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NC DENR

# Environmental Monitoring Reporting Form

Division of Waste Management - Solid Waste

**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):

Joyce Engineering

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

Name: Hannu Kempainen P.G.

Phone: (336)-323-0092

E-mail: hkempain@joyceengineering.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Town of Kernersville Landfill	Freeman Road Kernersville, NC 27284	34-04	.0500	April 27, 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     Methane gas monitoring data  
 Groundwater monitoring data from private water supply wells     Corrective action data (specify) MNA  
 Leachate monitoring data     Other(specify) \_\_\_\_\_  
 Surface water monitoring data

### 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.

Hannu Kempainen P.G.

Senior Project Consultant

(336)-323-0092

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Signature

Date

Affix NC License and Professional Geologist Seal

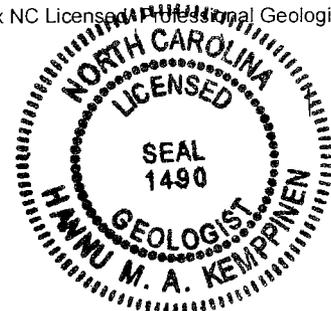
2211 W. Meadowview Rd. Ste. 101, Greensboro, NC 27407

Facility Representative Address

C-0782

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

Revised 6/2009





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August 10, 2015

Ms. Jaclynn Drummond  
Compliance Hydrogeologist  
NC Department of Environment and Natural Resources  
Division of Waste Management – Solid Waste Section  
2090 US Highway 70  
Swannanoa, Nc 28778

**RE: First Semiannual Water Quality Monitoring Report of 2015  
Town of Kernersville Landfill, Permit No. 34-04  
Forsyth County, North Carolina  
JOYCE Project No. 00838.1501.12 Task No. 02**

Dear Ms. Drummond:

On behalf of the Town of Kernersville, Joyce Engineering is submitting the *First Semiannual Water Quality Monitoring Report of 2015* for the closed Town of Kernersville Landfill, Permit No. 34-04. The attached report contains electronic versions of the complete report and all appendices for the April 2015 sampling event. Also attached is the North Carolina Environmental Monitoring Reporting Form for the April 2015 monitoring event.

If you wish to have a hard copy of the report, drawings, or appendices, we will be happy to provide it upon your request. Please feel free to contact me or Alex Everhart at (336) 323-0092 if you have any questions regarding this report.

Sincerely,  
**JOYCE ENGINEERING**

A handwritten signature in blue ink that reads "Hannu Kempainen".

Hannu Kempainen P.G.  
Senior Project Consultant

Attachment

C: Thad Buck – Town of Kernersville, Solid Waste Superintendent

**PREPARED FOR:**

TOWN OF KERNERSVILLE  
PUBLIC WORKS DEPARTMENT  
P.O. Box 728  
KERNERSVILLE, NORTH CAROLINA 27285-0728



**TOWN OF KERNERSVILLE LANDFILL  
PERMIT NO. 34-04**

**FIRST SEMIANNUAL WATER QUALITY MONITORING  
REPORT OF 2015**

**AUGUST 2015**

**PREPARED BY:**



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**First Semiannual Water Quality Monitoring Report of 2015  
Town of Kernersville Landfill  
Forsyth County, North Carolina**

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**First Semiannual Water Quality Monitoring Report of 2015  
Town of Kernersville Landfill  
Forsyth County, North Carolina**

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## 1.0 INTRODUCTION

### 1.1 Site Information

The Town of Kernersville Landfill is a closed, unlined municipal solid waste (MSW) landfill located on approximately 58.2 acres in Forsyth and Guilford Counties, NC, approximately 10 miles north of the City of Kernersville. The waste disposal area comprises approximately 13.8 acres. The property boundary is indicated on an excerpt from the 7.5 minutes USGS topographic map for Belews Creek, North Carolina (Figure 1). The facility was issued a Permit to Operate on May 15, 1985 and a letter of closure was issued on December 10, 1991.

The area surrounding the landfill is zoned residential/agricultural and contains open fields and woodlands. The landfill is separated to the North from the Waste Management Piedmont Landfill and Recycling Center Facility by Freeman Road. The landfill is bounded to the south by an unnamed tributary of Belews Creek.

### 1.2 Site Geology and Hydrogeology

The Town of Kernersville Landfill is located in the Piedmont physiographic province of North Carolina and is underlain by intrusive granitic rocks of Pennsylvanian to Permian age which are part of the Charlotte Belt Geologic Unit. The uppermost aquifer is unconfined and includes both saprolite and uppermost fractured bedrock, which are well connected. The groundwater level measurements taken on April 27, 2015, were used to construct the groundwater surface contours shown in Drawing 1. Historical static water levels are provided in Table 1A. Well construction parameters can be found in Table 1B. Groundwater flow at the site is generally to the southwest.

Using the hydraulic gradients along the flow paths shown on Drawing 1, the linear flow velocity ( $V$ ) was estimated using the modified Darcy equation:  $V=Ki/n$ . The hydraulic gradient ( $i$ ) is 0.03 ft/ft. An effective porosity value ( $n$ ) of 30 percent was estimated and a hydraulic conductivity ( $K$ ) 1.73 ft/day was estimated from slug tests completed by JOYCE in November 2013 at the Town of Kernersville Landfill. The calculated groundwater flow rate averages approximately 74.20 ft/year. A summary of the hydraulic gradients and linear flow velocities is provided in Table 2.

### 1.3 Regulatory Status

The Town of Kernersville Landfill is currently monitoring groundwater in accordance with criteria set forth in Title 15A Subchapter 13B .0500 of the North Carolina Solid Waste Management Rules (NCSWMR) for municipal solid waste landfills (MSWLF) closed prior to October 9, 1993.

Based on the presence of constituents above 2L standards that could potentially be crossing the facility boundary, NCDENR requested that Kernersville submit a Groundwater Assessment Plan

to evaluate site conditions as they relate to groundwater quality. The Groundwater Assessment Report was submitted to NCDENR on May 13, 2013. The Groundwater Assessment Report concluded that, based on site hydrogeology, it is very unlikely that the site impacts above 2L standards are crossing the boundary.

In a July 16, 2013, response to the Groundwater Assessment Report, NCDENR determined that despite the conclusion of the Assessment Report, the detection of VOCs at concentrations that exceed 2L standards beyond the compliance boundary of the site constitutes a violation of Solid Waste Section regulations. As required by NCDENR JOYCE submitted a Corrective Action Plan (CAP) on behalf of the Town of Kernersville Landfill in July 2014. NCDENR approved the Corrective Action Plan in a letter dated November 4, 2014.

## 2.0 FACILITY MONITORING PROGRAM

### 2.1 Groundwater Monitoring Program

The current groundwater compliance monitoring network includes six monitoring wells, including one upgradient well and five downgradient wells. These wells are summarized below, along with their current monitoring program status.

Monitoring Well	Classification	Monitoring Program	Total Depth from TOC (ft)
MW-1	Former Background	Water Levels Only	34.69
MW-2	Compliance/MNA	Detection (.0500)/CAP	13.18
MW-3S	Compliance/MNA	Detection (.0500)/CAP	24.00
MW-3D	Compliance/MNA	Detection (.0500)/CAP	56.96
MW-4	Compliance/MNA	Detection (.0500)/CAP	14.40
MW-5	Compliance	Detection (.0500)	11.36
MW-6	Background/MNA	Detection (.0500)/CAP	20.46

\*TOC = Top of casing.

Corrective Action Plan (CAP): Monitored Natural Attenuation (MNA) and Phytoremediation

The locations of the monitoring wells are shown on Drawing 1. Existing monitoring well MW-6 serves as the background well for the facility. Monitoring well MW-6 replaced MW-1 as the facility's background well due to infrequent opportunities to sample the well as a result of low well volumes or the well-being dry. Downgradient monitoring wells MW-2, -3S, -3D, -4, and -5 are monitored as part of the compliance network for the facility. MW-1 is monitored for water levels only, as conditions permit. As a condition of the CAP monitoring wells MW-2, -3S, -3D, -4 and -6 are now monitored for the MNA constituents; nitrate, sulfate, chloride, sulfide, alkalinity, total organic carbon, methane, ethane, ethene, volatile fatty acids, dissolved hydrogen, biological oxygen demand, chemical oxygen demand.

Groundwater samples are collected semiannually during the second and fourth quarters. Samples are analyzed for all constituents listed in the NCSWMR Appendix I and MNA parameters during both the first and second semiannual events.

## 2.2 Surface Water Monitoring Program

Surface water at the Town of Kernersville Landfill is monitored semiannually in conjunction with the groundwater sampling events. Samples are collected from three surface water monitoring points (SW-1, SW-2, and SW-3). The locations of the surface water monitoring points are shown on Drawing No. 1.

Surface water samples are collected and analyzed for the NCSWMR Appendix I list of constituents during both semiannual monitoring events. The results are compared to the 15A NCAC 2B (NC 2B) Surface Water Standards in a value-to-value comparison. These surface water monitoring points are summarized below, along with their current monitoring program status.

Surface Point	Classification	Monitoring Program
SW-1	Up Stream/Compliance	Surface Water
SW-2	Compliance	Surface Water
SW-3	Compliance	Surface Water

## 3.0 FIRST SEMIANNUAL SAMPLING EVENT OF 2015

### 3.1 Field Work and Visual Inspection

In order to detect potential releases of leachate and/or landfill gas migration in a timely manner, a visual inspection program has been implemented at the Town of Kernersville Landfill. This inspection program involves field personnel making the following observations:

- Observation of stress induced on the biological community (i.e., dead or dying vegetation),
- Indications of leachate impact (i.e., seeps, impacted surface water),
- Observations of erosion; and
- Negative changes around the waste facility.

On April 27, 2015, Joyce Engineering (JOYCE) personnel visited the facility to purge and sample the facility's monitoring wells MW-2, MW-3S, MW-3D, MW-4 and MW-5. Well MW-6 was dry and was not sampled. Prior to purging, the depth to static water level was measured for all monitoring wells with an electronic water level indicator, accurate to 0.01 foot. MW-1 was measured for a static water level only.

Monitoring wells were purged and sampled using either disposable bailers or a peristaltic pump. Measurements of temperature, pH, specific conductivity, dissolved oxygen, oxidation reduction

potential and turbidity were recorded in the site specific log book prior to purging, after each purge volume, and during sampling. Prior to sampling, laboratory-supplied containers were prepared with the following information:

- Monitoring well number (completed by field personnel),
- Date and time of sample collection (completed by field personnel),
- Initials of sampling personnel (completed by field personnel),
- Project name and number (completed by the laboratory),
- Chemical preservative (completed by the laboratory); and
- Requested chemical analysis (completed by the laboratory).

Groundwater samples from each monitoring well were collected directly from the disposable bailers in the provided laboratory containers either immediately after purging or within 24 hours of the final purge volume. Immediately after collection, the samples were placed in a laboratory provided cooler and chilled on ice. Field data logs are provided in the Appendix to this report.

Surface water samples were collected directly from stream flow, by lowering the prepared sample containers into the stream flow with the opening facing into the current flow. Care was taken not to overflow the sample containers (which could lead to preservative loss) and avoid sample-induced turbidity. At the time of sampling, surface water was also measured for temperature, pH, specific conductivity, and turbidity. After sample collection, the samples were placed in a laboratory provided cooler and chilled on ice. Field data logs are provided in the Appendix.

### **3.2 Laboratory Analysis and Quality Control**

The April 2015 groundwater and surface water samples were submitted to Pace Analytical Services, Inc. of Huntersville, North Carolina under chain-of-custody control for analysis. As presented earlier, the groundwater samples were analyzed for the NCSWMR Appendix I and MNA constituents. JOYCE requested a Level II data report for the final laboratory report. The samples were received by the laboratory on April 28, 2015, in good condition, properly preserved, and within analysis hold times.

In addition to samples collected for compliance monitoring at the Town of Kernersville Landfill, a Field Blank was collected by JOYCE personnel as part of the April 2015 sampling event. Also, a Trip Blank was prepared by the laboratory to accompany the volatile sampling containers during shipment to and from the laboratory. The April 2015 Field Blank was analyzed for the NCSWMR Appendix I constituents while the April 2015 Trip Blank was analyzed for the NCSWMR Appendix I volatile organics only.

Upon receipt of the laboratory data package, the data was reviewed by JOYCE personnel for the following:

- General typographical errors,

- Correct analyses performed and within method specified hold times,
- Biased data results based on Surrogate Recoveries, Matrix Spike, Matrix Spike Duplicate, and Laboratory Control Samples,
- Blank qualified data (B-flags),
- Detections above the groundwater and surface water standards; and
- Detections that are above historical levels.

#### 4.0 DATA ANALYSIS

##### 4.1 Groundwater Data Analysis and Comparisons to Standards

Results from the April 2015 sampling event were received May 7, 2015, from Pace and are found in the Appendix. Analytical results from monitoring wells were compared directly to the NC 2L Groundwater Standards (NC 2L) or Groundwater Protection Standards (GWPS).

The following inorganic and organic constituents were detected at quantified concentrations in groundwater during the April 2015 sampling event. All concentrations are reported in micrograms per liter (µg/L). Concentrations with a “J” are considered to be estimated. Highlighted concentrations were detected above the NC 2L or GWPS in downgradient wells.

Constituent	NC2L/ (GWPS)	Background	Downgradient					Blanks
		MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5	
<i>Barium</i>	700	Dry	268	104	39.0 J	94.8 J	67.4 J	ND
<i>Cobalt</i>	(1)	Dry	ND	2.7 J	ND	ND	<b>10.7</b>	ND
<i>Zinc</i>	1,000	Dry	7.3 B	11.5 B	8.0 B	14.1 B	10.3 B	7.5 J
<i>Benzene</i>	1	Dry	<b>6.4</b>	0.38 J	0.48 J	0.45 J	ND	ND
<i>1,4-Dichlorobenzene</i>	6	Dry	4.7	2.1	4.2	2.7	ND	ND
<i>1,1-Dichloroethane</i>	6	Dry	<b>24.2</b>	1.4 J	4.3 J	2.4 J	ND	ND
<i>1,2-Dichloroethane</i>	0.4	Dry	ND	0.56 J	1.2	0.15 J	ND	ND
<i>Cis-1,2-Dichloroethylene</i>	70	Dry	51.8	9.7	65.3	24.0	ND	ND
<i>1,2-Dichloropropane</i>	0.6	Dry	<b>4.8</b>	0.59 J	<b>1.6</b>	0.57 J	ND	ND
<i>Tetrachloroethylene</i>	0.7	Dry	<b>1.4</b>	ND	ND	ND	ND	ND
<i>Trichloroethylene</i>	3	Dry	<b>7.1</b>	ND	ND	ND	ND	ND
<i>Vinyl Chloride</i>	0.03	Dry	<b>5.3</b>	<b>2.4</b>	<b>7.1</b>	<b>21.4</b>	ND	ND

\*ND = Not Detected above laboratory detection limits

\*NS= Well was bent and not sampled

\*J= Estimated

In general, the organic and inorganic results are consistent with historical data. Historical groundwater data can be found in Table 3. The results, as reported by the laboratory, the laboratory quality/assurance/quality control information, and the chain-of-custody records are included in the Appendix.

##### 4.2 Surface Water Data Analysis and Comparisons to Standards

Zinc was detected above the NC SWSL in Sw-2; however, it was also detected in the field blank. There were no other constituents detected at quantified concentrations or above the NC 2B

standards in the surface waters during the April 2015 sampling event. In general, the results are consistent with historical data. Historical surface water data can be found in Table 4. The results, as reported by the laboratory, the laboratory quality/assurance/quality control information, and the chain-of-custody records are included in the Appendix.

## **5.0 EVALUATION OF MONITORED NATURAL ATTENUATION (MNA)**

### **5.1 MNA Parameters and Biodegradation Screening Matrix**

In accordance with the CAP for the facility, MNA baseline sampling was initiated with the April 2015 sampling event. The November 2015 sampling event will be the fourth and final baseline sampling event for MNA. During the April 2015 sampling event the full list of MNA parameters were obtained for the following wells: MW-2, MW-3S, MW-3D, and MW-4. MW-6 was dry and was not sampled. MNA parameters included field parameters temperature, pH, specific conductance, oxidation reduction potential, turbidity, dissolved oxygen, as well as laboratory parameters dissolved hydrogen, nitrate, sulfate, chloride, alkalinity, sulfide TOC, ethane, ethene, methane and volatile fatty acids Table 5 summarizes the MNA data where available. Laboratory reports and field data forms are included in *Appendix A*.

The MNA parameter data were evaluated in general accordance with the United States Environmental Protection Agency's (EPA's) *Technical Protocol Manual* (EPA, 1998) to determine whether the conditions are conducive to, or whether there is evidence for anaerobic degradation of the chlorinated hydrocarbons. Specifically, the results were evaluated according to the weighted system presented in Table 2.3 of the *Technical Protocol Manual*, referred to hereafter as the Biodegradation Screening Matrix. According to this manual, a score less than 5 indicates that there is inadequate evidence for anaerobic natural attenuation, a score of 6 to 14 indicates that there is limited evidence for anaerobic natural attenuation, a score of 15 to 19 indicates that there is adequate evidence for anaerobic natural attenuation, and a score of 20 or more indicates that there is strong evidence that anaerobic natural attenuation is occurring.

The MNA evaluation was performed based on the results from the April 2015 sampling event for downgradient wells within the contaminant plume, compared where appropriate to the background well (MW-6). MW-6 was dry during the April 2015 event; therefore; the data from 2014 was used for comparison. The Biodegradation Screening Matrix is presented in Table 6 of this report. The aspect of the scoring process is ambiguous with respect to how it should be applied to a landfill site such as this facility, and that is the issue of daughter products. Methane, carbon dioxide (CO<sub>2</sub>), cis-1,2-dichloroethylene, vinyl chloride, and 1,1-dichloroethane can all be daughter products produced by the biodegradation of higher-order chlorinated ethanes and ethenes, and as such, their presence can be strong indicators that biodegradation is occurring, and are therefore included in the EPA scoring matrix. On the other hand, methane and CO<sub>2</sub> are gases produced by the natural metabolization of biomass by microorganisms in a landfill, and cis-1,2-dichloroethylene, vinyl chloride, and 1,1-dichloroethane can be primary contaminants leached from waste in landfills. Some of these compounds are present in the groundwater plume; however, it is unclear whether or not they are daughter products indicating natural attenuation.

For this reason, the score has been calculated both with and without the points for daughter products.

The following table summarizes the scoring results from Table 6 for both options for interpreting the data. The scores ranged from 11 to 23 (adequate evidence of natural attenuation to strong evidence of natural attenuation). In reality, the best score is probably in the middle of this range, indicating limited evidence of natural attenuation.

Points Awarded including DP's	Points Awarded excluding DP's
25	13

DP's = Points for possible daughter products.

## 6.0 CONCLUSION

Based on historical groundwater data, inorganic and organic constituents detected above their respective NC 2L and GWPS in samples collected during the April 2015 sampling event are consistent with previous events. In addition, there were no constituents detected at the surface water monitoring points above the NC 2B Standards. The Town of Kernersville Landfill will continue to monitor groundwater in accordance with the approved CAP. The next semiannual sampling event is tentatively scheduled for November 2015.

## 7.0 REFERENCES

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USEPA, 1986, *RCRA Ground Water Monitoring Technical Enforcement Guidance Document (TEGD)*.

USEPA, 1992, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Addendum to Interim Final Guidance*, Chapter 2, July.

## ***Tables***

Table 1A	Summary of Historical Groundwater Elevations
Table 1B	Monitoring Well and Boring Completion Summary
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Table 5	Summary of MNA Constituents
Table 6	MNA Screening Matrix

**TABLE 1A**

**SUMMARY OF HISTORICAL GROUNDWATER ELEVATIONS**

<b>Well ID:</b>	<b>Background</b>		<b>Downgradient</b>				
	<b>MW-1</b>	<b>MW-6</b>	<b>MW-2</b>	<b>MW-3S</b>	<b>MW-3D</b>	<b>MW-4</b>	<b>MW-5</b>
<b>TOC Elevation:</b>	806.42	804.87	762.19	764.57	764.56	760.26	773.32
<b>Well Depth:</b>	34.69	20.46	13.18	24.00	56.96	14.40	11.36
30-Dec-09	772.45	786.66	759.16	751.54	752.79	754.33	769.21
01-Jun-10	773.45	788.32	758.90	750.76	752.63	753.90	769.69
16-Nov-10	773.55	787.93	759.14	750.98	752.59	753.74	769.81
29-Dec-10	773.29	787.37	758.83	749.82	752.45	753.68	769.56
29-Jun-11	773.10	786.81	758.38	750.54	752.16	753.41	769.73
01-Nov-11	771.92	785.10	758.49	754.73	751.90	753.08	769.63
01-May-12	771.88	785.32	758.54	750.86	752.34	753.55	769.55
07-Nov-12	771.65	DRY	758.20	750.30	751.61	752.87	768.57
09-May-13	769.95	787.56	759.20	752.52	753.24	754.44	-
07-Nov-13	771.46	DRY	758.09	750.12	751.50	752.79	768.13
05-Jun-14	772.22	785.84	758.45	750.67	752.14	753.36	768.57
20-Nov-14	771.73	784.41	758.08	750.24	751.53	752.81	769.23
27-Apr-15	-	784.66	758.49	751.11	752.34	753.61	769.62

**Notes:**

TOC = Top of PVC well casing.

Elevations in feet above mean sea level. Well depths in feet below TOC.

