0.00E+00	4.50E+00	<18		<50	LLD OK
BaLa-140	<5.44E+00	0.00E+00	5.44E+00	<15		<200	LLD OK
Be-7	<2.80E+01	0.00E+00	2.80E+01				
K-40	<7.28E+01	0.00E+00	7.28E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-1.0E+01	0.00E+00	2.02E+02	<250		<20000	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-3_ML1 [MNS Landfill 1 / MW-3 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363876
Collection Start: 1/7/2015 10:05:00
Collection End: 1/7/2015 10:05:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-1.4E-01	0.00E+00	8.79E-01				
Beta	<5.18E-01	0.00E+00	1.21E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<4.26E+00	0.00E+00	4.26E+00	<15		<1000	LLD OK
Co-58	<5.39E+00	0.00E+00	5.39E+00	<15		<1000	LLD OK
Fe-59	<1.10E+01	0.00E+00	1.10E+01	<30		<400	LLD OK
Co-60	<6.59E+00	0.00E+00	6.59E+00	<15		<300	LLD OK
Zn-65	<1.40E+01	0.00E+00	1.40E+01	<30		<300	LLD OK
Zr-95	<1.02E+01	0.00E+00	1.02E+01	<15		<400	LLD OK
Nb-95	<5.87E+00	0.00E+00	5.87E+00	<15		<400	LLD OK
I-131	<8.37E+00	0.00E+00	8.37E+00	<15			LLD OK
Cs-134	<7.03E+00	0.00E+00	7.03E+00	<15		<30	LLD OK
Cs-137	<6.16E+00	0.00E+00	6.16E+00	<18		<50	LLD OK
BaLa-140	<6.08E+00	0.00E+00	6.08E+00	<15		<200	LLD OK
Be-7	<4.73E+01	0.00E+00	4.73E+01				
K-40	2.16E+02	7.37E+01	7.62E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-6.0E+01	0.00E+00	1.98E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-3D_ML1 [MNS Landfill 1 / MW-3D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363877
Collection Start: 1/7/2015 10:45:00
Collection End: 1/7/2015 10:45:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-1.6E-01	0.00E+00	9.88E-01				
Beta	<2.84E-01	0.00E+00	1.24E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<5.81E+00	0.00E+00	5.81E+00	<15		<1000	LLD OK
Co-58	<6.49E+00	0.00E+00	6.49E+00	<15		<1000	LLD OK
Fe-59	<8.20E+00	0.00E+00	8.20E+00	<30		<400	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-3D_ML1 [MNS Landfill 1 / MW-3D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363877
Collection Start: 1/7/2015 10:45:00
Collection End: 1/7/2015 10:45:00

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Co-60	<5.37E+00	0.00E+00	5.37E+00	<15		<300	LLD OK
Zn-65	<9.49E+00	0.00E+00	9.49E+00	<30		<300	LLD OK
Zr-95	<9.74E+00	0.00E+00	9.74E+00	<15		<400	LLD OK
Nb-95	<5.44E+00	0.00E+00	5.44E+00	<15		<400	LLD OK
I-131	<8.11E+00	0.00E+00	8.11E+00	<15			LLD OK
Cs-134	<6.08E+00	0.00E+00	6.08E+00	<15		<30	LLD OK
Cs-137	<5.07E+00	0.00E+00	5.07E+00	<18		<50	LLD OK
BaLa-140	<1.02E+01	0.00E+00	1.02E+01	<15		<200	LLD OK
Be-7	<3.68E+01	0.00E+00	3.68E+01				
K-40	8.55E+01	4.96E+01	6.34E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-7.8E+01	0.00E+00	2.00E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-4_ML1 [MNS Landfill 1 / MW-4 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363878
Collection Start: 1/7/2015 08:00:00
Collection End: 1/7/2015 08:00:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-3.3E-01	0.00E+00	1.02E+00				
Beta	<3.42E-01	0.00E+00	1.25E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<3.72E+00	0.00E+00	3.72E+00	<15		<1000	LLD OK
Co-58	<3.58E+00	0.00E+00	3.58E+00	<15		<1000	LLD OK
Fe-59	<8.56E+00	0.00E+00	8.56E+00	<30		<400	LLD OK
Co-60	<5.09E+00	0.00E+00	5.09E+00	<15		<300	LLD OK
Zn-65	<7.30E+00	0.00E+00	7.30E+00	<30		<300	LLD OK
Zr-95	<6.28E+00	0.00E+00	6.28E+00	<15		<400	LLD OK
Nb-95	<5.17E+00	0.00E+00	5.17E+00	<15		<400	LLD OK
I-131	<6.45E+00	0.00E+00	6.45E+00	<15			LLD OK
Cs-134	<3.93E+00	0.00E+00	3.93E+00	<15		<30	LLD OK
Cs-137	<4.45E+00	0.00E+00	4.45E+00	<18		<50	LLD OK
BaLa-140	<6.43E+00	0.00E+00	6.43E+00	<15		<200	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-4_ML1 [MNS Landfill 1 / MW-4 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363878
Collection Start: 1/7/2015 08:00:00
Collection End: 1/7/2015 08:00:00