**TABLE 1B**

**MONITORING WELL AND BORING COMPLETION SUMMARY**

WELL NUMBER	CASING DIAMETER inches	WELL ELEVATIONS		TOTAL DEPTH		SCREENED INTERVAL*				LITHOLOGY OF SCREENED INTERVAL*
		GROUND SURFACE feet above M.S.L.	T.O.C.	B.G.S. feet	B.T.O.C. feet	DEPTH B.G.S.		ELEV. M.S.L.		
						from	to	from	to	
MW-1	2	803.89	806.42	32.16	34.69	24.69	34.96	779.2	768.9	SAPROLITE
MW-2	2	760.07	762.19	11.06	13.18	3.18	13.18	756.9	746.9	SAPROLITE
MW-3S	2	761.98	764.57	21.41	24.00	14	24	748.0	738.0	SAPROLITE
MW-3D	2	762.02	764.56	54.42	56.96	36.96	56.96	725.1	705.1	SAPROLITE
MW-4	2	757.00	760.26	11.14	14.40	4.4	14.4	752.6	742.6	SAPROLITE
MW-5	2	771.00	773.32	9.04	11.36	6.36	11.36	764.6	759.6	SAPROLITE
MW-6	2	801.77	804.87	17.36	20.46	10.46	20.46	791.3	781.3	SAPROLITE

**NOTES:**

- B.G.S. Below Ground Surface
- M.S.L. Mean Sea Level
- B.T.O.C. Below Top of Casing
- T.O.C. Top of Casing
- \* = Due to limited information this data is assumed based on field conditions

**Table 2:  
Summary of Estimated Hydraulic Gradient and Linear Velocity**

Date of Water Table Measurements:		April 27, 2015					
FLOW LINE SEGMENT	SEGMENT LENGTH (feet)	FLOW DIRECTION	SEGMENT BEGIN & END GW ELEVATION (feet-AMSL)	HORIZ. GRADIENT $i$ (ft/ft)	HYDRAULIC CONDUCTIVITY $K$ (ft/day)	EFFECTIVE POROSITY $n_e$	LINEAR VELOCITY $V$ (ft/year)
$i_1$	851	SW	785	0.0353	1.73E+00	0.30	74.20
			755				
			Average	0.0353			

**Notes:**

Linear flow velocity:  $V = Ki/n_e$  (modified Darcy equation).

1. Hydraulic conductivities (“K”) was estimated from slug test completed by JOYCE in April 2013
2. Velocity =  $Ki/n$ ; assume homogeneous isotropic porous aquifer.

**TABLE 3**

**SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS**

Analyte	Sample	DL	QL	MW-1		MW-2		MW-3S		MW-3D		MW-4		MW-5		Blanks	
	Collection Date			MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5							
<b>Inorganic Compounds</b>																	
Antimony GWPS = 1.4 µg/L (10/23/07) GWPS = 1 µg/L (8/1/10)	30-Dec-09	1.2	6.0	---	ND	5.4	B	ND	ND	4.5	B	---	1.4	J			
	01-Jun-10	1.2	6.0	---	ND	ND	ND	ND	ND	ND	---	---	3.9	J			
	29-Dec-10	2.6	6.0	---	ND	ND	ND	ND	ND	ND	ND	ND	ND				
	29-Jun-11	5.0	6.0	---	ND	ND	ND	ND	ND	ND	ND	ND	ND				
	01-Nov-11	5.0	6.0	---	ND	ND	ND	ND	ND	ND	ND	ND	ND				
	01-May-12	5.0	6.0	---	ND	ND	ND	ND	ND	ND	ND	ND	ND				
	07-Nov-12	0.48	6.0	---	---	ND	ND	ND	ND	ND	---	---	ND				
	09-May-13	5.0	6.0	---	ND	ND	ND	ND	ND	ND	---	---	ND				
	07-Nov-13	5.0	6.0	---	---	ND	ND	ND	ND	ND	---	---	ND				
	05-Jun-14	5.0	6.0	---	ND	ND	ND	ND	ND	ND	ND	ND	ND				
	20-Nov-14	3.8	6.0	---	---	ND	ND	ND	ND	ND	ND	ND	ND				
	27-Apr-15	3.8	6.0	---	---	ND	ND	ND	ND	ND	ND	ND	ND				
	Arsenic NC 2L = 10 µg/L (1/11/10)	29-Jun-11	5.0	10.0	---	ND	ND	ND	ND	ND	ND	6.2	J	ND			
01-Nov-11		5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	ND	ND				
01-May-12		5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	ND	ND				
07-Nov-12		0.094	10.0	---	---	1.43	B	1.42	B	0.87	B	1.04	B	---	1.0	J	
09-May-13		5.0	10.0	---	ND	ND	ND	ND	ND	ND	---	---	ND				
07-Nov-13		5.0	10.0	---	---	ND	ND	ND	ND	ND	---	---	ND				
05-Jun-14		5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	ND	ND				
20-Nov-14		2.5	10.0	---	---	ND	2.5	J	ND	ND	ND	2.7	J	ND			
27-Apr-15	2.5	10.0	---	---	ND	ND	J	ND	ND	ND	ND	ND	ND				
Barium NC 2L = 700 µg/L (1/11/10)	30-Dec-09	1.1	100	---	74.1	J	496	178	18.2	J	89.0	J	---	3.6	J		
	01-Jun-10	1.1	100	---	58.1	J	326	187	22.2	J	94.9	J	---	2.0	J		
	29-Dec-10	0.20	100	---	46.3	B	430	112	38.0	B	92.1	J	72.6	J	11.3	J	
	29-Jun-11	5.0	100	---	77.7	J	370	128	41.2	J	98.4	J	113	ND			
	01-Nov-11	5.0	100	---	125	J	413	132	41.7	J	111	J	72.1	J	ND		
	01-May-12	5.0	100	---	78.8	J	323	121	40.0	J	99.7	J	66.1	J	ND		
	07-Nov-12	0.39	100	---	---	J	369	127	41.0	B	98.7	J	---	12.2	J		
	09-May-13	5.0	100	---	78.6	J	307	112	40.0	J	85.6	J	---	ND			
	07-Nov-13	5.0	100	---	---	J	302	113	38.0	J	89.6	J	---	ND			
	05-Jun-14	5.0	100	---	60.3	J	285	117	39.2	J	80.3	J	75.0	J	ND		
	20-Nov-14	2.5	100	---	---	J	301	113	39.5	J	83.3	J	108	J	ND		
	27-Apr-15	2.5	100	---	---	J	268	104	39.0	J	94.8	J	67.4	J	ND		
	Beryllium GWPS = 4 µg/L (10/23/07)	30-Dec-09	0.2	1.0	---	ND	0.5	J	ND	ND	ND	---	---	ND			
01-Jun-10		0.2	1.0	---	0.6	J	0.7	J	ND	ND	---	---	ND				
29-Dec-10		0.10	1.0	---	ND	J	ND	ND	ND	ND	0.48	J	ND				
29-Jun-11		1.0	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
01-Nov-11		1.0	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
01-May-12		1.0	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
07-Nov-12		0.049	1.00	---	---	J	0.34	J	ND	ND	0.099	J	---	ND			
09-May-13		1.0	1.0	---	ND	J	ND	ND	ND	ND	---	---	ND				
07-Nov-13		1.0	1.0	---	---	J	ND	ND	ND	ND	---	---	ND				
05-Jun-14		1.0	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
20-Nov-14		0.5	1.0	---	---	J	ND	ND	ND	ND	ND	ND	ND				
27-Apr-15		0.5	1.0	---	---	J	ND	ND	ND	ND	ND	ND	ND				
Cadmium NC 2L = 2 µg/L (1/11/10)		30-Dec-09	0.2	1.0	---	ND	0.5	J	5.6	ND	ND	---	---	ND			
	01-Jun-10	0.2	1.0	---	2.9	J	1.0	B	5.3	0.4	B	0.4	B	---	0.4	J	
	29-Dec-10	0.50	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
	29-Jun-11	1.0	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
	01-Nov-11	1.0	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
	01-May-12	1.0	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
	07-Nov-12	0.026	1.00	---	---	J	0.15	J	ND	ND	0.043	J	---	ND			
	09-May-13	1.0	1.0	---	ND	J	ND	ND	ND	ND	---	---	ND				
	07-Nov-13	1.0	1.0	---	---	J	ND	ND	ND	ND	---	---	ND				
	05-Jun-14	1.0	1.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
	20-Nov-14	0.5	1.0	---	---	J	ND	ND	ND	ND	ND	ND	ND				
	27-Apr-15	0.5	1.0	---	---	J	ND	ND	ND	ND	ND	ND	ND				
	Chromium NC 2L = 10 µg/L (1/11/10)	30-Dec-09	0.7	10.0	---	ND	2.7	J	9.7	J	ND	3.1	J	---	ND		
01-Jun-10		0.7	10.0	---	3.5	J	1.6	J	12.4	1.2	J	3.2	J	---	ND		
29-Dec-10		0.40	10.0	---	0.48	J	1.3	J	0.57	J	ND	5.5	J	3.8	J	ND	
29-Jun-11		5.0	10.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND	ND			
01-Nov-11		5.0	10.0	---	ND	J	ND	ND	ND	ND	10.3	ND	ND	ND			
01-May-12		5.0	10.0	---	ND	J	ND	ND	ND	ND	5.8	J	ND	ND			
07-Nov-12		0.030	10.0	---	---	J	0.71	J	0.12	B	0.094	B	7.31	J	---	0.099	J
09-May-13		5.0	10.0	---	ND	J	ND	ND	ND	ND	ND	---	---	ND			
07-Nov-13		5.0	10.0	---	---	J	ND	ND	ND	ND	---	---	ND				
05-Jun-14		5.0	10.0	---	ND	J	ND	ND	ND	ND	ND	ND	ND				
20-Nov-14		2.5	10.0	---	---	J	ND	ND	ND	ND	ND	ND	ND				
27-Apr-15		2.5	10.0	---	---	J	ND	ND	ND	ND	7.2	J	ND	ND			

**TABLE 3**

**SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS**

Analyte	Sample												Blanks			
	Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5						
Cobalt GWPS = 70 µg/L (10/23/07) GWPS = 1 µg/L (10/1/10)	30-Dec-09	0.7	10.0	---	ND	6.4	J	11.2	ND	1.8	J	---	ND			
	01-Jun-10	0.7	10.0	---	1.8	J	2.5	J	8.5	J	ND	1.7	J	ND		
	29-Dec-10	0.60	10.0	---	ND	4.9	J	1.7	J	ND	1.6	J	<b>10.2</b>	ND		
	29-Jun-11	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	9.9	J	ND		
	01-Nov-11	5.0	10.0	---	ND	ND	ND	ND	ND	ND	5.2	J	ND			
	01-May-12	5.0	10.0	---	ND	ND	ND	ND	ND	ND	<b>13.9</b>	---	ND			
	07-Nov-12	0.053	10.0	---	---	1.98	J	3.89	J	0.43	B	2.02	J	0.24	J	
	09-May-13	5.0	10.0	---	ND	ND	ND	ND	ND	ND	---	---	---	ND		
	07-Nov-13	5.0	10.0	---	---	ND	ND	ND	ND	ND	---	---	---	ND		
	05-Jun-14	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	<b>12.0</b>	---	ND		
	20-Nov-14	2.5	10.0	---	---	ND	2.5	J	ND	ND	ND	<b>10.2</b>	---	ND		
	27-Apr-15	2.5	10.0	---	---	ND	2.7	J	ND	ND	ND	<b>10.7</b>	---	ND		
	Copper NC 2L = 1,000 µg/L (10/23/07)	30-Dec-09	2.0	10.0	---	ND	ND	B	10.6	ND	1.5	J	---	ND		
		01-Jun-10	2.0	10.0	---	12.2	B	3.3	B	33.2	3.9	B	6.8	B	4.8	J
29-Dec-10		0.30	10.0	---	ND	ND	0.49	J	0.59	J	1.5	J	7.9	J	ND	
29-Jun-11		5.0	10.0	---	ND	ND	ND	ND	ND	ND	16.6	---	ND			
01-Nov-11		5.0	10.0	---	ND	ND	ND	ND	ND	5.4	J	ND	ND			
01-May-12		5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
07-Nov-12		0.093	10.0	---	---	3.56	B	0.54	B	0.98	B	1.83	B	1.23	J	
09-May-13		5.0	10.0	---	ND	ND	ND	ND	ND	ND	---	---	---	ND		
07-Nov-13		5.0	10.0	---	---	ND	ND	ND	ND	ND	---	---	---	ND		
05-Jun-14		5.0	10.0	---	ND	ND	ND	ND	ND	ND	6.1	J	---	ND		
20-Nov-14		2.5	10.0	---	---	ND	ND	ND	ND	ND	5.3	J	---	ND		
27-Apr-15		2.5	10.0	---	---	ND	ND	ND	ND	3.5	B	3.6	B	3.2	J	
Lead NC 2L = 15 µg/L (10/23/07)		30-Dec-09	2.0	10.0	---	ND	ND	B	10.2	ND	ND	---	---	ND		
		01-Jun-10	2.0	10.0	---	9.1	B	8.2	B	8.7	B	3.0	B	3.9	B	3.2
	29-Dec-10	4.0	10.0	---	ND	ND	ND	ND	ND	ND	6.5	J	---	ND		
	29-Jun-11	5.0	10.0	---	ND	ND	ND	ND	ND	ND	<b>19.9</b>	---	ND			
	01-Nov-11	5.0	10.0	---	5.5	J	ND	ND	ND	ND	ND	---	ND			
	01-May-12	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
	07-Nov-12	0.025	10.0	---	---	1.00	B	0.091	B	0.066	B	1.12	B	0.58	J	
	09-May-13	5.0	10.0	---	ND	ND	ND	ND	ND	ND	---	---	---	ND		
	07-Nov-13	5.0	10.0	---	---	ND	ND	ND	ND	ND	---	---	---	ND		
	05-Jun-14	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	---	ND		
	20-Nov-14	2.5	10.0	---	---	ND	ND	ND	ND	ND	4.2	J	---	ND		
	27-Apr-15	2.5	10.0	---	---	ND	ND	ND	ND	ND	ND	---	---	ND		
	Nickel NC 2L = 100 µg/L (10/23/07)	30-Dec-09	0.6	50.0	---	ND	ND	J	8.1	J	1.8	J	---	ND		
		01-Jun-10	0.6	50.0	---	ND	ND	6.0	J	ND	0.9	J	---	ND		
29-Dec-10		1.7	50.0	---	ND	ND	ND	ND	ND	ND	2.0	B	3.1	J		
29-Jun-11		5.0	50.0	---	ND	ND	ND	ND	ND	ND	---	---	ND			
01-Nov-11		5.0	50.0	---	ND	ND	ND	ND	ND	ND	---	---	ND			
01-May-12		5.0	50.0	---	ND	ND	ND	ND	ND	ND	---	---	ND			
07-Nov-12		0.26	50.0	---	---	0.73	B	1.19	B	0.65	B	5.57	J	0.84	J	
09-May-13		5.0	50.0	---	ND	ND	ND	ND	ND	ND	---	---	---	ND		
07-Nov-13		5.0	50.0	---	---	ND	ND	ND	ND	ND	---	---	---	ND		
05-Jun-14		5.0	50.0	---	ND	ND	ND	ND	ND	ND	ND	---	---	ND		
20-Nov-14		2.5	50.0	---	---	ND	ND	ND	ND	ND	ND	---	---	ND		
27-Apr-15		2.5	50.0	---	---	ND	ND	ND	ND	3.4	J	ND	---	ND		
Selenium NC 2L = 20 µg/L (1/11/10)		30-Dec-09	6.3	10.0	---	ND	ND	J	8.4	J	ND	ND	---	ND		
		01-Jun-10	6.3	10.0	---	ND	ND	6.3	J	ND	ND	ND	---	ND		
	29-Dec-10	3.8	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
	29-Jun-11	10.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
	01-Nov-11	10.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
	01-May-12	10.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
	07-Nov-12	0.11	10.0	---	---	0.16	J	0.38	J	0.20	J	0.25	J	ND		
	09-May-13	10.0	10.0	---	ND	ND	ND	ND	ND	ND	---	---	---	ND		
	07-Nov-13	10.0	10.0	---	---	ND	ND	ND	ND	ND	---	---	---	ND		
	05-Jun-14	10.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	---	ND		
	20-Nov-14	5.0	10.0	---	---	ND	ND	ND	ND	ND	ND	---	---	ND		
	27-Apr-15	5.0	10.0	---	---	ND	ND	ND	ND	ND	ND	---	---	ND		
	Silver NC 2L = 20 µg/L (1/11/10)	30-Dec-09	1.1	10.0	---	ND	1.7	B	2.2	B	ND	ND	---	1.9	J	
		01-Jun-10	1.1	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND		
29-Dec-10		0.10	10.0	---	ND	1.8	J	0.36	J	0.19	J	0.23	J	ND		
29-Jun-11		5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
01-Nov-11		5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
01-May-12		5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	ND			
07-Nov-12		0.017	10.0	---	---	0.18	J	ND	ND	0.078	J	---	ND			
09-May-13		5.0	10.0	---	ND	ND	ND	ND	ND	ND	---	---	---	ND		
07-Nov-13		5.0	10.0	---	---	ND	ND	ND	ND	ND	---	---	---	ND		
05-Jun-14		5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND	---	---	ND		
20-Nov-14		2.5	10.0	---	---	ND	ND	ND	ND	ND	ND	---	---	ND		
27-Apr-15		2.5	10.0	---	---	ND	ND	ND	ND	ND	ND	---	---	ND		

**TABLE 3**

**SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS**

Analyte	Sample										Blanks							
	Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5								
Thallium GWPS = 0.28 µg/L (10/23/07) GWPS = 0.2 µg/L (10/1/10)	30-Dec-09	2.7	5.5	---	ND	ND	ND	ND	ND	---	3.7	J						
	01-Jun-10	2.7	5.5	---	ND	ND	ND	ND	ND	---	ND							
	29-Dec-10	3.0	5.5	---	ND	3.2	J	ND	ND	4.8	J	ND						
	29-Jun-11	5.4	5.5	---	ND	ND	ND	ND	ND	ND	ND	ND						
	01-Nov-11	5.4	5.5	---	ND	ND	ND	ND	ND	ND	ND	ND						
	01-May-12	5.4	5.5	---	ND	ND	ND	ND	ND	ND	ND	ND						
	07-Nov-12	0.060	5.50	---	---	0.16	J	ND	ND	0.76	J	---	ND					
	09-May-13	5.4	5.5	---	ND	ND	ND	ND	ND	---	---	ND						
	07-Nov-13	5.4	5.5	---	---	ND	ND	ND	ND	---	---	ND						
	05-Jun-14	5.4	5.5	---	ND	ND	ND	ND	ND	ND	ND	ND						
	20-Nov-14	5.0	5.5	---	---	ND	ND	ND	ND	ND	ND	ND						
	27-Apr-15	5.0	5.5	---	---	ND	ND	ND	ND	ND	ND	ND						
	Vanadium GWPS = 3.5 µg/L (10/23/07) GWPS = 0.3 µg/L (10/1/10)	30-Dec-09	0.4	25.0	---	ND	1.4	J	<b>37.4</b>	1.5	J	4.3	J	---	ND			
01-Jun-10		0.4	25.0	---	1.2	J	3.4	J	<b>84.2</b>	1.4	J	4.8	J	---	ND			
29-Dec-10		0.20	25.0	---	1.2	B	2.8	J	2.3	J	1.6	J	5.5	J	14.5	J	0.26	J
29-Jun-11		5.0	25.0	---	ND	ND	ND	ND	ND	ND	ND	22.0	J	ND	ND	ND		
01-Nov-11		5.0	25.0	---	7.2	J	ND	ND	ND	ND	12.0	J	7.2	J	ND	ND		
01-May-12		5.0	25.0	---	ND	ND	ND	ND	ND	7.2	J	7.6	J	ND	ND	ND		
07-Nov-12		0.085	25.0	---	---	2.48	J	2.02	J	2.35	J	4.55	J	---	ND	ND		
09-May-13		5.0	25.0	---	ND	ND	ND	ND	ND	ND	---	---	---	ND	ND	ND		
07-Nov-13		5.0	25.0	---	---	ND	ND	ND	ND	ND	---	---	---	ND	ND	ND		
05-Jun-14		5.0	25.0	---	ND	ND	11.4	J	ND	ND	ND	ND	ND	ND	ND	ND		
20-Nov-14		2.5	25.0	---	---	ND	3.2	J	ND	ND	ND	9.4	J	ND	ND	ND		
27-Apr-15		2.5	25.0	---	---	ND	ND	ND	ND	8.9	J	5.6	J	ND	ND	ND		
Zinc NC 2L = 1,000 µg/L (1/11/10)		30-Dec-09	2.7	10.0	---	ND	10.1	B	204	15.9	B	24.8	B	---	5.8	J		
	01-Jun-10	2.7	10.0	---	16.2	13.5		415	8.5	J	22.2	---	---	ND				
	29-Dec-10	0.40	10.0	---	12.2	B	15.8	B	8.9	B	ND	4.6	B	38.1	B	12.5		
	29-Jun-11	10.0	10.0	---	ND	23.6	B	22.3	B	ND	15.5	B	91.2	10.5				
	01-Nov-11	10.0	10.0	---	16.6	ND		40.0	ND	16.2		31.4	ND	ND				
	01-May-12	10.0	10.0	---	ND	ND		13.5	ND	10.2		12.0	ND	ND				
	07-Nov-12	1.31	10.0	---	---	8.61	J	5.20	J	3.98	J	4.65	J	---	ND	ND		
	09-May-13	10.0	10.0	---	ND	ND		ND	ND	ND	---	---	---	ND	ND	ND		
	07-Nov-13	10.0	10.0	---	---	13.8		10.4	ND	ND	---	---	---	ND	ND	ND		
	05-Jun-14	10.0	10.0	---	ND	ND		89.0	ND	ND	19.4		ND	ND	ND	ND		
	20-Nov-14	5.0	10.0	---	---	ND		20.9	ND	ND	55.0		ND	ND	ND	ND		
	27-Apr-15	5.0	10.0	---	---	7.3	B	11.5	B	8.0	B	14.1	B	10.3	B	7.5	J	