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Be-7	<2.87E+01	0.00E+00	2.87E+01				
K-40	<7.94E+01	0.00E+00	7.94E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-5.1E+01	0.00E+00	2.02E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-4R_ML1 [MNS Landfill 1 / MW-4R (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363879
Collection Start: 1/7/2015 11:40:00
Collection End: 1/7/2015 11:40:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-4.2E-01	0.00E+00	9.92E-01				
Beta	<2.56E-01	0.00E+00	1.24E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<5.68E+00	0.00E+00	5.68E+00	<15		<1000	LLD OK
Co-58	<5.38E+00	0.00E+00	5.38E+00	<15		<1000	LLD OK
Fe-59	<9.80E+00	0.00E+00	9.80E+00	<30		<400	LLD OK
Co-60	<3.86E+00	0.00E+00	3.86E+00	<15		<300	LLD OK
Zn-65	<1.12E+01	0.00E+00	1.12E+01	<30		<300	LLD OK
Zr-95	<7.63E+00	0.00E+00	7.63E+00	<15		<400	LLD OK
Nb-95	<5.42E+00	0.00E+00	5.42E+00	<15		<400	LLD OK
I-131	<7.14E+00	0.00E+00	7.14E+00	<15			LLD OK
Cs-134	<7.42E+00	0.00E+00	7.42E+00	<15		<30	LLD OK
Cs-137	<4.95E+00	0.00E+00	4.95E+00	<18		<50	LLD OK
BaLa-140	<6.03E+00	0.00E+00	6.03E+00	<15		<200	LLD OK
Be-7	<4.83E+01	0.00E+00	4.83E+01				
K-40	1.55E+02	6.86E+01	8.45E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<2.54E+00	0.00E+00	2.02E+02	<250		<20000	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-4D_ML1 [MNS Landfill 1 / MW-4D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363880
Collection Start: 1/7/2015 08:45:00
Collection End: 1/7/2015 08:45:00

ALPHABETA — Gross Alpha / Beta Analysis Waters
Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-5.7E-02	0.00E+00	1.03E+00				
Beta	7.17E-01	7.50E-01	1.25E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis
Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<4.50E+00	0.00E+00	4.50E+00	<15		<1000	LLD OK
Co-58	<4.81E+00	0.00E+00	4.81E+00	<15		<1000	LLD OK
Fe-59	<6.91E+00	0.00E+00	6.91E+00	<30		<400	LLD OK
Co-60	<5.38E+00	0.00E+00	5.38E+00	<15		<300	LLD OK
Zn-65	<6.55E+00	0.00E+00	6.55E+00	<30		<300	LLD OK
Zr-95	<7.81E+00	0.00E+00	7.81E+00	<15		<400	LLD OK
Nb-95	<5.22E+00	0.00E+00	5.22E+00	<15		<400	LLD OK
I-131	<7.20E+00	0.00E+00	7.20E+00	<15			LLD OK
Cs-134	<5.24E+00	0.00E+00	5.24E+00	<15		<30	LLD OK
Cs-137	<4.45E+00	0.00E+00	4.45E+00	<18		<50	LLD OK
BaLa-140	<5.94E+00	0.00E+00	5.94E+00	<15		<200	LLD OK
Be-7	<4.07E+01	0.00E+00	4.07E+01				
K-40	4.88E+01	4.26E+01	6.47E+01				

H3 — Tritium Analysis of Water
Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-1.8E+01	0.00E+00	2.03E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-4DR_ML1 [MNS Landfill 1 / MW-4DR (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363881
Collection Start: 1/7/2015 12:20:00
Collection End: 1/7/2015 12:20:00

ALPHABETA — Gross Alpha / Beta Analysis Waters
Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-2.2E-01	0.00E+00	9.96E-01				
Beta	1.17E+00	7.65E-01	1.24E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis
Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<3.82E+00	0.00E+00	3.82E+00	<15		<1000	LLD OK
Co-58	<3.72E+00	0.00E+00	3.72E+00	<15		<1000	LLD OK
Fe-59	<8.79E+00	0.00E+00	8.79E+00	<30		<400	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-4DR_ML1 [MNS Landfill 1 / MW-4DR (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363881
Collection Start: 1/7/2015 12:20:00
Collection End: 1/7/2015 12:20:00