**TABLE 3**

**SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS**

Analyte	Sample															
	Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5	Blanks					
<b>Organic Compounds</b>																
Acetone NC 2L = 6,000 µg/L (1/11/10)	29-Jun-11	2.2	100	---	ND	2.3	B	2.4	B	3.9	B	ND	3.8	B	5.3	J
	01-Nov-11	2.2	100	---	ND	ND		ND		ND		ND	ND		14.6	J
	01-May-12	2.2	100	---	ND	ND		ND		ND		ND	ND		ND	
	07-Nov-12	0.193	100	---	---	ND		ND		ND		---	---		ND	
	09-May-13	10.0	100	---	ND	ND		ND		ND		---	---		12.0	J
	07-Nov-13	10.0	100	---	---	ND		ND		ND		---	---		ND	
	05-Jun-14	10.0	100	---	ND	ND		ND		ND		ND	ND		ND	
	20-Nov-14	10.0	100	---	---	ND		ND		ND		ND	ND		ND	
	27-Apr-15	10.0	100	---	---	ND		14.8	B	ND		21.3	B	14.1	B	20.7
Benzene NC 2L = 1 µg/L (10/23/07)	30-Dec-09	0.1	1.0	---	ND	<b>8.4</b>		0.3	J	0.4	J	0.3	J	---	ND	
	01-Jun-10	0.1	1.0	---	ND	<b>2.9</b>		ND		ND		ND	---	ND		
	29-Dec-10	0.25	1.0	---	ND	<b>8.1</b>		ND		ND		ND	---	ND		
	29-Jun-11	0.25	1.0	---	ND	<b>7.2</b>		0.38	J	0.45	J	0.42	J	ND	ND	
	01-Nov-11	0.25	1.0	---	ND	<b>8.6</b>		ND		ND		ND	---	ND		
	01-May-12	0.25	1.0	---	ND	<b>6.7</b>		0.36	J	0.45	J	0.42	J	ND	ND	
	07-Nov-12	0.111	1.0	---	---	<b>8.63</b>		0.430	J	0.504	J	0.478	J	---	ND	
	09-May-13	0.25	1.0	---	ND	<b>5.2</b>		0.27	J	0.32	J	0.30	J	---	ND	
	07-Nov-13	0.25	1.0	---	---	<b>6.9</b>		0.33	J	0.38	J	0.39	J	---	ND	
	05-Jun-14	0.25	1.0	---	ND	<b>6.0</b>		ND		0.42	J	0.40	J	ND	ND	
	20-Nov-14	0.25	1.0	---	---	<b>6.2</b>		0.30	J	ND		0.32	J	ND	ND	
	27-Apr-15	0.25	1.0	---	---	<b>6.4</b>		0.38	J	0.48	J	0.45	J	ND	ND	
	Bromoform NC 2L = µg/L 4 (10/23/07)	09-May-13	0.26	3.0	---	ND	ND		0.37	B	ND		ND	---	0.37	J
07-Nov-13		0.26	3.0	---	---	ND		ND		ND		ND	---	ND		
05-Jun-14		0.26	3.0	---	ND	ND		ND		ND		ND	---	ND		
20-Nov-14		0.26	3.0	---	---	ND		ND		ND		ND	---	ND		
27-Apr-15		0.26	3.0	---	---	ND		ND		ND		ND	---	ND		
Chlorobenzene NC 2L = 50 µg/L (10/23/07)	30-Dec-09	0.1	3.0	---	ND	0.5	J	0.6	J	ND		ND	---	ND		
	01-Jun-10	0.1	3.0	---	ND	ND		ND		ND		ND	---	ND		
	29-Dec-10	0.23	3.0	---	ND	0.61	J	ND		ND		ND	---	ND		
	29-Jun-11	0.23	3.0	---	ND	0.46	J	1.0	J	0.37	J	ND	---	ND		
	01-Nov-11	0.23	3.0	---	ND	0.59	J	1.1	J	0.37	J	ND	---	ND		
	01-May-12	0.23	3.0	---	ND	{0.42}	J	0.94	B	0.38	B	ND	---	ND	0.30 {ND}	J
	07-Nov-12	0.083	3.00	---	---	0.468	J	1.30	J	0.476	J	ND	---	ND		
	09-May-13	0.23	3.0	---	ND	0.27	J	0.72	J	0.27	J	ND	---	ND		
	07-Nov-13	0.23	3.0	---	---	0.42	J	0.97	J	0.38	J	ND	---	ND		
	05-Jun-14	0.23	3.0	---	ND	0.30	J	0.78	J	0.33	J	ND	---	ND		
	20-Nov-14	0.23	3.0	---	---	0.37	J	0.95	J	0.36	J	ND	---	ND		
	27-Apr-15	0.23	3.0	---	---	0.27	J	1.0	J	0.40	J	ND	---	ND		

**TABLE 3**

**SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS**

Analyte	Sample										Blanks
	Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5	
Chloroethane NC 2L = 3,000 µg/L (1/11/10)	30-Dec-09	0.1	10.0	---	ND	ND	0.5 J	0.5 J	ND	---	0.1 J
	01-Jun-10	0.1	10.0	---	ND	ND	0.4 J	ND	ND	---	ND
	29-Dec-10	0.54	10.0	---	ND	ND	ND	ND	ND	---	ND
	29-Jun-11	0.54	10.0	---	ND	ND	0.77 J	ND	0.57 J	ND	ND
	01-Nov-11	0.54	10.0	---	ND	ND	0.79 J	ND	ND	ND	ND
	01-May-12	0.54	10.0	---	ND	ND	ND	ND	ND	ND	ND
	07-Nov-12	0.235	10.0	---	---	ND	ND	ND	ND	---	ND
	09-May-13	0.54	10.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	0.54	10.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	0.54	10.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	0.54	10.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	0.54	10.0	---	---	ND	0.95 J	0.65 J	0.57 J	ND	ND
	1,4-Dichlorobenzene NC 2L = 6 µg/L (1/11/10)	30-Dec-09	0.1	1.0	---	ND	3.8	2.2	2.3	3.1	---
01-Jun-10		0.1	1.0	---	ND	1.2	0.9 J	ND	1.2	---	ND
29-Dec-10		0.33	1.0	---	ND	3.9	1.1	2.3	1.9	ND	ND
29-Jun-11		0.33	1.0	---	ND	3.8	2.8	3.6	3.2	ND	ND
01-Nov-11		0.33	1.0	---	ND	4.7	4.1	4.1	3.5	ND	ND
01-May-12		0.33	1.0	---	ND	4.0	2.7	4.1	3.2	ND	ND
07-Nov-12		0.083	1.00	---	---	5.12	2.93	4.08	3.64	---	ND
09-May-13		0.33	1.0	---	ND	3.6	2.0	3.1	2.3	---	ND
07-Nov-13		0.33	1.0	---	---	5.4	2.5	4.2	3.2	---	ND
05-Jun-14		0.33	1.0	---	ND	5.0	1.9	4.0	2.7	ND	ND
20-Nov-14		0.33	1.0	---	---	4.7	1.9	3.8	2.6	ND	ND
27-Apr-15		0.33	1.0	---	---	4.7	2.1	4.2	2.7	ND	ND
1,1-Dichloroethane NC 2L = 6 µg/L (1/11/10)		30-Dec-09	0.2	5.0	---	ND	<b>22.8</b>	1.9 J	4.0 J	2.4 J	---
	01-Jun-10	0.2	5.0	---	ND	<b>11.0</b>	1.1 J	ND	1.2 J	---	ND
	29-Dec-10	0.32	5.0	---	ND	<b>28.2</b>	2.4 J	4.1 J	2.6 J	ND	ND
	29-Jun-11	0.32	5.0	---	ND	<b>25.0</b>	2.5 J	3.9 J	2.6 J	ND	ND
	01-Nov-11	0.32	5.0	---	ND	<b>27.2</b>	2.3 J	4.0 J	2.3 J	ND	ND
	01-May-12	0.32	5.0	---	ND	<b>22.6</b>	2.0 J	3.8 J	2.0 J	ND	ND
	07-Nov-12	0.208	5.0	---	---	<b>28.1</b>	2.06 J	4.08 J	J	---	ND
	09-May-13	0.32	5.0	---	ND	<b>18.7</b>	1.4 J	3.0 J	1.6 J	---	ND
	07-Nov-13	0.32	5.0	---	---	<b>26.6</b>	1.7 J	4.2 J	2.2 J	---	ND
	05-Jun-14	0.32	5.0	---	ND	<b>21.9</b>	1.4 J	3.9 J	1.9 J	ND	ND
	20-Nov-14	0.32	5.0	---	---	<b>21.5</b>	1.3 J	3.2 J	1.8 J	ND	ND
	27-Apr-15	0.32	5.0	---	---	<b>24.2</b>	1.4 J	4.3 J	2.4 J	ND	ND
	1,2-Dichloroethane NC 2L = 0.4 µg/L (1/11/10)	30-Dec-09	0.1	1.0	---	ND	<b>1.2</b>	0.7 J	<b>1.2</b>	ND	---
01-Jun-10		0.1	1.0	---	ND	ND	ND	ND	ND	---	ND
29-Dec-10		0.12	1.0	---	ND	ND	0.82 J	<b>1.1</b>	ND	ND	ND
29-Jun-11		0.12	1.0	---	ND	0.76 J	0.86 J	<b>1.3</b>	ND	ND	ND
01-Nov-11		0.12	1.0	---	ND	0.95 J	ND	<b>1.3</b>	ND	ND	ND
01-May-12		0.12	1.0	---	ND	0.71 J	0.70 J	<b>1.1</b>	ND	ND	ND
07-Nov-12		0.171	1.00	---	---	ND	ND	ND	ND	---	ND
09-May-13		0.12	1.0	---	ND	0.50 J	0.49 J	0.81 J	J	---	ND
07-Nov-13		0.12	1.0	---	---	0.93 J	0.66 J	<b>1.3</b>	ND	---	ND
05-Jun-14		0.12	1.0	---	ND	0.76 J	0.52 J	0.99 J	J	ND	ND
20-Nov-14		0.12	1.0	---	---	0.68 J	0.47 J	0.81 J	J	ND	ND
27-Apr-15		0.12	1.0	---	---	ND	0.56 J	<b>1.2</b>	0.15 J	ND	ND
1,1-Dichloroethene NC 2L = 7 µg/L (10/23/07)  NC 2L = 350 µg/L (04/01/2013)		30-Dec-09	0.1	5.0	---	ND	0.4 J	ND	ND	ND	---
	01-Jun-10	0.1	5.0	---	ND	ND	ND	ND	ND	---	ND
	29-Dec-10	0.56	5.0	---	ND	ND	ND	ND	ND	ND	ND
	29-Jun-11	0.56	5.0	---	ND	ND	ND	ND	ND	ND	ND
	01-Nov-11	0.56	5.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	0.56	5.0	---	ND	ND	ND	ND	ND	ND	ND
	07-Nov-12	0.208	5.00	---	---	ND	ND	ND	ND	---	ND
	09-May-13	0.56	5.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	0.56	5.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	0.56	5.0	---	ND	4.7 J	ND	ND	ND	ND	ND
	20-Nov-14	0.56	5.0	---	ND	ND	ND	ND	ND	ND	ND
	27-Apr-15	0.56	5.0	---	---	ND	ND	ND	ND	ND	ND
	cis-1,2-Dichloroethene NC 2L = 70 µg/L (10/23/07)	30-Dec-09	0.1	5.0	---	ND	68.2	11.0	51.0	21.8	---
01-Jun-10		0.1	5.0	---	ND	23.0	7.6	ND	10.2	---	ND
29-Dec-10		0.19	5.0	---	ND	66.7	16.8	56.7	24.1	ND	ND
29-Jun-11		0.19	5.0	---	ND	55.1	16.5	62.7	25.1	ND	ND
01-Nov-11		0.19	5.0	---	ND	59.4	15.2	59.3	23.2	ND	ND
01-May-12		0.19	5.0	---	ND	{48.7}	14.2	59.5	22.1	ND	0.21 {ND} J
07-Nov-12		0.103	5.00	---	---	59.7	13.6	<b>71.3</b>	26.4	---	ND
09-May-13		0.19	5.0	---	ND	39.9	10.9	49.7	17.4	---	ND
07-Nov-13		0.19	5.0	---	---	53.9	10.7	67.1	21.8	---	ND
05-Jun-14		0.19	5.0	---	ND	47.0	11.2	58.1	20.0	ND	ND
20-Nov-14		0.19	5.0	---	---	44.9	9.6	55.4	19.3	ND	ND
27-Apr-15		0.19	5.0	---	---	51.8	9.7	65.3	24.0	ND	ND

**TABLE 3**

**SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS**

Analyte	Sample												Blanks		
	Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5					
trans-1,2-Dichloroethene NC 2L = 100 µg/L (10/23/07)	30-Dec-09	0.1	5.0	---	ND	1.4	J	ND	0.2	J	0.2	J	---	ND	
	01-Jun-10	0.1	5.0	---	ND	0.6	J	ND	ND	ND	---	---	ND		
	29-Dec-10	0.49	5.0	---	ND	1.7	J	ND	ND	ND	ND	---	ND		
	29-Jun-11	0.49	5.0	---	ND	1.5	J	ND	ND	ND	ND	---	ND		
	01-Nov-11	0.49	5.0	---	ND	1.6	J	ND	ND	ND	ND	---	ND		
	01-May-12	0.49	5.0	---	ND	1.4	J	ND	ND	ND	ND	---	ND		
	07-Nov-12	0.077	5.00	---	---	1.59	J	ND	ND	ND	---	---	ND		
	09-May-13	0.49	5.0	---	ND	1.1	J	ND	ND	ND	---	---	ND		
	07-Nov-13	0.49	5.0	---	---	1.6	J	ND	ND	ND	---	---	ND		
	05-Jun-14	0.49	5.0	---	ND	1.4	J	ND	ND	ND	ND	---	ND		
	20-Nov-14	0.49	5.0	---	---	1.4	J	ND	ND	ND	ND	---	ND		
	27-Apr-15	0.49	5.0	---	---	1.6	J	ND	ND	ND	ND	---	ND		
	1,2-Dichloropropane NC 2L = 0.6 µg/L (1/11/10)	30-Dec-09	0.1	1.0	---	ND	<b>5.7</b>		0.6	J	1.1		0.7	J	---
01-Jun-10		0.1	1.0	---	ND	<b>1.9</b>		ND		ND		ND	---	ND	
29-Dec-10		0.27	1.0	---	ND	<b>5.3</b>		ND		ND		ND	---	ND	
29-Jun-11		0.27	1.0	---	ND	<b>4.8</b>		0.90	J	<b>1.3</b>		0.73	J	ND	ND
01-Nov-11		0.27	1.0	---	ND	<b>4.9</b>		0.76	J	<b>1.3</b>		ND		ND	ND
01-May-12		0.27	1.0	---	ND	<b>4.4</b>		0.76	J	<b>1.4</b>		0.62	J	ND	ND
07-Nov-12		0.150	1.0	---	---	<b>4.93</b>		ND		<b>1.66</b>		ND	---	ND	ND
09-May-13		0.27	1.0	---	ND	<b>3.3</b>		0.51	J	0.96	J	0.45	J	---	ND
07-Nov-13		0.27	1.0	---	---	<b>4.4</b>		0.63	J	<b>1.3</b>		0.57	J	---	ND
05-Jun-14		0.27	1.0	---	ND	<b>4.0</b>		0.51	J	ND		0.41	J	ND	ND
20-Nov-14		0.27	1.0	---	---	<b>4.1</b>		0.56	J	<b>1.2</b>		0.36	J	ND	ND
27-Apr-15		0.27	1.0	---	---	<b>4.8</b>		0.59	J	<b>1.6</b>		0.57	J	ND	ND
Ethylbenzene NC 2L = 600 µg/L (10/23/07)		30-Dec-09	0.1	1.0	---	ND	ND		ND	0.4	J	ND	---	---	ND
	01-Jun-10	0.1	1.0	---	ND	ND		ND	ND		ND	---	---	ND	
	29-Dec-10	0.30	1.0	---	ND	ND		ND	ND		ND	ND	---	ND	
	29-Jun-11	0.30	1.0	---	ND	ND		ND	ND		ND	ND	---	ND	
	01-Nov-11	0.30	1.0	---	ND	ND		ND	ND		ND	ND	---	ND	
	01-May-12	0.30	1.0	---	ND	ND		ND	ND		ND	ND	---	ND	
	07-Nov-12	0.109	1.00	---	---	ND		ND	ND		ND	---	---	ND	
	09-May-13	0.30	1.0	---	ND	ND		ND	ND		ND	---	---	ND	
	07-Nov-13	0.30	1.0	---	---	ND		ND	ND		ND	---	---	ND	
	05-Jun-14	0.30	1.0	---	ND	ND		ND	ND		ND	ND	---	ND	
	20-Nov-14	0.30	1.0	---	---	ND		ND	ND		ND	ND	---	ND	
	27-Apr-15	0.30	1.0	---	---	ND		ND	ND		ND	ND	---	ND	
	Tetrachloroethene NC 2L = 0.7 µg/L (10/23/07)	30-Dec-09	0.2	1.0	---	ND	<b>1.2</b>		ND	ND		ND	---	---	ND
01-Jun-10		0.2	1.0	---	ND	<b>1.4</b>		ND	ND		ND	---	---	ND	
29-Dec-10		0.46	1.0	---	ND	<b>2.8</b>		ND	ND		ND	ND	---	ND	
29-Jun-11		0.46	1.0	---	ND	<b>3.6</b>		ND	ND		ND	ND	---	ND	
01-Nov-11		0.46	1.0	---	ND	<b>2.9</b>		ND	ND		ND	ND	---	ND	
01-May-12		0.46	1.0	---	ND	<b>3.0</b>		ND	ND		ND	ND	---	ND	
07-Nov-12		0.193	1.00	---	---	<b>2.52</b>		ND	ND		ND	---	---	ND	
09-May-13		0.46	1.0	---	ND	<b>1.9</b>		ND	ND		ND	---	---	ND	
07-Nov-13		0.46	1.0	---	---	<b>1.8</b>		ND	ND		ND	---	---	ND	
05-Jun-14		0.46	1.0	---	ND	<b>2.3</b>		ND	ND		ND	ND	---	ND	
20-Nov-14		0.46	1.0	---	---	<b>1.1</b>		ND	ND		ND	ND	---	ND	
27-Apr-15		0.46	1.0	---	---	<b>1.4</b>		ND	ND		ND	ND	---	ND	

**TABLE 3**

**SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS**

Analyte	Sample										Blanks
	Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5	
Toluene NC 2L = 600 µg/L (1/11/10)	29-Jun-11	0.26	1.0	---	ND	ND	ND	ND	ND	0.76 J	ND
	01-Nov-11	0.26	1.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	0.26	1.0	---	ND	ND	ND	ND	ND	ND	ND
	07-Nov-12	0.122	1.00	---	---	ND	ND	ND	ND	---	ND
	09-May-13	0.26	1.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	0.26	1.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	0.26	1.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	0.26	1.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	0.26	1.0	---	---	ND	ND	ND	ND	ND	ND
Trichloroethene NC 2L = 3 µg/L (1/11/10)	30-Dec-09	0.1	1.0	---	ND	<b>8.0</b>	ND	ND	0.2 J	---	ND
	01-Jun-10	0.1	1.0	---	ND	<b>6.4</b>	ND	ND	ND	---	ND
	29-Dec-10	0.47	1.0	---	ND	<b>10.1</b>	ND	ND	ND	ND	ND
	29-Jun-11	0.47	1.0	---	ND	<b>14.6</b>	ND	ND	ND	ND	ND
	01-Nov-11	0.47	1.0	---	ND	<b>10.2</b>	ND	ND	ND	ND	ND
	01-May-12	0.47	1.0	---	ND	<b>11.6</b>	ND	ND	ND	ND	ND
	07-Nov-12	0.161	1.00	---	---	<b>9.97</b>	ND	ND	ND	---	ND
	09-May-13	0.47	1.0	---	ND	<b>8.4</b>	ND	ND	ND	---	ND
	07-Nov-13	0.47	1.0	---	---	<b>8.0</b>	ND	ND	ND	---	ND
	05-Jun-14	0.47	1.0	---	ND	<b>8.9</b>	ND	ND	ND	ND	ND
	20-Nov-14	0.47	1.0	---	---	<b>5.1</b>	ND	ND	ND	ND	ND
	27-Apr-15	0.47	1.0	---	---	<b>7.1</b>	ND	ND	ND	ND	ND
Trichlorofluoromethane NC 2L = 2000 µg/L (1/11/10)	29-Jun-11	0.20	1.0	---	ND	0.95 J	ND	ND	ND	ND	ND
	01-Nov-11	0.20	1.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	0.20	1.0	---	ND	ND	ND	ND	ND	ND	ND
	07-Nov-12	0.157	1.00	---	---	ND	ND	ND	ND	---	ND
	09-May-13	0.20	1.0	---	ND	0.66 J	ND	ND	ND	---	ND
	07-Nov-13	0.20	1.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	0.20	1.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	0.20	1.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	0.20	1.0	---	---	ND	ND	ND	ND	ND	ND

**TABLE 3**

**SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS**

Analyte	Sample	DL	QL	Monitoring Wells		Monitoring Wells					Blanks	
	Collection Date			MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5		
Vinyl chloride NC 2L = 0.03 µg/L (1/11/10)	30-Dec-09	0.1	1.0	---	ND	<b>4.0</b>	<b>2.8</b>	<b>4.1</b>	<b>26.2</b>	---	ND	
	01-Jun-10	0.1	1.0	---	ND	<b>2.2</b>	<b>3.0</b>	ND	<b>26.7</b>	---	ND	
	29-Dec-10	0.62	1.0	---	ND	<b>3.5</b>	<b>2.4</b>	<b>4.7</b>	<b>25.6</b>	ND	ND	
	29-Jun-11	0.62	1.0	---	ND	<b>2.8</b>	<b>2.8</b>	<b>4.6</b>	<b>28.7</b>	ND	ND	
	01-Nov-11	0.62	1.0	---	ND	<b>5.1</b>	<b>2.6</b>	<b>6.9</b>	<b>24.0</b>	ND	ND	
	01-May-12	0.62	1.0	---	ND	<b>3.5</b>	<b>2.0</b>	<b>4.8</b>	<b>21.8</b>	ND	ND	
	07-Nov-12	0.127	1.00	---	---	<b>7.94</b>	<b>2.73</b>	<b>6.99</b>	<b>29.9</b>	---	ND	
	09-May-13	0.62	1.0	---	ND	<b>2.8</b>	<b>1.9</b>	<b>4.2</b>	<b>18.6</b>	---	ND	
	07-Nov-13	0.62	1.0	---	---	<b>6.3</b>	<b>2.1</b>	<b>6.0</b>	<b>21.9</b>	---	ND	
	05-Jun-14	0.62	1.0	---	ND	<b>7.1</b>	<b>5.6</b>	<b>8.9</b>	<b>21.9</b>	ND	ND	
	20-Nov-14	0.62	1.0	---	---	<b>5.2</b>	<b>2.1</b>	<b>5.3</b>	<b>16.2</b>	ND	ND	
	27-Apr-15	0.62	1.0	---	---	<b>5.3</b>	<b>2.4</b>	<b>7.1</b>	<b>21.4</b>	ND	ND	
	Xylene (Total) NC 2L = 500 µg/L (1/11/10)	30-Dec-09	0.3	4.0	---	ND	ND	ND	3.5	J	ND	---
01-Jun-10		0.3	4.0	---	ND	ND	ND	ND	ND	---	ND	
29-Dec-10		0.66	2.0	---	ND	ND	ND	ND	ND	ND	ND	
29-Jun-11		0.66	2.0	---	ND	ND	ND	ND	ND	ND	ND	
01-Nov-11		0.66	2.0	---	ND	ND	ND	ND	ND	ND	ND	
01-May-12		0.66	2.0	---	ND	0.89	J	ND	ND	ND	ND	
07-Nov-12		0.179	5.00	---	---	ND	ND	ND	ND	---	ND	
09-May-13		0.66	5.0	---	ND	ND	ND	ND	ND	---	ND	
07-Nov-13		0.66	5.0	---	---	ND	ND	ND	ND	---	ND	
05-Jun-14		0.66	5.0	---	ND	ND	ND	ND	ND	ND	ND	
20-Nov-14		0.66	5.0	---	---	ND	ND	ND	ND	ND	ND	
27-Apr-15		0.66	5.0	---	---	ND	ND	ND	ND	ND	ND	

**Notes:**

1. RL = Reporting limit (NC SWSL).
2. All concentrations are in micrograms per liter (ug/L).
3. NC 2L Standard is the groundwater quality standard established under 15A NCAC 2L.
4. MW = Monitoring well.
5. Blanks = Quality control blanks, including trip, field, and laboratory blanks. The listed concentration is the highest value reported in all blanks associated with the samples.
6. ND = Not detected at the laboratory's detection limit.
7. J = Estimated value since concentration is less than the laboratory's reporting limit and greater than the detection limit.
8. B = Probable field and/or laboratory contamination since the concentration is within five times the concentration reported in the associated quality control blanks.
9. **Bold** values are greater than the NC 2L Standard or GWPS.
10. DL = Detection limit.
11. GWPS = Groundwater Protection Standard (GWPS is used when the NC 2L Standard has not been established.)
12. --- = Monitoring well was no sampled.