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Co-60	<3.51E+00	0.00E+00	3.51E+00	<15		<300	LLD OK
Zn-65	<8.27E+00	0.00E+00	8.27E+00	<30		<300	LLD OK
Zr-95	<6.54E+00	0.00E+00	6.54E+00	<15		<400	LLD OK
Nb-95	<4.75E+00	0.00E+00	4.75E+00	<15		<400	LLD OK
I-131	<6.31E+00	0.00E+00	6.31E+00	<15			LLD OK
Cs-134	<4.29E+00	0.00E+00	4.29E+00	<15		<30	LLD OK
Cs-137	<4.81E+00	0.00E+00	4.81E+00	<18		<50	LLD OK
BaLa-140	<1.43E+00	0.00E+00	1.43E+00	<15		<200	LLD OK
Be-7	<2.69E+01	0.00E+00	2.69E+01				
K-40	<6.10E+01	0.00E+00	6.10E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<6.24E+01	0.00E+00	1.99E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-11_ML1 [MNS Landfill 1 / MW-11 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363882
Collection Start: 1/7/2015 10:05:00
Collection End: 1/7/2015 10:05:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<1.18E-01	0.00E+00	7.38E-01				
Beta	<-1.5E-01	0.00E+00	1.18E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<3.25E+00	0.00E+00	3.25E+00	<15		<1000	LLD OK
Co-58	<4.05E+00	0.00E+00	4.05E+00	<15		<1000	LLD OK
Fe-59	<5.34E+00	0.00E+00	5.34E+00	<30		<400	LLD OK
Co-60	<4.07E+00	0.00E+00	4.07E+00	<15		<300	LLD OK
Zn-65	<8.58E+00	0.00E+00	8.58E+00	<30		<300	LLD OK
Zr-95	<7.81E+00	0.00E+00	7.81E+00	<15		<400	LLD OK
Nb-95	<3.66E+00	0.00E+00	3.66E+00	<15		<400	LLD OK
I-131	<6.15E+00	0.00E+00	6.15E+00	<15			LLD OK
Cs-134	<3.00E+00	0.00E+00	3.00E+00	<15		<30	LLD OK
Cs-137	<4.27E+00	0.00E+00	4.27E+00	<18		<50	LLD OK
BaLa-140	<7.79E+00	0.00E+00	7.79E+00	<15		<200	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-11_ML1 [MNS Landfill 1 / MW-11 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363882
Collection Start: 1/7/2015 10:05:00
Collection End: 1/7/2015 10:05:00