**TABLE 4**

**SUMMARY OF HISTORICAL SURFACE WATER CONSTITUENTS**

Analyte	Sample	DL	QL	SW-1		SW-2		SW-3		Blanks	
	Collection Date										
<b>Inorganic Compounds</b>											
Antimony NC 2B = NE µg/L (05/01/07)	30-Dec-09	1.2	6.0	1.5	B	6.4	B	NS		1.4	J
	01-Jun-10	1.2	6.0	6.7	B	2.5	B	NS		3.9	J
	29-Dec-10	2.6	6.0	ND		ND		ND		ND	
	29-Jun-11	5.0	6.0	ND		ND		ND		ND	
	01-Nov-11	5.0	6.0	ND		ND		ND		ND	
	01-May-12	5.0	6.0	ND		ND		ND		ND	
	07-Nov-12	0.48	6.0	ND		ND		ND		ND	
	09-May-13	5.0	6.0	ND		ND		ND		ND	
	07-Nov-13	5.0	6.0	ND		ND		ND		ND	
	05-Jun-14	5.0	6.0	ND		ND		ND		ND	
	20-Nov-14	3.8	6.0	ND		ND		ND		ND	
	27-Apr-15	3.8	6.0	ND		ND		ND		ND	
Arsenic NC 2B = 50 µg/L (05/01/07)	07-Nov-12	0.094	10.0	0.17	B	0.26	B	0.24	B	1.0	J
	09-May-13	5.0	10.0	ND		ND		ND		ND	
	07-Nov-13	5.0	10.0	ND		ND		ND		ND	
	05-Jun-14	5.0	10.0	ND		ND		ND		ND	
	20-Nov-14	2.5	10.0	ND		ND		ND		ND	
	27-Apr-15	2.5	10.0	ND		ND		ND		ND	
Barium NC 2B = NE µg/L (05/01/07)	30-Dec-09	1.1	100	25.1	J	34	J	NS		3.4	J
	01-Jun-10	1.1	100	28.8	J	31.5	J	NS		2.0	J
	29-Dec-10	0.20	100	22.3	B	27.8	B	27.9	B	11.3	J
	29-Jun-11	5.0	100	40.0	J	39.4	J	39.3	J	ND	
	01-Nov-11	5.0	100	30.1	J	35.2	J	34.3	J	ND	
	01-May-12	5.0	100	66.1	J	35.4	J	33.3	J	ND	
	07-Nov-12	0.39	100	27.6	B	31.5	B	29.9	B	12.2	J
	09-May-13	5.0	100	33.6	J	33.8	J	32.6	J	ND	
	07-Nov-13	5.0	100	36.6	J	32.0	J	29.8	J	ND	
	05-Jun-14	5.0	100	31.2	J	35.8	J	33.6	J	ND	
	20-Nov-14	2.5	100	26.6	J	31.2	J	29.4	J	ND	
	27-Apr-15	2.5	100	28.9	J	33.7	J	36.0	J	ND	
Cadmium NC 2B = 2 µg/L (05/01/07)	30-Dec-09	0.2	1.0	ND		ND		NS		ND	
	01-Jun-10	0.2	1.0	0.9	B	0.4	B	NS		0.4	J
	29-Dec-10	0.50	1.0	ND		ND		ND		ND	
	29-Jun-11	1.0	1.0	ND		ND		ND		ND	
	01-Nov-11	1.0	1.0	ND		ND		ND		ND	
	01-May-12	1.0	1.0	ND		ND		ND		ND	
	07-Nov-12	0.026	1.000	ND		ND		ND		ND	
	09-May-13	1.0	1.0	ND		ND		ND		ND	
	07-Nov-13	1.0	1.0	ND		ND		ND		ND	
	05-Jun-14	1.0	1.0	ND		ND		ND		ND	
	20-Nov-14	0.5	1.0	ND		ND		ND		ND	
	27-Apr-15	0.5	1.0	ND		ND		ND		ND	

**TABLE 4**

**SUMMARY OF HISTORICAL SURFACE WATER CONSTITUENTS**

Analyte	Sample	DL	QL	SW-1		SW-2		SW-3		Blanks	
	Collection Date										
Chromium NC 2B = 50 µg/L (05/01/07)	30-Dec-09	0.7	10.0	ND		ND		NS		ND	
	01-Jun-10	0.7	10.0	1.7	J	1.2	J	NS		ND	
	29-Dec-10	0.40	10.0	0.69	J	0.53	J	0.41	J	ND	
	29-Jun-11	5.0	10.0	ND		ND		ND		ND	
	01-Nov-11	5.0	10.0	ND		ND		ND		ND	
	01-May-12	5.0	10.0	ND		ND		ND		ND	
	07-Nov-12	0.030	10.0	0.29	B	0.13	B	0.11	B	0.099	J
	09-May-13	5.0	10.0	ND		ND		ND		ND	
	07-Nov-13	5.0	10.0	ND		ND		ND		ND	
	05-Jun-14	5.0	10.0	ND		ND		ND		ND	
	20-Nov-14	2.5	10.0	ND		ND		2.7	J	ND	
	27-Apr-15	2.5	10.0	ND		ND		ND		ND	
	Cobalt NC 2B = NE µg/L (05/01/07)	30-Dec-09	0.7	10.0	ND		ND		NS		ND
01-Jun-10		0.7	10.0	ND		ND		NS		ND	
29-Dec-10		0.60	10.0	ND		1.8	J	1.9	J	ND	
29-Jun-11		5.0	10.0	ND		ND		ND		ND	
01-Nov-11		5.0	10.0	ND		ND		ND		ND	
01-May-12		5.0	10.0	ND		ND		ND		ND	
07-Nov-12		0.053	10.0	0.34	B	0.76	B	0.76	B	0.24	J
09-May-13		5.0	10.0	ND		ND		ND		ND	
07-Nov-13		5.0	10.0	ND		ND		ND		ND	
05-Jun-14		5.0	10.0	ND		ND		ND		ND	
20-Nov-14		2.5	10.0	ND		ND		ND		ND	
27-Apr-15		2.5	10.0	ND		ND		ND		ND	
Copper NC 2B = 7 µg/L (05/01/07)		30-Dec-09	2.0	10.0	ND		ND		NS		ND
	01-Jun-10	2.0	10.0	6.9	B	5.8	B	NS		4.8	J
	29-Dec-10	0.30	10.0	0.38	J	ND		ND		ND	
	29-Jun-11	5.0	10.0	ND		ND		ND		ND	
	01-Nov-11	5.0	10.0	ND		ND		ND		ND	
	01-May-12	5.0	10.0	ND		ND		ND		ND	
	07-Nov-12	0.093	10.0	0.27	B	0.38	B	0.38	B	1.23	J
	09-May-13	5.0	10.0	ND		ND		ND		ND	
	07-Nov-13	5.0	10.0	ND		ND		ND		ND	
	05-Jun-14	5.0	10.0	ND		ND		ND		ND	
	20-Nov-14	2.5	10.0	ND		ND		ND		ND	
	27-Apr-15	2.5	10.0	3.5	B	7.2	B	ND		3.2	J
	Lead NC 2B = 25 µg/L (05/01/07)	30-Dec-09	2.0	10.0	ND		ND		NS		ND
01-Jun-10		2.0	10.0	2.7	B	2.8	B	NS		3.2	J
29-Dec-10		4.0	10.0	ND		ND		ND		ND	
29-Jun-11		5.0	10.0	ND		ND		ND		ND	
01-Nov-11		5.0	10.0	ND		ND		ND		ND	
01-May-12		5.0	10.0	ND		ND		ND		ND	
07-Nov-12		0.025	10.0	0.071	B	0.049	B	0.060	B	0.58	J
09-May-13		5.0	10.0	ND		ND		ND		ND	
07-Nov-13		5.0	10.0	ND		ND		ND		ND	
05-Jun-14		5.0	10.0	ND		ND		ND		ND	
20-Nov-14		2.5	10.0	ND		ND		ND		ND	
27-Apr-15		2.5	10.0	ND		ND		ND		ND	

**TABLE 4**

**SUMMARY OF HISTORICAL SURFACE WATER CONSTITUENTS**

Analyte	Sample	DL	QL	SW-1		SW-2		SW-3		Blanks	
	Collection Date										
Nickel NC 2B = 88 µg/L (05/01/07)	07-Nov-12	0.26	50.0	0.46	B	0.39	B	0.35	B	0.84	J
	09-May-13	5.0	50.0	ND		ND		ND		ND	
	07-Nov-13	5.0	50.0	ND		ND		ND		ND	
	05-Jun-14	5.0	50.0	ND		ND		ND		ND	
	20-Nov-14	2.5	50.0	ND		ND		ND		ND	
	27-Apr-15	2.5	50.0	ND		ND		ND		ND	
Vanadium NC 2B = NE µg/L (05/01/07)	30-Dec-09	0.4	25.0	2.0	J	0.8	J	NS		ND	
	01-Jun-10	0.4	25.0	2.2	J	2.4	J	NS		ND	
	29-Dec-10	0.20	25.0	0.67	B	0.37	B	0.62	B	0.26	J
	29-Jun-11	5.0	25.0	ND		ND		ND		ND	
	01-Nov-11	5.0	25.0	ND		ND		ND		ND	
	01-May-12	5.0	25.0	ND		ND		ND		ND	
	07-Nov-12	0.085	25.0	0.63	J	0.44	J	0.52	J	ND	
	09-May-13	5.0	25.0	7.8	J	9.1	J	9.4	J	ND	
	07-Nov-13	5.0	25.0	ND		ND		ND		ND	
	05-Jun-14	5.0	25.0	ND		ND		ND		ND	
	20-Nov-14	2.5	25.0	ND		ND		ND		ND	
	27-Apr-15	2.5	25.0	ND		2.80	J	ND		ND	
Zinc NC 2B = 50 µg/L (05/01/07)	30-Dec-09	2.7	10.0	6.7	B	ND		NS		4.7	J
	01-Jun-10	2.7	10.0	6.7	J	8.7	J	NS		ND	
	29-Dec-10	0.40	10.0	ND		1.2	B	1.2	B	12.5	
	29-Jun-11	10.0	10.0	ND		ND		ND		10.5	
	01-Nov-11	10.0	10.0	ND		ND		ND		ND	
	01-May-12	10.0	10.0	ND		ND		ND		ND	
	07-Nov-12	1.31	10.0	ND		ND		1.56	J	ND	
	09-May-13	10.0	10.0	ND		ND		ND		ND	
	07-Nov-13	10.0	10.0	ND		ND		ND		ND	
	05-Jun-14	10.0	10.0	ND		ND		ND		ND	
	20-Nov-14	5.0	10.0	ND		ND		ND		ND	
	27-Apr-15	5.0	10.0	8.9	B	10.5	B	9.3	B	7.5	J

**TABLE 4**

**SUMMARY OF HISTORICAL SURFACE WATER CONSTITUENTS**

Analyte	Sample	DL	QL	SW-1		SW-2		SW-3		Blanks	
	Collection Date										
<b>Organic Compounds</b>											
Acetone NC 2B = NE µg/L (05/01/07)	29-Jun-11	2.2	100	2.8	B	3.3	B	4.4	B	5.3	J
	01-Nov-11	2.2	100	ND		ND		ND		14.6	J
	01-May-12	2.2	100	ND		ND		ND		ND	
	07-Nov-12	0.193	100	ND		ND		ND		ND	
	09-May-13	10.0	100	ND		ND		ND		12.0	J
	07-Nov-13	10.0	100	ND		ND		ND		ND	
	05-Jun-14	10.0	100	ND		ND		ND		ND	
	20-Nov-14	10.0	100	ND		ND		ND		ND	
	27-Apr-15	10.0	100	12.4	B	10.6	B	13.8	B	20.7	J
cis-1,2-Dichloroethene NC 2B = NE µg/L (05/01/07)	30-Dec-09	0.1	5.0	ND		ND		NS		ND	
	01-Jun-10	0.1	5.0	ND		ND		NS		ND	
	29-Dec-10	0.19	5.0	ND		0.39	J	ND		ND	
	29-Jun-11	0.19	5.0	0.26	J	0.30	J	0.33	J	ND	
	01-Nov-11	0.19	5.0	ND		ND		ND		ND	
	01-May-12	0.19	5.0	0.31	B	ND		ND		0.21 (ND)	J
	07-Nov-12	0.103	5.00	ND		ND		ND		ND	
	09-May-13	0.19	5.0	ND		ND		ND		ND	
	07-Nov-13	0.19	5.0	ND		0.38	J	ND		ND	
	05-Jun-14	0.19	5.0	ND		0.33	J	ND		ND	
	20-Nov-14	0.19	5.0	ND		0.49	J	ND		ND	
	27-Apr-15	0.19	5.0	ND		ND		0.39	J	ND	

**Notes:**

1. RL = Reporting limit (NC SWSL).
2. All concentrations are in micrograms per liter (µg/L).
3. NC 2B Standard is the surface water quality standard. Classification is currently Freshwater Aquatic Life.
4. NS = Not sampled.
5. SMP = Surface water monitoring point.
6. Blanks = Quality control blanks, including trip, field, and laboratory blanks.  
The listed concentration is the highest value reported in all blanks associated with the samples.
7. ND = Not detected at the laboratory's detection limit.
8. J = Estimated value since concentration is less than the laboratory's reporting limit and greater than the detection limit.
9. B = Blank Qualified
10. Shaded values are greater than the established NC 2B Surface Water Quality Standards.
11. DL = Detection limit.
12. NE = Not established.

**TABLE 5**

**SUMMARY OF MNA CONSTITUENTS**

Analyte	Sample								
	Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4
Alkalinity, Total as CaCO3 (ug/L)	Jun-14	1000.0	5000	---	4600 J	148000	147000	160000	186000
	Nov-14	1000.0	5000	---	---	159000	151000	159000	181000
	Apr-15	1000.0	5000	---	---	141000	134000	146000	166000
Sulfate (ug/L)	Jun-14	2000	250000	---	6500 J	ND	ND	ND	ND
	Nov-14	1000	250000	---	---	1760 J	1730 J	1870 J	1560 J
	Apr-15	1000	250000	---	---	ND	ND	ND	ND
Nitrogen, Nitrate (ug/L)	Jun-14	20.0	1000	---	72 J	56 J	ND	ND	ND
	Nov-14	10.0	1000	---	---	45 J	ND	ND	ND
	Apr-15	10.0	1000	---	---	ND	ND	ND	ND
Ethene (ug/L)	Jun-14	0.5	10	---	---	ND	ND	ND	ND
	Nov-14	0.5	10	---	---	ND	ND	ND	ND
	Apr-15	0.5	10	---	---	ND	ND	ND	4.1
Methane (ug/L)	Jun-14	3.3	6.6	---	---	5530	254	242	515
	Nov-14	3.3	6.6	---	---	4980	159	182	186
	Apr-15	3.3	6.6	---	---	4160	178	188	536
Chloride (ug/L)	Jun-14	1000	1000	---	2220	11200	25900	16800	15600
	Nov-14	500	1000	---	---	17100	27900	17300	17100
	Apr-15	500	1000	---	---	12200	26900	17200	17000
Total Organic Carbon (ug/L)	Jun-14	1000	1000	---	3100	10600	8300	1500	8200
	Nov-14	500	1000	---	---	2150	1750	1370	1100
	Apr-15	500	1000	---	---	1510	1720	1380	1630
Hydrogen (nM)	Jun-14	0.13	0.6	---	---	1.5	1.2	120	3.5
	Nov-14	0.13	0.6	---	---	2.0	1.1	4.4	1.4
	Apr-15	0.13	0.6	---	---	2.3	1.4	320	4.4
BOD, 5 day (ug/L)	Jun-14	2000	2000	---	ND	ND	ND	ND	ND
	Nov-14	2000	2000	---	---	4900	ND	ND	ND
	Apr-15	2000	2000	---	---	5670	ND	ND	ND
Chemical Oxygen Demand (ug/L)	Jun-14	12500	25000	---	ND	ND	ND	ND	ND
	Nov-14	12500	25000	---	---	ND	ND	431000	ND
	Apr-15	12500	25000	---	---	ND	ND	ND	ND
Acetic Acid (ug/L)	Jun-14	890	5000	---	---	ND	ND	ND	ND
	Nov-14	890	5000	---	---	ND	ND	ND	ND
	Apr-15	890	5000	---	---	2500 J	ND	1700 J	ND
Propionic Acid (ug/L)	Jun-14	730	5000	---	---	ND	ND	ND	ND
	Nov-14	730	5000	---	---	ND	ND	ND	ND
	Apr-15	730	5000	---	---	750 J	ND	ND	ND
Total Volatile Fatty Acids (ug/L)	Jun-14	---	---	---	---	ND	ND	ND	ND
	Nov-14	---	---	---	---	ND	ND	ND	ND
	Apr-15	---	---	---	---	3250	ND	1700	ND

**Notes:**

MW = Monitoring well.

Blanks = Quality control blanks, including trip, field, and laboratory blanks. The listed concentration is the highest value reported in all blanks associated with the samples.

ND = Not detected at the laboratory's detection limit.

J = Estimated value since concentration is less than the laboratory's reporting limit and greater than the detection limit.

B = Probable field and/or laboratory contamination since the concentration is within five times the concentration reported in the associated quality control blanks.

DL = Detection limit.

QL = Quantitation limit (NC SWSL).

--- = Monitoring well was not sampled.

**TABLE 6: BIODEGRADATION SCREENING MATRIX**

Parameter	Concentration in Plume	Interpretation	Possible Points	Points Awarded with DP points	Points Awarded without DP points	
Oxygen	< 0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	3	0	0	
	> 5 mg/L	Not tolerated; however, vinyl chloride may be oxidized aerobically	-3	0	0	
Nitrate	< 1 mg/L	At higher concentrations may compete with reductive pathway	2	2	2	
Iron II (Ferrous Iron)	> 1 mg/L	Reductive pathway possible; vinyl chloride may be oxidized under Fe (III) - reducing conditions	3	0	0	
Sulfate	< 20 mg/L	At higher concentrations may compete with reductive pathway	2	2	2	
Sulfide	> 1 mg/L	Reductive pathway possible	3	0	0	
Methane	< 0.5 mg/L	Vinyl chloride oxidizes	0			
	> 0.5 mg/L	Ultimate reductive daughter product, vinyl chloride accumulates	3	0	0	
Oxidation Reduction Potential	< 50 mV	Reductive pathway possible	1	1	1	
	< -100 mV	Reductive pathway likely	2			
pH	5 < pH < 9	Optimal range for reductive pathway	0	0	0	
	5 > pH > 9	Outside optimal range for reductive pathway	-2	0	0	
TOC	> 20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	2	0	0	
Temperature	>20° C	At T > 20°C biochemical process is accelerated	1	0	0	
Carbon Dioxide	> 2x background	Ultimate oxidative daughter product	1	0	0	
Alkalinity	> 2x background	Results from interaction between CO <sub>2</sub> and aquifer minerals	1	1	1	
Chloride	> 2x background	Daughter product of organic chlorine	2	2	2	
Hydrogen	> 1 nM	Reductive pathway possible	3	3	3	
	< 1 nM	Vinyl chloride oxidizes	0			
Volatile Fatty Acids	> 0.1 mg/L	Intermediates resulting from biodegradation of more complex compounds; carbon and energy source	2	2	2	
BTEX	> 0.1 mg/L	Carbon and energy source; drives dechlorination	2	0	0	
Tetrachloroethene (PCE)	---	Material released	0	0	0	
Trichloroethene (TCE)	---	Material released	0	0	0	
	---	Daughter product of PCE	2	2	0	
Dichloroethenes (DCE)	---	Material released	0	0	0	
	---	Daughter product of TCE	2	2	0	
Dichloroethene, cis-1,2,	---	Material released	0	0	0	
	---	Daughter product of trichloroethene	2	2	0	
Vinyl Chloride (VC)	---	Material released	0	0	0	
	---	Daughter product of DCE	2	2	0	
1,1,1-Trichloroethane (TCA)	---	Material released	0	0	0	
1,1-Dichloroethane (DCA)	---	Material released	0	0	0	
	---	Daughter product of TCA	2	2	0	
Chloroethane	---	Daughter product of dichloroethane or vinyl chloride under reducing conditions	0	0	0	
	---		2	2	0	
Ethene/Ethane	> 0.01 mg/L	Daughter products of vinyl chloride/ethene	2	0	0	
	> 0.1 mg/L		3	0	0	
Chloroform	---	Material released	0	0	0	
	---	Daughter product of carbon tetrachloride	2	0	0	
Dichloromethane (MC)	---	Material released	0	0	0	
(Methylene Chloride)	---	Daughter product of chloroform	2	0	0	
<b>Based on data collected in April 2015.</b>				<b>Total Points Awarded :</b>	<b>25</b>	<b>13</b>

mg/L = milligrams per liter  
mV = millivolts  
nM = Nanometer  
C = Celcius  
NA = Not Analyzed  
BTEX = Sum of Benzene, Toluene, Ethylbenzene, and Total Xylenes

**NOTE:** Chloroethane, Methane, TCE, DCE, cis-1,2-DCE, MC, VC, DCA, and CO<sub>2</sub> are all present in the plume; however, it is uncertain whether these are primary leachate constituents or daughter products (DPs); therefore, we have two calculation columns. The first column assumes all of these are daughter products, and the second column assumes none of them are. The true score is probably between the two.