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Be-7	<3.26E+01	0.00E+00	3.26E+01				
K-40	5.22E+01	3.80E+01	5.34E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-1.2E+02	0.00E+00	1.99E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-11D_ML1 [MNS Landfill 1 / MW-11D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363883
Collection Start: 1/7/2015 10:35:00
Collection End: 1/7/2015 10:35:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-2.5E-01	0.00E+00	7.75E-01				
Beta	<-1.8E-02	0.00E+00	1.19E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<4.19E+00	0.00E+00	4.19E+00	<15		<1000	LLD OK
Co-58	<2.96E+00	0.00E+00	2.96E+00	<15		<1000	LLD OK
Fe-59	<7.19E+00	0.00E+00	7.19E+00	<30		<400	LLD OK
Co-60	<4.89E+00	0.00E+00	4.89E+00	<15		<300	LLD OK
Zn-65	<7.03E+00	0.00E+00	7.03E+00	<30		<300	LLD OK
Zr-95	<6.10E+00	0.00E+00	6.10E+00	<15		<400	LLD OK
Nb-95	<3.95E+00	0.00E+00	3.95E+00	<15		<400	LLD OK
I-131	<7.26E+00	0.00E+00	7.26E+00	<15			LLD OK
Cs-134	<4.51E+00	0.00E+00	4.51E+00	<15		<30	LLD OK
Cs-137	<4.16E+00	0.00E+00	4.16E+00	<18		<50	LLD OK
BaLa-140	<6.67E+00	0.00E+00	6.67E+00	<15		<200	LLD OK
Be-7	<3.28E+01	0.00E+00	3.28E+01				
K-40	<5.40E+01	0.00E+00	5.40E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-4.6E+01	0.00E+00	2.00E+02	<250		<20000	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-12_ML1 [MNS Landfill 1 / MW-12 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363884
Collection Start: 1/7/2015 12:20:00
Collection End: 1/7/2015 12:20:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<1.58E-01	0.00E+00	7.44E-01				
Beta	<-5.4E-02	0.00E+00	1.18E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<6.08E+00	0.00E+00	6.08E+00	<15		<1000	LLD OK
Co-58	<5.64E+00	0.00E+00	5.64E+00	<15		<1000	LLD OK
Fe-59	<6.52E+00	0.00E+00	6.52E+00	<30		<400	LLD OK
Co-60	<6.24E+00	0.00E+00	6.24E+00	<15		<300	LLD OK
Zn-65	<8.94E+00	0.00E+00	8.94E+00	<30		<300	LLD OK
Zr-95	<9.08E+00	0.00E+00	9.08E+00	<15		<400	LLD OK
Nb-95	<8.20E+00	0.00E+00	8.20E+00	<15		<400	LLD OK
I-131	<8.80E+00	0.00E+00	8.80E+00	<15			LLD OK
Cs-134	<5.10E+00	0.00E+00	5.10E+00	<15		<30	LLD OK
Cs-137	<6.16E+00	0.00E+00	6.16E+00	<18		<50	LLD OK
BaLa-140	<8.85E+00	0.00E+00	8.85E+00	<15		<200	LLD OK
Be-7	<4.66E+01	0.00E+00	4.66E+01				
K-40	1.22E+02	6.80E+01	9.37E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-2.5E+01	0.00E+00	2.00E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: MW-12D_ML1 [MNS Landfill 1 / MW-12D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363885
Collection Start: 1/7/2015 12:10:00
Collection End: 1/7/2015 12:10:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-3.8E-01	0.00E+00	9.03E-01				
Beta	<-9.3E-02	0.00E+00	1.21E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<4.32E+00	0.00E+00	4.32E+00	<15		<1000	LLD OK
Co-58	<4.05E+00	0.00E+00	4.05E+00	<15		<1000	LLD OK
Fe-59	<8.10E+00	0.00E+00	8.10E+00	<30		<400	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: MW-12D_ML1 [MNS Landfill 1 / MW-12D (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363885
Collection Start: 1/7/2015 12:10:00
Collection End: 1/7/2015 12:10:00

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Co-60	<4.45E+00	0.00E+00	4.45E+00	<15		<300	LLD OK
Zn-65	<8.58E+00	0.00E+00	8.58E+00	<30		<300	LLD OK
Zr-95	<8.12E+00	0.00E+00	8.12E+00	<15		<400	LLD OK
Nb-95	<4.11E+00	0.00E+00	4.11E+00	<15		<400	LLD OK
I-131	<5.91E+00	0.00E+00	5.91E+00	<15			LLD OK
Cs-134	<4.42E+00	0.00E+00	4.42E+00	<15		<30	LLD OK
Cs-137	<4.61E+00	0.00E+00	4.61E+00	<18		<50	LLD OK
BaLa-140	<6.59E+00	0.00E+00	6.59E+00	<15		<200	LLD OK
Be-7	<3.26E+01	0.00E+00	3.26E+01				
K-40	4.43E+01	3.00E+01	3.71E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<7.62E+00	0.00E+00	2.01E+02	<250		<20000	LLD OK

Station: MCGUIRE
Location: SW-1_ML1 [MNS Landfill 1 / SW-1 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363886
Collection Start: 1/7/2015 13:25:00
Collection End: 1/7/2015 13:25:00

ALPHABETA — Gross Alpha / Beta Analysis Waters

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Alpha	<-2.0E-01	0.00E+00	9.28E-01				
Beta	1.28E+00	7.59E-01	1.22E+00	<4			LLD OK

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Mn-54	<3.93E+00	0.00E+00	3.93E+00	<15		<1000	LLD OK
Co-58	<3.57E+00	0.00E+00	3.57E+00	<15		<1000	LLD OK
Fe-59	<7.44E+00	0.00E+00	7.44E+00	<30		<400	LLD OK
Co-60	<3.15E+00	0.00E+00	3.15E+00	<15		<300	LLD OK
Zn-65	<6.53E+00	0.00E+00	6.53E+00	<30		<300	LLD OK
Zr-95	<7.05E+00	0.00E+00	7.05E+00	<15		<400	LLD OK
Nb-95	<4.45E+00	0.00E+00	4.45E+00	<15		<400	LLD OK
I-131	<4.67E+00	0.00E+00	4.67E+00	<15			LLD OK
Cs-134	<4.18E+00	0.00E+00	4.18E+00	<15		<30	LLD OK
Cs-137	<3.46E+00	0.00E+00	3.46E+00	<18		<50	LLD OK
BaLa-140	<3.88E+00	0.00E+00	3.88E+00	<15		<200	LLD OK