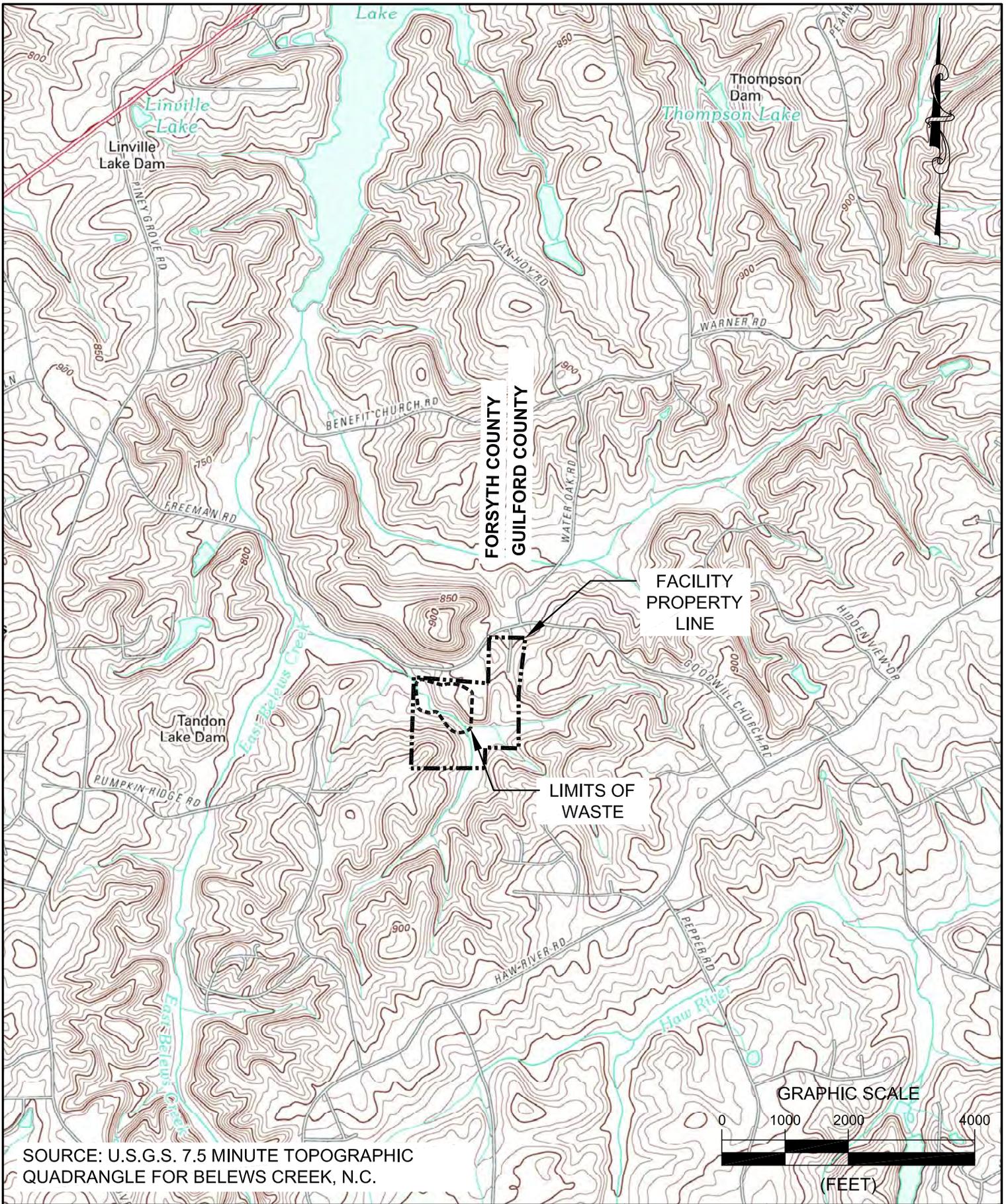
SCORE:	Evid. of Nat. Atten.
< 5	inadequate
6-14	limited
15-19	adequate
> 20	strong

This screening matrix is prepared in general accordance with the United States Environmental Protection Agency's (EPA's) Table 2.3 *Analytical Parameters and Weighted for Preliminary Screening for Anaerobic Biodegradation Process* presented in the EPA's *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater*, September 1988.

*Figure*

Figure 1

Site Location Map



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE FOR BELEWS CREEK, N.C.

TOWN OF KERNERSVILLE LANDFILL  
 FORSYTH COUNTY, NORTH CAROLINA

SITE LOCATION MAP

**JOYCE**  
 ENGINEERING  
 2211 W. MEADOWVIEW ROAD  
 GREENSBORO, NC 27407  
 PHONE: (336) 323-0092

DESIGNED \_\_\_\_\_ HRW  
 DRAWN \_\_\_\_\_ HRW  
 CHECKED \_\_\_\_\_ TLH  
 APPROVED \_\_\_\_\_ TLH  
 DATE 01/01/16  
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SCALE  
 AS SHOWN

NC CORP LIC: C-0782

PROJECT NO.  
 838

FIGURE NO.

1

***Drawing***

Drawing 1

Potentiometric Surface Contour Map



## *Appendix I*

Laboratory Analytical Report and Field Data Logs

May 07, 2015

Mr. Alex Everhart  
Joyce Engineering-NC  
2211 W. Meadowview Road  
Suite 101  
Greensboro, NC 27407

RE: Project: TOWN OF KERNERSVILLE  
Pace Project No.: 92247433

Dear Mr. Everhart:

Enclosed are the analytical results for sample(s) received by the laboratory on April 28, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,



Kevin Godwin  
kevin.godwin@pacelabs.com  
Project Manager

Enclosures

cc: Mr. Van Burbach, Joyce Engineering-NC  
Alex Everhart, Joyce Engineering-NC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

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### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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### Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
West Virginia Certification #: 356  
Virginia/VELAP Certification #: 460222

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## SAMPLE SUMMARY

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92247433001	3404-FIELD BLANK	Water	04/27/15 17:00	04/28/15 16:35
92247433002	3404-MW2	Water	04/27/15 10:00	04/28/15 16:35
92247433003	3404-MW3D	Water	04/27/15 13:15	04/28/15 16:35
92247433004	3404-MW3S	Water	04/27/15 14:15	04/28/15 16:35
92247433005	3404-MW4	Water	04/27/15 15:45	04/28/15 16:35
92247433006	3404-MW5	Water	04/27/15 16:55	04/28/15 16:35
92247433007	3404-SW1	Water	04/27/15 10:50	04/28/15 16:35
92247433008	3404-SW2	Water	04/27/15 10:22	04/28/15 16:35
92247433009	3404-SW3	Water	04/27/15 16:25	04/28/15 16:35
92247433010	3404-TRIP BLANK	Water	04/27/15 08:00	04/28/15 16:35

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### SAMPLE ANALYTE COUNT

Project: TOWN OF KERNERSVILLE  
Pace Project No.: 92247433

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92247433001	3404-FIELD BLANK	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433002	3404-MW2	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433003	3404-MW3D	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433004	3404-MW3S	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433005	3404-MW4	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433006	3404-MW5	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433007	3404-SW1	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433008	3404-SW2	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433009	3404-SW3	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	50	PASI-C
92247433010	3404-TRIP BLANK	EPA 8260	GAW	50	PASI-C

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: TOWN OF KERNERSVILLE  
Pace Project No.: 92247433

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92247433001</b>	<b>3404-FIELD BLANK</b>					
EPA 6010	Copper	3.2J	ug/L	10.0	05/01/15 00:09	
EPA 6010	Zinc	7.5J	ug/L	10.0	05/01/15 00:09	B
EPA 8260	Acetone	20.7J	ug/L	100	05/07/15 01:36	
EPA 8260	Methylene Chloride	1.2	ug/L	1.0	05/07/15 01:36	
<b>92247433002</b>	<b>3404-MW2</b>					
EPA 6010	Barium	268	ug/L	100	05/01/15 00:13	
EPA 6010	Zinc	7.3J	ug/L	10.0	05/01/15 00:13	B
EPA 8260	Benzene	6.4	ug/L	1.0	05/07/15 01:52	
EPA 8260	Chlorobenzene	0.27J	ug/L	3.0	05/07/15 01:52	
EPA 8260	1,4-Dichlorobenzene	4.7	ug/L	1.0	05/07/15 01:52	
EPA 8260	1,1-Dichloroethane	24.2	ug/L	5.0	05/07/15 01:52	
EPA 8260	cis-1,2-Dichloroethene	51.8	ug/L	5.0	05/07/15 01:52	
EPA 8260	trans-1,2-Dichloroethene	1.6J	ug/L	5.0	05/07/15 01:52	
EPA 8260	1,2-Dichloropropane	4.8	ug/L	1.0	05/07/15 01:52	
EPA 8260	Tetrachloroethene	1.4	ug/L	1.0	05/07/15 01:52	
EPA 8260	Trichloroethene	7.1	ug/L	1.0	05/07/15 01:52	
EPA 8260	Vinyl chloride	5.3	ug/L	1.0	05/07/15 01:52	
<b>92247433003</b>	<b>3404-MW3D</b>					
EPA 6010	Barium	39.0J	ug/L	100	05/01/15 00:16	
EPA 6010	Zinc	8.0J	ug/L	10.0	05/01/15 00:16	B
EPA 8260	Benzene	0.48J	ug/L	1.0	05/07/15 02:09	
EPA 8260	Chlorobenzene	0.40J	ug/L	3.0	05/07/15 02:09	
EPA 8260	Chloroethane	0.65J	ug/L	10.0	05/07/15 02:09	
EPA 8260	1,4-Dichlorobenzene	4.2	ug/L	1.0	05/07/15 02:09	
EPA 8260	1,1-Dichloroethane	4.3J	ug/L	5.0	05/07/15 02:09	
EPA 8260	1,2-Dichloroethane	1.2	ug/L	1.0	05/07/15 02:09	
EPA 8260	cis-1,2-Dichloroethene	65.3	ug/L	5.0	05/07/15 02:09	
EPA 8260	1,2-Dichloropropane	1.6	ug/L	1.0	05/07/15 02:09	
EPA 8260	Vinyl chloride	7.1	ug/L	1.0	05/07/15 02:09	
<b>92247433004</b>	<b>3404-MW3S</b>					
EPA 6010	Barium	104	ug/L	100	05/01/15 00:19	
EPA 6010	Cobalt	2.7J	ug/L	10.0	05/01/15 00:19	
EPA 6010	Zinc	11.5	ug/L	10.0	05/01/15 00:19	B
EPA 8260	Acetone	14.8J	ug/L	100	05/07/15 02:25	
EPA 8260	Benzene	0.38J	ug/L	1.0	05/07/15 02:25	
EPA 8260	Chlorobenzene	1.0J	ug/L	3.0	05/07/15 02:25	
EPA 8260	Chloroethane	0.95J	ug/L	10.0	05/07/15 02:25	
EPA 8260	1,4-Dichlorobenzene	2.1	ug/L	1.0	05/07/15 02:25	
EPA 8260	1,1-Dichloroethane	1.4J	ug/L	5.0	05/07/15 02:25	
EPA 8260	1,2-Dichloroethane	0.56J	ug/L	1.0	05/07/15 02:25	
EPA 8260	cis-1,2-Dichloroethene	9.7	ug/L	5.0	05/07/15 02:25	
EPA 8260	1,2-Dichloropropane	0.59J	ug/L	1.0	05/07/15 02:25	
EPA 8260	Vinyl chloride	2.4	ug/L	1.0	05/07/15 02:25	
<b>92247433005</b>	<b>3404-MW4</b>					
EPA 6010	Barium	94.8J	ug/L	100	05/01/15 00:22	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: TOWN OF KERNERSVILLE  
Pace Project No.: 92247433

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92247433005</b>	<b>3404-MW4</b>					
EPA 6010	Chromium	7.2J	ug/L	10.0	05/01/15 00:22	
EPA 6010	Copper	3.5J	ug/L	10.0	05/01/15 00:22	
EPA 6010	Nickel	3.4J	ug/L	50.0	05/01/15 00:22	
EPA 6010	Vanadium	8.9J	ug/L	25.0	05/01/15 00:22	
EPA 6010	Zinc	14.1	ug/L	10.0	05/01/15 00:22	B
EPA 8260	Acetone	21.3J	ug/L	100	05/07/15 02:42	
EPA 8260	Benzene	0.45J	ug/L	1.0	05/07/15 02:42	
EPA 8260	Chloroethane	0.57J	ug/L	10.0	05/07/15 02:42	
EPA 8260	1,4-Dichlorobenzene	2.7	ug/L	1.0	05/07/15 02:42	
EPA 8260	1,1-Dichloroethane	2.4J	ug/L	5.0	05/07/15 02:42	
EPA 8260	1,2-Dichloroethane	0.15J	ug/L	1.0	05/07/15 02:42	
EPA 8260	cis-1,2-Dichloroethene	24.0	ug/L	5.0	05/07/15 02:42	
EPA 8260	1,2-Dichloropropane	0.57J	ug/L	1.0	05/07/15 02:42	
EPA 8260	Vinyl chloride	21.4	ug/L	1.0	05/07/15 02:42	
<b>92247433006</b>	<b>3404-MW5</b>					
EPA 6010	Barium	67.4J	ug/L	100	05/01/15 00:25	
EPA 6010	Cobalt	10.7	ug/L	10.0	05/01/15 00:25	
EPA 6010	Copper	3.6J	ug/L	10.0	05/01/15 00:25	
EPA 6010	Vanadium	5.6J	ug/L	25.0	05/01/15 00:25	
EPA 6010	Zinc	10.3	ug/L	10.0	05/01/15 00:25	B
EPA 8260	Acetone	14.1J	ug/L	100	05/07/15 02:58	
<b>92247433007</b>	<b>3404-SW1</b>					
EPA 6010	Barium	28.9J	ug/L	100	05/01/15 00:28	
EPA 6010	Copper	3.5J	ug/L	10.0	05/01/15 00:28	
EPA 6010	Zinc	8.9J	ug/L	10.0	05/01/15 00:28	B
EPA 8260	Acetone	12.4J	ug/L	100	05/07/15 03:15	
<b>92247433008</b>	<b>3404-SW2</b>					
EPA 6010	Barium	33.7J	ug/L	100	05/01/15 00:31	
EPA 6010	Copper	7.2J	ug/L	10.0	05/01/15 00:31	
EPA 6010	Vanadium	2.8J	ug/L	25.0	05/01/15 00:31	
EPA 6010	Zinc	10.5	ug/L	10.0	05/01/15 00:31	B
EPA 8260	Acetone	10.6J	ug/L	100	05/07/15 03:31	
<b>92247433009</b>	<b>3404-SW3</b>					
EPA 6010	Barium	36.0J	ug/L	100	05/01/15 00:43	
EPA 6010	Vanadium	3.8J	ug/L	25.0	05/01/15 00:43	
EPA 6010	Zinc	9.3J	ug/L	10.0	05/01/15 00:43	B
EPA 8260	Acetone	13.8J	ug/L	100	05/07/15 03:48	
EPA 8260	cis-1,2-Dichloroethene	0.39J	ug/L	5.0	05/07/15 03:48	
<b>92247433010</b>	<b>3404-TRIP BLANK</b>					
EPA 8260	Acetone	23.1J	ug/L	100	05/07/15 04:05	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

Sample: 3404-FIELD BLANK Lab ID: 92247433001 Collected: 04/27/15 17:00 Received: 04/28/15 16:35 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:09	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:09	7440-38-2	
Barium	ND	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:09	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:09	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:09	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:09	7440-48-4	
Copper	3.2J	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:09	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:09	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:09	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:09	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:09	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:09	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:09	7440-62-2	
Zinc	7.5J	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:09	7440-66-6	B
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Acetone	20.7J	ug/L	100	10.0	1		05/07/15 01:36	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 01:36	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		05/07/15 01:36	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 01:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 01:36	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 01:36	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 01:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 01:36	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 01:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 01:36	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		05/07/15 01:36	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		05/07/15 01:36	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 01:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 01:36	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 01:36	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 01:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 01:36	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 01:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 01:36	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		05/07/15 01:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 01:36	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		05/07/15 01:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		05/07/15 01:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 01:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		05/07/15 01:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 01:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		05/07/15 01:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 01:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 01:36	10061-02-6	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-FIELD BLANK**      **Lab ID: 92247433001**      Collected: 04/27/15 17:00      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 01:36	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 01:36	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 01:36	74-88-4	
Methylene Chloride	<b>1.2</b>	ug/L	1.0	0.97	1		05/07/15 01:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 01:36	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 01:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 01:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 01:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 01:36	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 01:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 01:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 01:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 01:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 01:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 01:36	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 01:36	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		05/07/15 01:36	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 01:36	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		05/07/15 01:36	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		05/07/15 01:36	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		05/07/15 01:36	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE  
Pace Project No.: 92247433

**Sample: 3404-MW2**      **Lab ID: 92247433002**      Collected: 04/27/15 10:00      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b>			Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:13	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:13	7440-38-2	
Barium	<b>268</b>	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:13	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:13	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:13	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:13	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:13	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:13	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:13	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:13	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:13	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:13	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:13	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:13	7440-62-2	
Zinc	<b>7.3J</b>	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:13	7440-66-6	B
<b>8260 MSV Low Level Landfill</b>			Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	10.0	1		05/07/15 01:52	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 01:52	107-13-1	
Benzene	<b>6.4</b>	ug/L	1.0	0.25	1		05/07/15 01:52	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 01:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 01:52	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 01:52	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 01:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 01:52	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 01:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 01:52	56-23-5	
Chlorobenzene	<b>0.27J</b>	ug/L	3.0	0.23	1		05/07/15 01:52	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		05/07/15 01:52	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 01:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 01:52	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 01:52	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 01:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 01:52	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 01:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 01:52	95-50-1	
1,4-Dichlorobenzene	<b>4.7</b>	ug/L	1.0	0.33	1		05/07/15 01:52	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 01:52	110-57-6	
1,1-Dichloroethane	<b>24.2</b>	ug/L	5.0	0.32	1		05/07/15 01:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		05/07/15 01:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 01:52	75-35-4	
cis-1,2-Dichloroethene	<b>51.8</b>	ug/L	5.0	0.19	1		05/07/15 01:52	156-59-2	
trans-1,2-Dichloroethene	<b>1.6J</b>	ug/L	5.0	0.49	1		05/07/15 01:52	156-60-5	
1,2-Dichloropropane	<b>4.8</b>	ug/L	1.0	0.27	1		05/07/15 01:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 01:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 01:52	10061-02-6	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-MW2**      **Lab ID: 92247433002**      Collected: 04/27/15 10:00      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 01:52	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 01:52	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 01:52	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 01:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 01:52	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 01:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 01:52	630-20-6	
1,1,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 01:52	79-34-5	
Tetrachloroethene	<b>1.4</b>	ug/L	1.0	0.46	1		05/07/15 01:52	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 01:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 01:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 01:52	79-00-5	
Trichloroethene	<b>7.1</b>	ug/L	1.0	0.47	1		05/07/15 01:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 01:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 01:52	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 01:52	108-05-4	
Vinyl chloride	<b>5.3</b>	ug/L	1.0	0.62	1		05/07/15 01:52	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 01:52	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		05/07/15 01:52	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		05/07/15 01:52	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		05/07/15 01:52	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

Sample: 3404-MW3D Lab ID: 92247433003 Collected: 04/27/15 13:15 Received: 04/28/15 16:35 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:16	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:16	7440-38-2	
Barium	<b>39.0J</b>	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:16	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:16	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:16	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:16	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:16	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:16	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:16	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:16	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:16	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:16	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:16	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:16	7440-62-2	
Zinc	<b>8.0J</b>	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:16	7440-66-6	B
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Acetone	ND	ug/L	100	10.0	1		05/07/15 02:09	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 02:09	107-13-1	
Benzene	<b>0.48J</b>	ug/L	1.0	0.25	1		05/07/15 02:09	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 02:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 02:09	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 02:09	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 02:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 02:09	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 02:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 02:09	56-23-5	
Chlorobenzene	<b>0.40J</b>	ug/L	3.0	0.23	1		05/07/15 02:09	108-90-7	
Chloroethane	<b>0.65J</b>	ug/L	10.0	0.54	1		05/07/15 02:09	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 02:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 02:09	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 02:09	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 02:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 02:09	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 02:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 02:09	95-50-1	
1,4-Dichlorobenzene	<b>4.2</b>	ug/L	1.0	0.33	1		05/07/15 02:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 02:09	110-57-6	
1,1-Dichloroethane	<b>4.3J</b>	ug/L	5.0	0.32	1		05/07/15 02:09	75-34-3	
1,2-Dichloroethane	<b>1.2</b>	ug/L	1.0	0.12	1		05/07/15 02:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 02:09	75-35-4	
cis-1,2-Dichloroethene	<b>65.3</b>	ug/L	5.0	0.19	1		05/07/15 02:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 02:09	156-60-5	
1,2-Dichloropropane	<b>1.6</b>	ug/L	1.0	0.27	1		05/07/15 02:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 02:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 02:09	10061-02-6	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-MW3D**      **Lab ID: 92247433003**      Collected: 04/27/15 13:15      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 02:09	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 02:09	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 02:09	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 02:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 02:09	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 02:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 02:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 02:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 02:09	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 02:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 02:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 02:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 02:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 02:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 02:09	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 02:09	108-05-4	
Vinyl chloride	7.1	ug/L	1.0	0.62	1		05/07/15 02:09	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 02:09	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		05/07/15 02:09	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		05/07/15 02:09	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		05/07/15 02:09	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-MW3S**      **Lab ID: 92247433004**      Collected: 04/27/15 14:15      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b> Analytical Method: EPA 6010      Preparation Method: EPA 3010									
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:19	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:19	7440-38-2	
Barium	<b>104</b>	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:19	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:19	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:19	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:19	7440-47-3	
Cobalt	<b>2.7J</b>	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:19	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:19	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:19	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:19	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:19	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:19	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:19	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:19	7440-62-2	
Zinc	<b>11.5</b>	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:19	7440-66-6	B
<b>8260 MSV Low Level Landfill</b> Analytical Method: EPA 8260									
Acetone	<b>14.8J</b>	ug/L	100	10.0	1		05/07/15 02:25	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 02:25	107-13-1	
Benzene	<b>0.38J</b>	ug/L	1.0	0.25	1		05/07/15 02:25	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 02:25	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 02:25	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 02:25	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 02:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 02:25	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 02:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 02:25	56-23-5	
Chlorobenzene	<b>1.0J</b>	ug/L	3.0	0.23	1		05/07/15 02:25	108-90-7	
Chloroethane	<b>0.95J</b>	ug/L	10.0	0.54	1		05/07/15 02:25	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 02:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 02:25	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 02:25	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 02:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 02:25	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 02:25	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 02:25	95-50-1	
1,4-Dichlorobenzene	<b>2.1</b>	ug/L	1.0	0.33	1		05/07/15 02:25	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 02:25	110-57-6	
1,1-Dichloroethane	<b>1.4J</b>	ug/L	5.0	0.32	1		05/07/15 02:25	75-34-3	
1,2-Dichloroethane	<b>0.56J</b>	ug/L	1.0	0.12	1		05/07/15 02:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 02:25	75-35-4	
cis-1,2-Dichloroethene	<b>9.7</b>	ug/L	5.0	0.19	1		05/07/15 02:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 02:25	156-60-5	
1,2-Dichloropropane	<b>0.59J</b>	ug/L	1.0	0.27	1		05/07/15 02:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 02:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 02:25	10061-02-6	

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### ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-MW3S**      **Lab ID: 92247433004**      Collected: 04/27/15 14:15      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 02:25	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 02:25	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 02:25	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 02:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 02:25	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 02:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 02:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 02:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 02:25	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 02:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 02:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 02:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 02:25	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 02:25	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 02:25	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 02:25	108-05-4	
Vinyl chloride	<b>2.4</b>	ug/L	1.0	0.62	1		05/07/15 02:25	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 02:25	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		05/07/15 02:25	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		05/07/15 02:25	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		05/07/15 02:25	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

Sample: 3404-MW4 Lab ID: 92247433005 Collected: 04/27/15 15:45 Received: 04/28/15 16:35 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:22	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-38-2	
Barium	<b>94.8J</b>	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:22	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:22	7440-43-9	
Chromium	<b>7.2J</b>	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-48-4	
Copper	<b>3.5J</b>	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7439-92-1	
Nickel	<b>3.4J</b>	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:22	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:22	7440-28-0	
Vanadium	<b>8.9J</b>	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-62-2	
Zinc	<b>14.1</b>	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:22	7440-66-6	B
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Acetone	<b>21.3J</b>	ug/L	100	10.0	1		05/07/15 02:42	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 02:42	107-13-1	
Benzene	<b>0.45J</b>	ug/L	1.0	0.25	1		05/07/15 02:42	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 02:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 02:42	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 02:42	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 02:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 02:42	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 02:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 02:42	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		05/07/15 02:42	108-90-7	
Chloroethane	<b>0.57J</b>	ug/L	10.0	0.54	1		05/07/15 02:42	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 02:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 02:42	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 02:42	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 02:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 02:42	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 02:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 02:42	95-50-1	
1,4-Dichlorobenzene	<b>2.7</b>	ug/L	1.0	0.33	1		05/07/15 02:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 02:42	110-57-6	
1,1-Dichloroethane	<b>2.4J</b>	ug/L	5.0	0.32	1		05/07/15 02:42	75-34-3	
1,2-Dichloroethane	<b>0.15J</b>	ug/L	1.0	0.12	1		05/07/15 02:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 02:42	75-35-4	
cis-1,2-Dichloroethene	<b>24.0</b>	ug/L	5.0	0.19	1		05/07/15 02:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 02:42	156-60-5	
1,2-Dichloropropane	<b>0.57J</b>	ug/L	1.0	0.27	1		05/07/15 02:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 02:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 02:42	10061-02-6	

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### ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-MW4**      **Lab ID: 92247433005**      Collected: 04/27/15 15:45      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 02:42	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 02:42	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 02:42	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 02:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 02:42	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 02:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 02:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 02:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 02:42	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 02:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 02:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 02:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 02:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 02:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 02:42	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 02:42	108-05-4	
Vinyl chloride	<b>21.4</b>	ug/L	1.0	0.62	1		05/07/15 02:42	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 02:42	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		05/07/15 02:42	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		05/07/15 02:42	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		05/07/15 02:42	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-MW5**      **Lab ID: 92247433006**      Collected: 04/27/15 16:55      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010      Preparation Method: EPA 3010							
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:25	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-38-2	
Barium	<b>67.4J</b>	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:25	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:25	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-47-3	
Cobalt	<b>10.7</b>	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-48-4	
Copper	<b>3.6J</b>	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:25	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:25	7440-28-0	
Vanadium	<b>5.6J</b>	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-62-2	
Zinc	<b>10.3</b>	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:25	7440-66-6	B
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Acetone	<b>14.1J</b>	ug/L	100	10.0	1		05/07/15 02:58	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 02:58	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		05/07/15 02:58	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 02:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 02:58	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 02:58	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 02:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 02:58	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 02:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 02:58	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		05/07/15 02:58	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		05/07/15 02:58	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 02:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 02:58	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 02:58	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 02:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 02:58	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 02:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 02:58	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		05/07/15 02:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 02:58	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		05/07/15 02:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		05/07/15 02:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 02:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		05/07/15 02:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 02:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		05/07/15 02:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 02:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 02:58	10061-02-6	

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### ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-MW5**      **Lab ID: 92247433006**      Collected: 04/27/15 16:55      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 02:58	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 02:58	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 02:58	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 02:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 02:58	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 02:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 02:58	630-20-6	
1,1,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 02:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 02:58	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 02:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 02:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 02:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 02:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 02:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 02:58	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 02:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		05/07/15 02:58	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 02:58	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		05/07/15 02:58	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		05/07/15 02:58	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		05/07/15 02:58	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-SW1**      **Lab ID: 92247433007**      Collected: 04/27/15 10:50      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b>			Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:28	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:28	7440-38-2	
Barium	<b>28.9J</b>	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:28	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:28	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:28	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:28	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:28	7440-48-4	
Copper	<b>3.5J</b>	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:28	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:28	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:28	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:28	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:28	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:28	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:28	7440-62-2	
Zinc	<b>8.9J</b>	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:28	7440-66-6	B
<b>8260 MSV Low Level Landfill</b>			Analytical Method: EPA 8260						
Acetone	<b>12.4J</b>	ug/L	100	10.0	1		05/07/15 03:15	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 03:15	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		05/07/15 03:15	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 03:15	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 03:15	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 03:15	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 03:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 03:15	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 03:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 03:15	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		05/07/15 03:15	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		05/07/15 03:15	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 03:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 03:15	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 03:15	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 03:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 03:15	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 03:15	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 03:15	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		05/07/15 03:15	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 03:15	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		05/07/15 03:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		05/07/15 03:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 03:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		05/07/15 03:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 03:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		05/07/15 03:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 03:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 03:15	10061-02-6	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-SW1**      **Lab ID: 92247433007**      Collected: 04/27/15 10:50      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 03:15	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 03:15	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 03:15	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 03:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 03:15	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 03:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 03:15	630-20-6	
1,1,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 03:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 03:15	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 03:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 03:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 03:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 03:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 03:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 03:15	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 03:15	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		05/07/15 03:15	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 03:15	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		05/07/15 03:15	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		05/07/15 03:15	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		05/07/15 03:15	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE  
Pace Project No.: 92247433

Sample: 3404-SW2 Lab ID: 92247433008 Collected: 04/27/15 10:22 Received: 04/28/15 16:35 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:31	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-38-2	
Barium	<b>33.7J</b>	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:31	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:31	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-48-4	
Copper	<b>7.2J</b>	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:31	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:31	7440-28-0	
Vanadium	<b>2.8J</b>	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-62-2	
Zinc	<b>10.5</b>	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:31	7440-66-6	B
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Acetone	<b>10.6J</b>	ug/L	100	10.0	1		05/07/15 03:31	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 03:31	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		05/07/15 03:31	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 03:31	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 03:31	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 03:31	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 03:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 03:31	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 03:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 03:31	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		05/07/15 03:31	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		05/07/15 03:31	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 03:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 03:31	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 03:31	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 03:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 03:31	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 03:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 03:31	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		05/07/15 03:31	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 03:31	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		05/07/15 03:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		05/07/15 03:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 03:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		05/07/15 03:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 03:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		05/07/15 03:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 03:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 03:31	10061-02-6	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-SW2**      **Lab ID: 92247433008**      Collected: 04/27/15 10:22      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 03:31	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 03:31	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 03:31	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 03:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 03:31	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 03:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 03:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 03:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 03:31	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 03:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 03:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 03:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 03:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 03:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 03:31	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 03:31	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		05/07/15 03:31	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 03:31	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		05/07/15 03:31	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		05/07/15 03:31	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		05/07/15 03:31	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

Sample: **3404-SW3** Lab ID: **92247433009** Collected: 04/27/15 16:25 Received: 04/28/15 16:35 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	6.0	3.8	1	04/30/15 09:40	05/01/15 00:43	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-38-2	
Barium	<b>36.0J</b>	ug/L	100	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:43	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	04/30/15 09:40	05/01/15 00:43	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:43	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	04/30/15 09:40	05/01/15 00:43	7440-28-0	
Vanadium	<b>3.8J</b>	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-62-2	
Zinc	<b>9.3J</b>	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:43	7440-66-6	B
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Acetone	<b>13.8J</b>	ug/L	100	10.0	1		05/07/15 03:48	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 03:48	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		05/07/15 03:48	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 03:48	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 03:48	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 03:48	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 03:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 03:48	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 03:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 03:48	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		05/07/15 03:48	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		05/07/15 03:48	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 03:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 03:48	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 03:48	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 03:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 03:48	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 03:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 03:48	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		05/07/15 03:48	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 03:48	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		05/07/15 03:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		05/07/15 03:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 03:48	75-35-4	
cis-1,2-Dichloroethene	<b>0.39J</b>	ug/L	5.0	0.19	1		05/07/15 03:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 03:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		05/07/15 03:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 03:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 03:48	10061-02-6	

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### ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-SW3**      **Lab ID: 92247433009**      Collected: 04/27/15 16:25      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 03:48	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 03:48	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 03:48	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 03:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 03:48	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 03:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 03:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 03:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 03:48	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 03:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 03:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 03:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 03:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 03:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 03:48	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 03:48	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		05/07/15 03:48	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 03:48	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		05/07/15 03:48	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		05/07/15 03:48	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		05/07/15 03:48	2037-26-5	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

**Sample: 3404-TRIP BLANK**      **Lab ID: 92247433010**      Collected: 04/27/15 08:00      Received: 04/28/15 16:35      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Acetone	<b>23.1J</b>	ug/L	100	10.0	1		05/07/15 04:05	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		05/07/15 04:05	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		05/07/15 04:05	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		05/07/15 04:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		05/07/15 04:05	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		05/07/15 04:05	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		05/07/15 04:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		05/07/15 04:05	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		05/07/15 04:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		05/07/15 04:05	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		05/07/15 04:05	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		05/07/15 04:05	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		05/07/15 04:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		05/07/15 04:05	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		05/07/15 04:05	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		05/07/15 04:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		05/07/15 04:05	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		05/07/15 04:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		05/07/15 04:05	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		05/07/15 04:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		05/07/15 04:05	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		05/07/15 04:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		05/07/15 04:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		05/07/15 04:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		05/07/15 04:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		05/07/15 04:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		05/07/15 04:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		05/07/15 04:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		05/07/15 04:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		05/07/15 04:05	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		05/07/15 04:05	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		05/07/15 04:05	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		05/07/15 04:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		05/07/15 04:05	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		05/07/15 04:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		05/07/15 04:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 04:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		05/07/15 04:05	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		05/07/15 04:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		05/07/15 04:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		05/07/15 04:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		05/07/15 04:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		05/07/15 04:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		05/07/15 04:05	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		05/07/15 04:05	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		05/07/15 04:05	75-01-4	

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

Sample: 3404-TRIP BLANK		Lab ID: 92247433010		Collected: 04/27/15 08:00	Received: 04/28/15 16:35	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level Landfill</b>		Analytical Method: EPA 8260							
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 04:05	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		05/07/15 04:05	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		05/07/15 04:05	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		05/07/15 04:05	2037-26-5	

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

Parameter	Units	1446616		1446617		MS % Rec	MSD % Rec	% Rec	Limits	RPD	Max RPD	Qual
		92247382014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Antimony	ug/L	ND	500	500	488	478	97	96	75-125	2	25	
Arsenic	ug/L	ND	500	500	472	462	94	92	75-125	2	25	
Barium	ug/L	175	500	500	659	641	97	93	75-125	3	25	
Beryllium	ug/L	ND	500	500	488	476	98	95	75-125	2	25	
Cadmium	ug/L	ND	500	500	483	474	97	95	75-125	2	25	
Chromium	ug/L	ND	500	500	483	473	96	94	75-125	2	25	
Cobalt	ug/L	ND	500	500	468	460	94	92	75-125	2	25	
Copper	ug/L	ND	500	500	488	477	97	95	75-125	2	25	
Lead	ug/L	ND	500	500	466	459	93	92	75-125	1	25	
Nickel	ug/L	ND	500	500	469	460	94	92	75-125	2	25	
Selenium	ug/L	ND	500	500	470	461	94	92	75-125	2	25	
Silver	ug/L	ND	250	250	241	235	96	94	75-125	2	25	
Thallium	ug/L	ND	500	500	470	464	93	92	75-125	1	25	
Vanadium	ug/L	ND	500	500	486	474	97	94	75-125	3	25	
Zinc	ug/L	ND	500	500	470	463	92	91	75-125	2	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

QC Batch: MSV/31519 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill  
 Associated Lab Samples: 92247433001, 92247433002, 92247433003, 92247433004, 92247433005, 92247433006, 92247433007, 92247433008, 92247433009, 92247433010

METHOD BLANK: 1452209 Matrix: Water  
 Associated Lab Samples: 92247433001, 92247433002, 92247433003, 92247433004, 92247433005, 92247433006, 92247433007, 92247433008, 92247433009, 92247433010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	05/06/15 22:51	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/06/15 22:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	05/06/15 22:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/06/15 22:51	
1,1-Dichloroethane	ug/L	ND	5.0	05/06/15 22:51	
1,1-Dichloroethene	ug/L	ND	5.0	05/06/15 22:51	
1,2,3-Trichloropropane	ug/L	ND	1.0	05/06/15 22:51	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	05/06/15 22:51	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/06/15 22:51	
1,2-Dichlorobenzene	ug/L	ND	5.0	05/06/15 22:51	
1,2-Dichloroethane	ug/L	ND	1.0	05/06/15 22:51	
1,2-Dichloropropane	ug/L	ND	1.0	05/06/15 22:51	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/06/15 22:51	
2-Butanone (MEK)	ug/L	ND	100	05/06/15 22:51	
2-Hexanone	ug/L	ND	50.0	05/06/15 22:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	05/06/15 22:51	
Acetone	ug/L	ND	100	05/06/15 22:51	
Acrylonitrile	ug/L	ND	200	05/06/15 22:51	
Benzene	ug/L	ND	1.0	05/06/15 22:51	
Bromochloromethane	ug/L	ND	3.0	05/06/15 22:51	
Bromodichloromethane	ug/L	ND	1.0	05/06/15 22:51	
Bromoform	ug/L	ND	3.0	05/06/15 22:51	
Bromomethane	ug/L	ND	10.0	05/06/15 22:51	
Carbon disulfide	ug/L	ND	100	05/06/15 22:51	
Carbon tetrachloride	ug/L	ND	1.0	05/06/15 22:51	
Chlorobenzene	ug/L	ND	3.0	05/06/15 22:51	
Chloroethane	ug/L	ND	10.0	05/06/15 22:51	
Chloroform	ug/L	ND	5.0	05/06/15 22:51	
Chloromethane	ug/L	ND	1.0	05/06/15 22:51	
cis-1,2-Dichloroethene	ug/L	ND	5.0	05/06/15 22:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	05/06/15 22:51	
Dibromochloromethane	ug/L	ND	3.0	05/06/15 22:51	
Dibromomethane	ug/L	ND	10.0	05/06/15 22:51	
Ethylbenzene	ug/L	ND	1.0	05/06/15 22:51	
Iodomethane	ug/L	ND	10.0	05/06/15 22:51	
Methylene Chloride	ug/L	ND	1.0	05/06/15 22:51	
Styrene	ug/L	ND	1.0	05/06/15 22:51	
Tetrachloroethene	ug/L	ND	1.0	05/06/15 22:51	
Toluene	ug/L	ND	1.0	05/06/15 22:51	
trans-1,2-Dichloroethene	ug/L	ND	5.0	05/06/15 22:51	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

METHOD BLANK: 1452209

Matrix: Water

Associated Lab Samples: 92247433001, 92247433002, 92247433003, 92247433004, 92247433005, 92247433006, 92247433007, 92247433008, 92247433009, 92247433010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	05/06/15 22:51	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	05/06/15 22:51	
Trichloroethene	ug/L	ND	1.0	05/06/15 22:51	
Trichlorofluoromethane	ug/L	ND	1.0	05/06/15 22:51	
Vinyl acetate	ug/L	ND	50.0	05/06/15 22:51	
Vinyl chloride	ug/L	ND	1.0	05/06/15 22:51	
Xylene (Total)	ug/L	ND	5.0	05/06/15 22:51	
1,2-Dichloroethane-d4 (S)	%	103	70-130	05/06/15 22:51	
4-Bromofluorobenzene (S)	%	99	70-130	05/06/15 22:51	
Toluene-d8 (S)	%	102	70-130	05/06/15 22:51	

LABORATORY CONTROL SAMPLE: 1452210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	48.2	96	80-125	
1,1,1-Trichloroethane	ug/L	50	58.8	118	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	53.8	108	79-124	
1,1,2-Trichloroethane	ug/L	50	58.0	116	85-125	
1,1-Dichloroethane	ug/L	50	58.9	118	73-126	
1,1-Dichloroethene	ug/L	50	55.3	111	66-135	
1,2,3-Trichloropropane	ug/L	50	54.4	109	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	53.0	106	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	55.3	111	83-124	
1,2-Dichlorobenzene	ug/L	50	51.3	103	80-133	
1,2-Dichloroethane	ug/L	50	57.3	115	67-128	
1,2-Dichloropropane	ug/L	50	57.0	114	75-132	
1,4-Dichlorobenzene	ug/L	50	50.0	100	78-130	
2-Butanone (MEK)	ug/L	100	123	123	61-144	
2-Hexanone	ug/L	100	113	113	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	117	117	72-135	
Acetone	ug/L	100	123	123	48-146	
Acrylonitrile	ug/L	250	320	128	40-160	
Benzene	ug/L	50	57.2	114	80-125	
Bromochloromethane	ug/L	50	60.5	121	71-125	
Bromodichloromethane	ug/L	50	54.1	108	78-124	
Bromoform	ug/L	50	42.8	86	71-128	
Bromomethane	ug/L	50	49.3	99	40-160	
Carbon disulfide	ug/L	50	58.4J	117	50-160	
Carbon tetrachloride	ug/L	50	51.5	103	69-131	
Chlorobenzene	ug/L	50	51.7	103	81-122	
Chloroethane	ug/L	50	49.8	100	39-148	
Chloroform	ug/L	50	54.5	109	73-127	
Chloromethane	ug/L	50	48.3	97	44-146	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

LABORATORY CONTROL SAMPLE: 1452210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	59.4	119	74-124	
cis-1,3-Dichloropropene	ug/L	50	54.8	110	72-132	
Dibromochloromethane	ug/L	50	43.2	86	78-125	
Dibromomethane	ug/L	50	55.7	111	82-120	
Ethylbenzene	ug/L	50	51.9	104	79-121	
Iodomethane	ug/L	100	85.8	86	39-154	
Methylene Chloride	ug/L	50	57.9	116	64-133	
Styrene	ug/L	50	55.1	110	84-126	
Tetrachloroethene	ug/L	50	50.6	101	78-122	
Toluene	ug/L	50	56.6	113	80-121	
trans-1,2-Dichloroethene	ug/L	50	56.4	113	71-127	
trans-1,3-Dichloropropene	ug/L	50	52.9	106	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	47.4J	95	40-160	
Trichloroethene	ug/L	50	53.3	107	78-122	
Trichlorofluoromethane	ug/L	50	50.7	101	53-137	
Vinyl acetate	ug/L	100	109	109	40-160	
Vinyl chloride	ug/L	50	55.0	110	58-137	
Xylene (Total)	ug/L	150	156	104	81-126	
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			101	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TOWN OF KERNERSVILLE