Radiological Data for MCGUIRE

Station: MCGUIRE
Location: SW-1_ML1 [MNS Landfill 1 / SW-1 (LANDFILL)]
Job: MNS_4DEC2014_A
GW McGuire Landfill 1 Groundwater

Sample #: 363886
Collection Start: 1/7/2015 13:25:00
Collection End: 1/7/2015 13:25:00

GAMMAGW — Gamma Spectroscopy Ground Water Analysis

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
Be-7	<2.86E+01	0.00E+00	2.86E+01				
K-40	<7.58E+01	0.00E+00	7.58E+01				

H3 — Tritium Analysis of Water

Units: pCi/l

	Activity	2 Sigma Error	Calculated MDA	SLC/ODCM LLD	Fraction	SLC/ODCM RPT LVL	
H3GW	<-7.6E+00	0.00E+00	2.02E+02	<250		<20000	LLD OK

EnRad Laboratory
MNS Building 7405 (MG03A2)
13339 Hagers Ferry Road
Huntersville, NC 28078
(980)875-5371

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

DUKE ENERGY

Duke Energy EnRad Laboratories
Mail Code MG03A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(980) 875-5371
Fax: (980) 875-5559

EnRad Laboratory Use Only

LIMS #: MNS_4DEC2014_A | Sample Class: GROUNDWATER | Samples Originating From: NC √ SC ___

Logged By: Jill Lockridge | Date & Time: 12/4/2014 13:00

Vendor | Cooler Temp (C)

SAMPLE PROGRAM: Ground Water √ | NPDES ___ | Drinking Water ___ | UST ___ | RCRA Waste ___

[19]Page 1 of 1

DISTRIBUTION ORIGINAL to LAB, COPY to CLIENT

Revised 12/3/2014

Customer must Complete

1)Project Name: MNS LANDFILL #1 PERMIT # 60-04
2)Phone No: 980-875-5257
3)Client: T. Hunsucker / Chuck Campbell
4)Fax No:
5)Business Unit: 20036
6)Process: BLDFLGN
7)Resp. To: MC00
8)Task ID:
9)Activity ID:
10)Mail Code: MG03A3

PO #
MR #

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

Volume: 4000 ML (3), 300 ML (5), 500 ML (3)

Customer to complete all appropriate NON-SHADED areas.

Customer to complete appropriate columns to right

[16]Analysis Required

LAB USE ONLY [11]Lab ID	[13]Sample Description or ID	[14]Collection Information Date	Time	Signature	TESTS [18]Grab	GAMMA	TRITIUM	GROSS A & B	[20]Total # of Containers
363872	MW-1	1/7/15	0845	JDC	X	1	1	1	3
363873	MW-1D	1/7/15	0900	JDC	X	1	1	1	3
363874	MW-2A	1/7/15	1415	JDC	X	1	1	1	3
363875	MW-2D	1/7/15	1445	JDC	X	1	1	1	3
363876	MW-3	1/7/15	1005	PSP	X	1	1	1	3
363877	MW-3D	1/7/15	1045	PSP	X	1	1	1	3
363878	MW-4	1/7/15	0800	PSP	X	1	1	1	3
363879	MW-4R	1/7/15	1140	PSP	X	1	1	1	3
363880	MW-4D	1/7/15	0845	PSP	X	1	1	1	3
363881	MW-4DR	1/7/15	1220	PSP	X	1	1	1	3
363882	MW-11	1/7/15	1005	JDC	X	1	1	1	3
363883	MW-11D	1/7/15	1035	JDC	X	1	1	1	3
363884	MW-12	1/7/15	1220	JDC	X	1	1	1	3
363885	MW-12D	1/7/15	1210	JDC	X	1	1	1	3
363886	SW-1	1/7/15	1325	PSP	X	1	1	1	3
363889	QC SAMPLE (WELL MW-1) (ENR_4DEC2014_A)	1/7/15	0845	JDC					

Customer to sign & date below

	Date/Time		Date/Time
21)Relinquished By: Pearl Powell	1/8/15 0640	Accepted By: Jill Lockridge	1/8/15 0640
21)Relinquished By		Accepted By:	
21)Relinquished By		Accepted By:	
23)Seal/Locked By		Seal/Lock Opened By	

24)Comments:

Customer, important please indicate desired turnaround

[22]Requested Turnaround
- 14 Days √
- *7 Days ___
- *48 Hr ___
- *Other ___
- * Add. Cost Will Apply