Pace Project No.: 92247433

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92247433001	3404-FIELD BLANK	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433002	3404-MW2	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433003	3404-MW3D	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433004	3404-MW3S	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433005	3404-MW4	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433006	3404-MW5	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433007	3404-SW1	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433008	3404-SW2	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433009	3404-SW3	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247433001	3404-FIELD BLANK	EPA 8260	MSV/31519		
92247433002	3404-MW2	EPA 8260	MSV/31519		
92247433003	3404-MW3D	EPA 8260	MSV/31519		
92247433004	3404-MW3S	EPA 8260	MSV/31519		
92247433005	3404-MW4	EPA 8260	MSV/31519		
92247433006	3404-MW5	EPA 8260	MSV/31519		
92247433007	3404-SW1	EPA 8260	MSV/31519		
92247433008	3404-SW2	EPA 8260	MSV/31519		
92247433009	3404-SW3	EPA 8260	MSV/31519		
92247433010	3404-TRIP BLANK	EPA 8260	MSV/31519		

### REPORT OF LABORATORY ANALYSIS

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Client Name: Joyce Engineering

Carrier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Insulating Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Correction Factor T1401 No Correction

Recorded Cooler Temp.: 3.4 °C

Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: WAS 4/29/15

Item	Yes	No	N/A	Comments:
1. Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Cooler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. 24hr Hold Time Analysis (<72hr):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7. 24hr Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. Sample Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Spare Containers Used:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Correct volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13. Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Includes date/time/ID/Analysis Matrix: Containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. Options: VOA, collform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
18. Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
19. Trip Blank Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20. Trip Blank Custody Seals Present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21. Trip Blank Lot # (if purchased):				

Field Data Required? Y / N

Client Notification/ Resolution: Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SRF Review:	<u>[Signature]</u>	Date:	<u>4/29/15</u>
SRF Review:	<u>[Signature]</u>	Date:	<u>4/29/15</u>

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

WO# : 92247433



92247433



May 15, 2015

Mr. Alex Everhart  
Joyce Engineering-NC  
2211 W. Meadowview Road  
Suite 101  
Greensboro, NC 27407

RE: Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

Dear Mr. Everhart:

Enclosed are the analytical results for sample(s) received by the laboratory on April 28, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,



Kevin Godwin  
kevin.godwin@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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May 15, 2015  
Page 2

cc: Mr. Van Burbach, Joyce Engineering-NC  
Alex Everhart, Joyce Engineering-NC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

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### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Alabama Certification #40770

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: 8TMS-L

Florida/NELAP Certification #: E87605

Guam Certification #:14-008r

Georgia Certification #: 959

Georgia EPD #: Pace

Idaho Certification #: MN00064

Hawaii Certification #MN00064

Illinois Certification #: 200011

Indiana Certification#C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky Dept of Envi. Protection - DW #90062

Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086

Louisiana DHH #: LA140001

Maine Certification #: 2013011

Maryland Certification #: 322

Michigan DEPH Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT0092

Nevada Certification #: MN\_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Carolina State Public Health #: 27700

North Dakota Certification #: R-036

Ohio EPA #: 4150

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Saipan (CNMI) #:MP0003

South Carolina #:74003001

Texas Certification #: T104704192

Tennessee Certification #: 02818

Utah Certification #: MN000642013-4

Virginia DGS Certification #: 251

Virginia/VELAP Certification #: Pace

Washington Certification #: C486

West Virginia Certification #: 382

West Virginia DHHR #:9952C

Wisconsin Certification #: 999407970

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### Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

West Virginia Certification #: 356

Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92247296001	3040-MW2	Water	04/27/15 10:00	04/28/15 11:00
92247296002	3040-MW3S	Water	04/27/15 14:15	04/28/15 11:00
92247296003	3040-MW3D	Water	04/27/15 13:15	04/28/15 11:00
92247296004	3040-MW4	Water	04/27/15 15:45	04/28/15 11:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92247296001	3040-MW2	RSK 175	JRB	3	PASI-M
		SM 2320B	MLS	1	PASI-A
		SM 4500-S2D	MAB	1	PASI-A
		SM 5210B	MLS	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-CI-E	SER	1	PASI-A
		SM 5220D	MAB	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92247296002	3040-MW3S	RSK 175	JRB	3	PASI-M
		SM 2320B	MLS	1	PASI-A
		SM 4500-S2D	MAB	1	PASI-A
		SM 5210B	MLS	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-CI-E	SER	1	PASI-A
		SM 5220D	MAB	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92247296003	3040-MW3D	RSK 175	JRB	3	PASI-M
		SM 2320B	MLS	1	PASI-A
		SM 4500-S2D	MAB	1	PASI-A
		SM 5210B	MLS	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-CI-E	SER	1	PASI-A
		SM 5220D	MAB	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92247296004	3040-MW4	RSK 175	JRB	3	PASI-M
		SM 2320B	MLS	1	PASI-A
		SM 4500-S2D	MAB	1	PASI-A
		SM 5210B	MLS	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-CI-E	SER	1	PASI-A
		SM 5220D	MAB	1	PASI-A
		SM 5310B	AES2	1	PASI-A

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92247296001</b>	<b>3040-MW2</b>					
RSK 175	Methane	4160	ug/L	10.0	05/01/15 22:17	
SM 2320B	Alkalinity, Total as CaCO <sub>3</sub>	141000	ug/L	5000	05/07/15 18:29	
SM 5210B	BOD, 5 day	5670	ug/L	2000	05/03/15 12:55	
EPA 300.0	Sulfate	1590J	ug/L	250000	05/01/15 02:22	
EPA 353.2	Nitrogen, Nitrate	0.062J	mg/L	10.0	04/29/15 07:26	
SM 4500-Cl-E	Chloride	12200	ug/L	1000	04/30/15 01:10	
SM 5310B	Total Organic Carbon	1510	ug/L	1000	05/02/15 02:43	
<b>92247296002</b>	<b>3040-MW3S</b>					
RSK 175	Methane	178	ug/L	10.0	05/01/15 22:25	
SM 2320B	Alkalinity, Total as CaCO <sub>3</sub>	134000	ug/L	5000	05/07/15 18:42	
EPA 300.0	Sulfate	1360J	ug/L	250000	05/01/15 02:36	
SM 4500-Cl-E	Chloride	26900	ug/L	1000	04/30/15 01:11	
SM 5220D	Chemical Oxygen Demand	13000J	ug/L	25000	05/04/15 09:35	
SM 5310B	Total Organic Carbon	1720	ug/L	1000	05/02/15 03:26	
<b>92247296003</b>	<b>3040-MW3D</b>					
RSK 175	Methane	188	ug/L	10.0	05/02/15 23:32	
SM 2320B	Alkalinity, Total as CaCO <sub>3</sub>	146000	ug/L	5000	05/07/15 18:55	
EPA 300.0	Sulfate	1850J	ug/L	250000	05/01/15 02:49	
SM 4500-Cl-E	Chloride	17200	ug/L	1000	04/30/15 01:12	
SM 5310B	Total Organic Carbon	1380	ug/L	1000	05/02/15 04:41	
<b>92247296004</b>	<b>3040-MW4</b>					
RSK 175	Ethene	4.1J	ug/L	10.0	05/02/15 23:40	
RSK 175	Methane	536	ug/L	10.0	05/02/15 23:40	
SM 2320B	Alkalinity, Total as CaCO <sub>3</sub>	166000	ug/L	5000	05/07/15 19:07	
EPA 300.0	Sulfate	1610J	ug/L	250000	05/01/15 03:30	
SM 4500-Cl-E	Chloride	17000	ug/L	1000	04/30/15 01:13	
SM 5310B	Total Organic Carbon	1630	ug/L	1000	05/02/15 04:51	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

Sample: 3040-MW2		Lab ID: 92247296001		Collected: 04/27/15 10:00	Received: 04/28/15 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>RSK 175 AIR Headspace</b>		Analytical Method: RSK 175								
Ethane	ND	ug/L	10.0	5.0	1		05/01/15 22:17	74-84-0		
Ethene	ND	ug/L	10.0	0.47	1		05/01/15 22:17	74-85-1		
Methane	<b>4160</b>	ug/L	10.0	0.63	1		05/01/15 22:17	74-82-8		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	<b>141000</b>	ug/L	5000	1000	1		05/07/15 18:29			
<b>4500S2D Sulfide Water</b>		Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		04/30/15 15:45	18496-25-8	M1	
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B								
BOD, 5 day	<b>5670</b>	ug/L	2000	2000	1	04/28/15 16:05	05/03/15 12:55			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Sulfate	<b>1590J</b>	ug/L	250000	1000	1		05/01/15 02:22	14808-79-8		
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2								
Nitrogen, Nitrate	<b>0.062J</b>	mg/L	10.0	0.010	1		04/29/15 07:26			
<b>4500 Chloride</b>		Analytical Method: SM 4500-Cl-E								
Chloride	<b>12200</b>	ug/L	1000	500	1		04/30/15 01:10	16887-00-6		
<b>5220D COD</b>		Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		05/04/15 09:35			
<b>5310B TOC</b>		Analytical Method: SM 5310B								
Total Organic Carbon	<b>1510</b>	ug/L	1000	500	1		05/02/15 02:43	7440-44-0		

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

Sample: 3040-MW3S		Lab ID: 92247296002		Collected: 04/27/15 14:15	Received: 04/28/15 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>RSK 175 AIR Headspace</b>		Analytical Method: RSK 175								
Ethane	ND	ug/L	10.0	5.0	1		05/01/15 22:25	74-84-0		
Ethene	ND	ug/L	10.0	0.47	1		05/01/15 22:25	74-85-1		
Methane	<b>178</b>	ug/L	10.0	0.63	1		05/01/15 22:25	74-82-8		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	<b>134000</b>	ug/L	5000	1000	1		05/07/15 18:42			
<b>4500S2D Sulfide Water</b>		Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		04/30/15 15:45	18496-25-8		
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	04/28/15 16:05	05/03/15 12:55			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Sulfate	<b>1360J</b>	ug/L	250000	1000	1		05/01/15 02:36	14808-79-8		
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	10.0	0.010	1		04/29/15 07:41			
<b>4500 Chloride</b>		Analytical Method: SM 4500-Cl-E								
Chloride	<b>26900</b>	ug/L	1000	500	1		04/30/15 01:11	16887-00-6		
<b>5220D COD</b>		Analytical Method: SM 5220D								
Chemical Oxygen Demand	<b>13000J</b>	ug/L	25000	12500	1		05/04/15 09:35			
<b>5310B TOC</b>		Analytical Method: SM 5310B								
Total Organic Carbon	<b>1720</b>	ug/L	1000	500	1		05/02/15 03:26	7440-44-0		

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## ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

Sample: 3040-MW3D		Lab ID: 92247296003		Collected: 04/27/15 13:15	Received: 04/28/15 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>RSK 175 AIR Headspace</b>		Analytical Method: RSK 175								
Ethane	ND	ug/L	10.0	5.0	1		05/02/15 23:32	74-84-0		
Ethene	ND	ug/L	10.0	0.47	1		05/02/15 23:32	74-85-1		
Methane	<b>188</b>	ug/L	10.0	0.63	1		05/02/15 23:32	74-82-8		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	<b>146000</b>	ug/L	5000	1000	1		05/07/15 18:55			
<b>4500S2D Sulfide Water</b>		Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		04/30/15 15:45	18496-25-8		
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	04/28/15 16:05	05/03/15 12:55			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0								
Sulfate	<b>1850J</b>	ug/L	250000	1000	1		05/01/15 02:49	14808-79-8		
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	10.0	0.010	1		04/29/15 07:39			
<b>4500 Chloride</b>		Analytical Method: SM 4500-Cl-E								
Chloride	<b>17200</b>	ug/L	1000	500	1		04/30/15 01:12	16887-00-6		
<b>5220D COD</b>		Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		05/04/15 09:35			
<b>5310B TOC</b>		Analytical Method: SM 5310B								
Total Organic Carbon	<b>1380</b>	ug/L	1000	500	1		05/02/15 04:41	7440-44-0		

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### ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

Sample: 3040-MW4		Lab ID: 92247296004		Collected: 04/27/15 15:45	Received: 04/28/15 11:00	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>RSK 175 AIR Headspace</b>		Analytical Method: RSK 175							
Ethane	ND	ug/L	10.0	5.0	1		05/02/15 23:40	74-84-0	
Ethene	<b>4.1J</b>	ug/L	10.0	0.47	1		05/02/15 23:40	74-85-1	
Methane	<b>536</b>	ug/L	10.0	0.63	1		05/02/15 23:40	74-82-8	
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	<b>166000</b>	ug/L	5000	1000	1		05/07/15 19:07		
<b>4500S2D Sulfide Water</b>		Analytical Method: SM 4500-S2D							
Sulfide	ND	ug/L	1000	100	1		04/30/15 15:45	18496-25-8	
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B							
BOD, 5 day	ND	ug/L	2000	2000	1	04/28/15 16:05	05/03/15 12:55		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Sulfate	<b>1610J</b>	ug/L	250000	1000	1		05/01/15 03:30	14808-79-8	
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	10.0	0.010	1		04/29/15 07:44		
<b>4500 Chloride</b>		Analytical Method: SM 4500-Cl-E							
Chloride	<b>17000</b>	ug/L	1000	500	1		04/30/15 01:13	16887-00-6	
<b>5220D COD</b>		Analytical Method: SM 5220D							
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		05/04/15 09:35		
<b>5310B TOC</b>		Analytical Method: SM 5310B							
Total Organic Carbon	<b>1630</b>	ug/L	1000	500	1		05/02/15 04:51	7440-44-0	

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

QC Batch: AIR/23142 Analysis Method: RSK 175  
QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE  
Associated Lab Samples: 92247296001, 92247296002

METHOD BLANK: 1952962 Matrix: Water  
Associated Lab Samples: 92247296001, 92247296002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	10.0	05/01/15 15:48	
Ethene	ug/L	ND	10.0	05/01/15 15:48	
Methane	ug/L	1.1J	10.0	05/01/15 15:48	

LABORATORY CONTROL SAMPLE & LCSD: 1952963

Parameter	Units	1952964								Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	
Ethane	ug/L	114	113	114	99	100	85-115	1	20	
Ethene	ug/L	106	105	106	99	100	85-115	1	20	
Methane	ug/L	60.7	59.9	60.8	99	100	85-115	1	20	

SAMPLE DUPLICATE: 1952966

Parameter	Units	60192777005		RPD	Max RPD	Qualifiers
		Result	Dup Result			
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	80.6	78.2	3	20	

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

QC Batch: WET/37301 Analysis Method: SM 2320B  
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

METHOD BLANK: 1452569 Matrix: Water  
Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	ug/L	ND	5000	05/07/15 16:40	

LABORATORY CONTROL SAMPLE: 1452570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	ug/L	50000	46200	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1452571 1452572

Parameter	Units	92248145009 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Conc.	Spike Conc.	MSD Conc.						
Alkalinity, Total as CaCO <sub>3</sub>	ug/L	ND	50000	50000	46400	46200	93	92	90-110	0	4	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1452573 1452574

Parameter	Units	92248349002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Conc.	Spike Conc.	MSD Conc.						
Alkalinity, Total as CaCO <sub>3</sub>	ug/L	50.5 mg/L	50000	50000	91500	92000	82	83	90-110	1	4 M1	

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

QC Batch: WET/37153

Analysis Method: SM 4500-S2D

QC Batch Method: SM 4500-S2D

Analysis Description: 4500S2D Sulfide Water

Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

METHOD BLANK: 1446929

Matrix: Water

Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	ug/L	ND	1000	04/30/15 15:45	

LABORATORY CONTROL SAMPLE: 1446930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	ug/L	500	536J	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446931 1446932

Parameter	Units	92247296001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Sulfide	ug/L	ND	500	500	426J	426J	85	85	90-110	0	10	M1	

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

QC Batch: WET/37105

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

METHOD BLANK: 1445037

Matrix: Water

Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	ug/L	ND	2000	05/03/15 12:55	

LABORATORY CONTROL SAMPLE: 1445038

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	ug/L	198000	211000	107	84.6-115.4	

SAMPLE DUPLICATE: 1445039

Parameter	Units	92247256001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	ug/L	159 mg/L	148000	7	10	

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

QC Batch: WETA/22746 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

METHOD BLANK: 1446177 Matrix: Water  
Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	ND	250000	04/30/15 23:26	

LABORATORY CONTROL SAMPLE: 1446178

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	19600J	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446179 1446180

Parameter	Units	92246735025 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Sulfate	ug/L	2.8 mg/L	20000	20000	21600J	21600J	94	94	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446181 1446182

Parameter	Units	92247296004 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Sulfate	ug/L	1610J	20000	20000	19900J	19800J	91	91	90-110	0	10	

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

QC Batch: WETA/22731 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.  
Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

METHOD BLANK: 1445614 Matrix: Water  
Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	10.0	04/29/15 07:23	

LABORATORY CONTROL SAMPLE: 1445615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.6J	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1445616 1445617

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92247296001 Result	Spike Conc.	Spike Conc.	Result						
Nitrogen, Nitrate	mg/L	0.062J	2.5	2.5	2.6J	2.6J	103	103	90-110	0	10

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

QC Batch: WETA/22741 Analysis Method: SM 4500-Cl-E  
 QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride  
 Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

METHOD BLANK: 1446012 Matrix: Water  
 Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	ND	1000	04/30/15 00:54	

LABORATORY CONTROL SAMPLE: 1446013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	20000	21200	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446014 1446015

Parameter	Units	92247255001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Chloride	ug/L	14.6 mg/L	20000	20000	34100	34200	97	98	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446016 1446017

Parameter	Units	92247095003 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Chloride	ug/L	2.7 mg/L	20000	20000	23300	23200	103	103	90-110	1	10	

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

QC Batch: WETA/22767 Analysis Method: SM 5220D  
 QC Batch Method: SM 5220D Analysis Description: 5220D COD  
 Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

METHOD BLANK: 1448061 Matrix: Water  
 Associated Lab Samples: 92247296001, 92247296002, 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	ug/L	ND	25000	05/04/15 09:35	

LABORATORY CONTROL SAMPLE: 1448062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	ug/L	750000	735000	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1448063 1448064

Parameter	Units	92247473004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Chemical Oxygen Demand	ug/L	199 mg/L	750000	750000	842000	842000	86	86	90-110	0	3	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1448065 1448066

Parameter	Units	92247697004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Chemical Oxygen Demand	ug/L	105 mg/L	750000	750000	892000	892000	105	105	90-110	0	3		

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

QC Batch: WETA/22773 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B TOC  
Associated Lab Samples: 92247296001

METHOD BLANK: 1448586 Matrix: Water  
Associated Lab Samples: 92247296001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	ND	1000	05/01/15 21:10	

LABORATORY CONTROL SAMPLE: 1448587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	25000	24300	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1448588 1448589

Parameter	Units	92247359001		1448588		1448589		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Conc.	MS Result	MSD Conc.	MS Result	MSD Conc.				
Total Organic Carbon	ug/L	1.5 mg/L	25000	25000	26700	26700	101	101	90-110	0	5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1448590 1448591

Parameter	Units	92247619002		1448590		1448591		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Conc.	MS Result	MSD Conc.	MS Result	MSD Conc.				
Total Organic Carbon	ug/L	ND	25000	25000	25100	25200	95	95	90-110	0	5 D3

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA

Pace Project No.: 92247296

QC Batch: WETA/22774

Analysis Method: SM 5310B

QC Batch Method: SM 5310B

Analysis Description: 5310B TOC

Associated Lab Samples: 92247296002, 92247296003, 92247296004

METHOD BLANK: 1448593

Matrix: Water

Associated Lab Samples: 92247296002, 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	ND	1000	05/02/15 02:56	

LABORATORY CONTROL SAMPLE: 1448594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	25000	24000	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1448595 1448596

Parameter	Units	MS		MSD		% Rec		% Rec Limits	RPD	Max RPD	Qual
		92247296002 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec				
Total Organic Carbon	ug/L	1720	25000	25000	27000	26900	101	101	90-110	1	5

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

---

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

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

TNI - The NELAC Institute.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-M Pace Analytical Services - Minneapolis

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TOWN OF KERNERSVILLE MNA  
Pace Project No.: 92247296

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92247296001	3040-MW2	RSK 175	AIR/23142		
92247296002	3040-MW3S	RSK 175	AIR/23142		
92247296003	3040-MW3D	RSK 175	AIR/23143		
92247296004	3040-MW4	RSK 175	AIR/23143		
92247296001	3040-MW2	SM 2320B	WET/37301		
92247296002	3040-MW3S	SM 2320B	WET/37301		
92247296003	3040-MW3D	SM 2320B	WET/37301		
92247296004	3040-MW4	SM 2320B	WET/37301		
92247296001	3040-MW2	SM 4500-S2D	WET/37153		
92247296002	3040-MW3S	SM 4500-S2D	WET/37153		
92247296003	3040-MW3D	SM 4500-S2D	WET/37153		
92247296004	3040-MW4	SM 4500-S2D	WET/37153		
92247296001	3040-MW2	SM 5210B	WET/37105	SM 5210B	WET/37108
92247296002	3040-MW3S	SM 5210B	WET/37105	SM 5210B	WET/37108
92247296003	3040-MW3D	SM 5210B	WET/37105	SM 5210B	WET/37108
92247296004	3040-MW4	SM 5210B	WET/37105	SM 5210B	WET/37108
92247296001	3040-MW2	EPA 300.0	WETA/22746		
92247296002	3040-MW3S	EPA 300.0	WETA/22746		
92247296003	3040-MW3D	EPA 300.0	WETA/22746		
92247296004	3040-MW4	EPA 300.0	WETA/22746		
92247296001	3040-MW2	EPA 353.2	WETA/22731		
92247296002	3040-MW3S	EPA 353.2	WETA/22731		
92247296003	3040-MW3D	EPA 353.2	WETA/22731		
92247296004	3040-MW4	EPA 353.2	WETA/22731		
92247296001	3040-MW2	SM 4500-CI-E	WETA/22741		
92247296002	3040-MW3S	SM 4500-CI-E	WETA/22741		
92247296003	3040-MW3D	SM 4500-CI-E	WETA/22741		
92247296004	3040-MW4	SM 4500-CI-E	WETA/22741		
92247296001	3040-MW2	SM 5220D	WETA/22767		
92247296002	3040-MW3S	SM 5220D	WETA/22767		
92247296003	3040-MW3D	SM 5220D	WETA/22767		
92247296004	3040-MW4	SM 5220D	WETA/22767		
92247296001	3040-MW2	SM 5310B	WETA/22773		
92247296002	3040-MW3S	SM 5310B	WETA/22774		
92247296003	3040-MW3D	SM 5310B	WETA/22774		
92247296004	3040-MW4	SM 5310B	WETA/22774		

### REPORT OF LABORATORY ANALYSIS

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Document Name: **Sample Condition Upon Receipt (SCUR)**  
 Document No.: F-ASV-CS-003-rev.14

Document Revised: June 10, 2014  
 Page 1 of 2  
 Issuing Authorities:  
 Pace Asheville Quality Office

Client Name: Source

Courier (Circle):  Fed Ex  UPS  USPS Client:  Commercial  Pace  Other

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used: IR Gun #3 - 130265963 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun  
 IR Gun #4 SN:140290365 Other:

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 2.3/3.0 C Biological Tissue is Frozen: Yes No N/A  
 Temp should be above freezing to 6°C

Date and Initials of person examining contents: ROB 4/28/15

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	6. N/A, BOD
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review:	<u>[Signature]</u>	Date:	<u>4/28/15</u>
SRF Review:	<u>[Signature]</u>	Date:	<u>4/29/15</u>

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

WO#: 92247296



92247296





Microseeps/Pace Analytical Energy Services, LLC  
220 William Pitt Way  
Pittsburgh, PA 15238  
Phone: (412) 826-5245  
Fax: (412) 826-3433

May 12, 2015

Kevin Godwin  
Pace Analytical Services, Inc.  
9800 Kinsey Avenue  
Suite 100  
Huntersville, NC 28078

RE: **92247296 / Kernersville MNA**  
*Microseeps Workorder: 15357*

Dear Kevin Godwin:

Enclosed are the analytical results for sample(s) received by the laboratory on Thursday, April 30, 2015. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Robbin Robl      05/12/2015  
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.  
Please email [info@microseeps.com](mailto:info@microseeps.com).

Total Number of Pages 18

Report ID: 15357 - 653254

Page 1 of 16



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## LABORATORY ACCREDITATIONS & CERTIFICATIONS

<b>Accreditor:</b>	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
<b>Accreditation ID:</b>	02-00538
<b>Scope:</b>	NELAP Non-Potable Water and Solid & Hazardous Waste
<b>Accreditor:</b>	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
<b>Accreditation ID:</b>	89009003
<b>Scope:</b>	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
<b>Accreditor:</b>	NELAP: New Jersey, Department of Environmental Protection
<b>Accreditation ID:</b>	PA026
<b>Scope:</b>	Non-Potable Water; Solid and Chemical Materials
<b>Accreditor:</b>	NELAP: New York, Department of Health Wadsworth Center
<b>Accreditation ID:</b>	11815
<b>Scope:</b>	Non-Potable Water; Solid and Hazardous Waste
<b>Accreditor:</b>	State of Connecticut, Department of Public Health, Division of Environmental Health
<b>Accreditation ID:</b>	PH-0263
<b>Scope:</b>	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
<b>Accreditor:</b>	NELAP: Texas, Commission on Environmental Quality
<b>Accreditation ID:</b>	T104704453-09-TX
<b>Scope:</b>	Non-Potable Water
<b>Accreditor:</b>	State of New Hampshire
<b>Accreditation ID:</b>	299409
<b>Scope:</b>	Non-potable water
<b>Accreditor:</b>	State of Georgia
<b>Accreditation ID:</b>	Chapter 391-3-26
<b>Scope:</b>	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).



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### SAMPLE SUMMARY

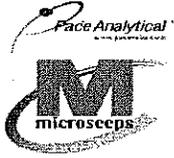
Workorder: 15357 92247296 / Kernersville MNA

Lab ID	Sample ID	Matrix	Date Collected	Date Received
153570001	3040-MW2	Water	4/27/2015 10:00	4/30/2015 13:41
153570002	3040-MW2	Bubble Strip	4/27/2015 10:00	4/30/2015 13:41
153570003	3040-MW3S	Water	4/27/2015 14:15	4/30/2015 13:41
153570004	3040-MW3S	Bubble Strip	4/27/2015 14:15	4/30/2015 13:41
153570005	3040-MW3D	Water	4/27/2015 13:15	4/30/2015 13:41
153570006	3040-MW3D	Bubble Strip	4/27/2015 13:15	4/30/2015 13:41
153570007	3040-MW4	Water	4/27/2015 15:45	4/30/2015 13:41
153570008	3040-MW4	Bubble Strip	4/27/2015 15:45	4/30/2015 13:41



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### ANALYTICAL RESULTS

Workorder: 15357 92247296 / Kernersville MNA

Lab ID: 153570001 Date Received: 4/30/2015 13:41 Matrix: Water  
 Sample ID: 3040-MW2 Date Collected: 4/27/2015 10:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
<b>EDonors - MICR</b>								
Analysis Desc: AM21G			Analytical Method: AM21G					
Acetic Acid	2.5J	mg/l	5.0	0.89	1	5/4/2015 18:17	BW	n
Propionic Acid	0.75J	mg/l	5.0	0.73	1	5/4/2015 18:17	BW	n
Pyruvic Acid	0.41U	mg/l	5.0	0.41	1	5/4/2015 18:17	BW	n
Butyric Acid	1.4U	mg/l	5.0	1.4	1	5/4/2015 18:17	BW	n
Lactic Acid	2.4U	mg/l	10	2.4	1	5/4/2015 18:17	BW	n



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### ANALYTICAL RESULTS

Workorder: 15357 92247296 / Kernersville MNA

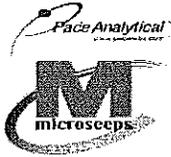
Lab ID: 153570002 Date Received: 4/30/2015 13:41 Matrix: Bubble Strip  
 Sample ID: 3040-MW2 Date Collected: 4/27/2015 10:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
<b>RISK - MICR</b>								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	2.3	nM	0.60	0.13	1	5/9/2015 04:58	TD	n



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**ANALYTICAL RESULTS**

Workorder: 15357 92247296 / Kernersville MNA

Lab ID: 153570003 Date Received: 4/30/2015 13:41 Matrix: Water  
 Sample ID: 3040-MW3S Date Collected: 4/27/2015 14:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
<b>EDonors - MICR</b>								
Analysis Desc: AM21G			Analytical Method: AM21G					
Acetic Acid	0.89U	mg/l	5.0	0.89	1	5/4/2015 18:45	BW	n
Propionic Acid	0.73U	mg/l	5.0	0.73	1	5/4/2015 18:45	BW	n
Pyruvic Acid	0.41U	mg/l	5.0	0.41	1	5/4/2015 18:45	BW	n
Butyric Acid	1.4U	mg/l	5.0	1.4	1	5/4/2015 18:45	BW	n
Lactic Acid	2.4U	mg/l	10	2.4	1	5/4/2015 18:45	BW	n



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### ANALYTICAL RESULTS

Workorder: 15357 92247296 / Kenersville MNA

Lab ID: 153570004 Date Received: 4/30/2015 13:41 Matrix: Bubble Strip  
Sample ID: 3040-MW3S Date Collected: 4/27/2015 14:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
<b>RISK - MICR</b>								
Analysis Desc: AM20GAX Analytical Method: AM20GAX								
Hydrogen	1.4	nM	0.60	0.13	1	5/9/2015 05:10	TD	n



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**ANALYTICAL RESULTS**

Workorder: 15357 92247296 / Kernersville MNA

Lab ID: 153570005 Date Received: 4/30/2015 13:41 Matrix: Water  
 Sample ID: 3040-MW3D Date Collected: 4/27/2015 13:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
<b>EDonors - MICR</b>								
Analysis Desc: AM21G			Analytical Method: AM21G					
Acetic Acid	1.7J	mg/l	5.0	0.89	1	5/4/2015 19:13	BW	n
Propionic Acid	0.73U	mg/l	5.0	0.73	1	5/4/2015 19:13	BW	n
Pyruvic Acid	0.41U	mg/l	5.0	0.41	1	5/4/2015 19:13	BW	n
Butyric Acid	1.4U	mg/l	5.0	1.4	1	5/4/2015 19:13	BW	n
Lactic Acid	2.4U	mg/l	10	2.4	1	5/4/2015 19:13	BW	n



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### ANALYTICAL RESULTS

Workorder: 15357 92247296 / Kernersville MNA

Lab ID: 153570006 Date Received: 4/30/2015 13:41 Matrix: Bubble Strip  
Sample ID: 3040-MW3D Date Collected: 4/27/2015 13:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
<b>RISK - MICR</b>								
Analysis Desc: AM20GAX Analytical Method: AM20GAX								
Hydrogen	320	nM	12	2.6	20	5/9/2015 07:55	TD	n



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### ANALYTICAL RESULTS

Workorder: 15357 92247296 / Kernersville MNA

Lab ID: 153570007 Date Received: 4/30/2015 13:41 Matrix: Water  
 Sample ID: 3040-MW4 Date Collected: 4/27/2015 15:45

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
<b>EDonors - MICR</b>								
Analysis Desc: AM21G			Analytical Method: AM21G					
Acetic Acid	0.89U	mg/l	5.0	0.89	1	5/4/2015 19:40	BW	n
Propionic Acid	0.73U	mg/l	5.0	0.73	1	5/4/2015 19:40	BW	n
Pyruvic Acid	0.41U	mg/l	5.0	0.41	1	5/4/2015 19:40	BW	n
Butyric Acid	1.4U	mg/l	5.0	1.4	1	5/4/2015 19:40	BW	n
Lactic Acid	2.4U	mg/l	10	2.4	1	5/4/2015 19:40	BW	n



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**ANALYTICAL RESULTS**

Workorder: 15357 92247296 / Kernersville MNA

Lab ID: 153570008 Date Received: 4/30/2015 13:41 Matrix: Bubble Strip  
 Sample ID: 3040-MW4 Date Collected: 4/27/2015 15:45

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
<b>RISK - MICR</b>								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	4.4	nM	0.60	0.13	1	5/9/2015 05:37	TD	n



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## ANALYTICAL RESULTS QUALIFIERS

Workorder: 15357 92247296 / Kernersville MNA

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### DEFINITIONS/QUALIFIERS

- Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAX, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.
- MDL Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
- PQL Practical Quantitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
- ND Not detected at or above reporting limit.
- DF Dilution Factor.
- S Surrogate.
- RPD Relative Percent Difference.
- % Rec Percent Recovery.
- U Indicates the compound was analyzed for, but not detected at or above the noted concentration.
- J Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).
- n The laboratory does not hold NELAP/TNI accreditation for this method or analyte.



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 220 William Pitt Way  
 Pittsburgh, PA 15238  
 Phone: (412) 826-5245  
 Fax: (412) 826-3433

**QUALITY CONTROL DATA**

Workorder: 15357 92247296 / Kernersville MNA

QC Batch: EDON/2502 Analysis Method: AM21G  
 QC Batch Method: AM21G  
 Associated Lab Samples: 153570001, 153570003, 153570005, 153570007

METHOD BLANK: 34603

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Acetic Acid	mg/l	0.89U	0.89	n
Propionic Acid	mg/l	0.73U	0.73	n
Pyruvic Acid	mg/l	0.41U	0.41	n
Butyric Acid	mg/l	1.4U	1.4	n
Lactic Acid	mg/l	2.4U	2.4	n

LABORATORY CONTROL SAMPLE: 34604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Acetic Acid	mg/l	100	96	96	70-130	n
Propionic Acid	mg/l	100	94	94	70-130	n
Pyruvic Acid	mg/l	100	95	95	70-130	n
Butyric Acid	mg/l	100	93	93	70-130	n
Lactic Acid	mg/l	100	92	92	70-130	n

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 34605 34606 Original: 153540001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
EDonors											
Acetic Acid	mg/l	0.42	100	88	95	88	94	70-130	6.6	20	n
Propionic Acid	mg/l	0	100	84	94	84	94	70-130	11	20	n
Pyruvic Acid	mg/l	0.064	100	90	93	90	93	70-130	3.3	20	n
Butyric Acid	mg/l	0.16	100	82	94	82	94	70-130	14	20	n
Lactic Acid	mg/l	0	100	87	88	87	88	70-130	1.1	20	n



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**QUALITY CONTROL DATA**

Workorder: 15357 92247296 / Kernersville MNA

QC Batch: DISG/4551 Analysis Method: AM20GAX  
 QC Batch Method: AM20GAX  
 Associated Lab Samples: 153570002, 153570004, 153570006, 153570008

METHOD BLANK: 34791

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK Hydrogen	nM	0.13U	0.13	n

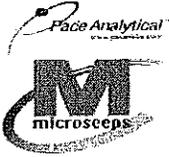
LABORATORY CONTROL SAMPLE & LCSD: 34794 34797

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK Hydrogen	nM	24	25	25	104	104	80-120	0	20	n



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## QUALITY CONTROL DATA QUALIFIERS

Workorder: 15357 92247296 / Kernersville MNA

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### QUALITY CONTROL PARAMETER QUALIFIERS

- n The laboratory does not hold NELAP/TNI accreditation for this method or analyte.



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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 15357 92247296 / Kernersville MNA

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
153570001	3040-MW2			AM21G	EDON/2502
153570003	3040-MW3S			AM21G	EDON/2502
153570005	3040-MW3D			AM21G	EDON/2502
153570007	3040-MW4			AM21G	EDON/2502
153570002	3040-MW2			AM20GAX	DISG/4551
153570004	3040-MW3S			AM20GAX	DISG/4551
153570006	3040-MW3D			AM20GAX	DISG/4551
153570008	3040-MW4			AM20GAX	DISG/4551



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# Chain of Custody

15357



Workorder: 92247296      Workorder Name: TOWN OF KERNERSVILLE MNA      Results Requested 5/12/2015

Report Invoice To: Kevin Godwin  
 Pace Analytical Charlotte  
 9800 Kincey Ave. Suite 100  
 Huntersville, NC 28078  
 Phone (704)875-9092  
 Email: kevin.godwin@paceelabs.com

no message

P.O. #KRL14500

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Requested Analysis	Comments
1	3040-MW2	4/27/2015 10:00	92247296001	Water	3	VFA AM216	
2	3040-MW3S	4/27/2015 14:15	92247296002	Water	3	Hydrogen AM206AX	
3	3040-MW3D	4/27/2015 13:15	92247296003	Water	3		
4	3040-MW4	4/27/2015 15:45	92247296004	Water	3		
5							

Transfers Released By: *[Signature]* Date/Time: 4/29/15 12:00 Received By: *[Signature]* Date/Time: 4/30/15  
 Cooler Temperature on Receipt 4 °C Custody Seal Y or N Received on Ice Y or N Samples Intact Y or N

Report data in 10/1L  
 Please report MDL & J-Flags

## Cooler Receipt Form

Client Name: Pace-H Project: 92247296 Lab Work Order: 15357

**A. Shipping/Container Information (circle appropriate response)**

Courier: FedEx UPS USPS Client Other: \_\_\_\_\_ Air bill Present: Yes No

Tracking Number: 7734 8462 1128

Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other: \_\_\_\_\_

Type of Ice: Wet Blue None Ice Intact: Yes Melted

Cooler Temperature: 40C Radiation Screened: Yes No Chain of Custody Present: Yes No

Comments: \_\_\_\_\_

**B. Laboratory Assignment/Log-in (check appropriate response)**

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC		✓		
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC	✓			
Sample name/date and time collected	✓			
Sufficient volume provided	✓			
PAES containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)			✓	
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments: \_\_\_\_\_

Cooler contents examined/received by: LG Date: 4-30-15

Project Manager Review: RL Date: 4/30/15

DATE: 4/27/15



**GROUND WATER SAMPLING LOG**

Project Name: Town Of Kernersville Project No./Task No.: 838.1501.12.01

Well ID: MW-2 Sampler(s): H. Seaton/ D. Girdner

Well Location: Back side of landfill along Creek

Well Diameter: 2 inches  
Initial Depth to Water (DTW): 3.70 feet  
Depth to Bottom (DTB): 13.18 feet  
Water Column Thickness (WCT): 9.48 feet [DTB-DTW]

**Calculation for One Well Volume (WV):**

For 2" Well: WCT X 0.163 = 1.5 gallons  
For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = 4.5 gallons

Actual Amount Purged/Bailed: 4.5 gallons

Purged with: Disposable bailer

Sampled with: Disposable bailer

Depth to Water before Sampling: - feet

Gallons	Time	Temp(°C)	DO	Cond. (µS)	pH	ORP	Turb.(ntu)	Initials
0	0944	13.6	1.46	234.8	6.19	65.3	12.30	HS
1.5	0946	13.5	2.50	239.3	6.18	64.9	13.60	HS
3.0	0949	13.5	2.37	245.4	6.12	59.9	14.11	HS
4.5	0952	13.6	2.40	252.1	6.12	55.9	14.85	HS
Before Sampling	0952	13.6	2.40	252.1	6.12	55.9	14.85	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was sunny with temperatures in the 60s on 11/2015.

Fe2+: 0.5 mg/L

Dissolved CO2: 55 mg/L

Signature: Haley Seaton Date: 4/27/15

QA/QC Sign Off: M. E. H. Date: 5/28/15

DATE: 4/27/15



**GROUND WATER SAMPLING LOG**

Project Name: Town Of Kernersville Project No./Task No.: 838.1501.12.01

Well ID: MW-3D Sampler(s): H. Seaton/ D. Girdner

Well Location: Back side of landfill along Creek

Well Diameter: 2 inches  
Initial Depth to Water (DTW): 12.22 feet  
Depth to Bottom (DTB): 56.96 feet  
Water Column Thickness (WCT): 44.74 feet [DTB-DTW]

**Calculation for One Well Volume (WV):**

For 2" Well: WCT X 0.163 = 7.3 gallons  
For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = 21.9 gallons

Actual Amount Purged/Bailed: 21.9 gallons

Purged with: Disposable Bailer

Sampled with: Disposable Bailer

Depth to Water before Sampling: - feet

Gallons	Time	Temp(°C)	DO	Cond. (µS)	pH	ORP	Turb.(ntu)	Initials
0	1226	15.3	1.08	290.6	6.86	-23.2	12.68	HS
7.3	1256	16.5	1.99	306.3	6.42	5.5	11.45	HS
14.6	1308	16.6	1.39	294.1	6.26	37.6	10.25	HS
21.9	1315	15.9	1.64	289.7	6.29	43.9	9.55	HS
Before Sampling	1315	15.9	1.64	289.7	6.29	43.9	9.55	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was sunny  
with temperatures in the 60s on 4/27/15.

Fe2+: 0 mg/L

Dissolved CO2: 85 mg/L

Signature: Haley Seaton Date: 4/27/15

QA/QC Sign Off: [Signature] Date: 5/28/15

DATE: 4/27/15



**GROUND WATER SAMPLING LOG**

Project Name: Town Of Kernersville Project No./Task No.: 838.1501.12.01

Well ID: MW-3S Sampler(s): H. Seaton/ D. Girdner

Well Location: Back side of landfill along Creek

Well Diameter: 2 inches  
Initial Depth to Water (DTW): 13.46 feet  
Depth to Bottom (DTB): 24.00 feet  
Water Column Thickness (WCT): 10.54 feet [DTB-DTW]

**Calculation for One Well Volume (WV):**

For 2" Well: WCT X 0.163 = 1.7 gallons  
For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = 5.1 gallons

Actual Amount Purged/Bailed: 5.1 gallons

Purged with: Peristaltic pump

Sampled with: Peristaltic pump

Depth to Water before Sampling: - feet

Gallons	Time	Temp(°C)	DO	Cond. (µS)	pH	ORP	Turb.(ntu)	Initials
0	1212	15.5	1.10	422.0	6.30	29.8	7.99	HS
1.7	1214	14.3	2.05	295.8	6.36	35.1	850	HS
3.4	1218	14.5	2.36	248.7	6.55	34.2	>1000	HS
5.1	1220	14.3	1.68	286.6	6.31	34.9	>1000	HS
Before Sampling	1415	14.7	1.38	288.5	6.35	31.3	6.88	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was sunny  
with temperatures in the 60s on 4/27/15.

Fe2+: 0.2 mg/L

Dissolved CO2: 50 mg/L

Signature: Haley Seaton Date: 4/27/15

QA/QC Sign Off: M. G. H. T. Date: 5/28/15

DATE: 4/27/15



**GROUND WATER SAMPLING LOG**

Project Name: Town Of Kernersville Project No./Task No.: 838.1501.12.01

Well ID: MW-4 Sampler(s): H. Seaton/ D. Girdner

Well Location: Back side of landfill along Creek

Well Diameter: 2 inches

Initial Depth to Water (DTW): 6.65 feet

Depth to Bottom (DTB): 14.40 feet

Water Column Thickness (WCT): 7.75 feet [DTB-DTW]

**Calculation for One Well Volume (WV):**

For 2" Well: WCT X 0.163 = 1.3 gallons

For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = 3.9 gallons

Actual Amount Purged/Bailed: 3.9 gallons

Purged with: Peristaltic pump

Sampled with: Peristaltic pump

Depth to Water before Sampling: - feet

Gallons	Time	Temp(°C)	DO	Cond. (µS)	pH	ORP	Turb.(ntu)	Initials
0	1516	12.9	2.68	293.9	6.94	43.7	7.15	HS
1.3	1518	14.0	3.48	296.2	6.45	41.0	14.5	HS
2.6	1524	13.5	1.54	294.8	6.38	42.6	32.6	HS
3.9	1535	12.6	2.04	292.2	6.46	41.5	15.0	HS
Before Sampling	1535	12.6	2.04	292.2	6.46	41.5	15.0	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was sunny with temperatures in the 60s on 4/27/15. The field blank was taken at 1700 on 4/27/15.

Fe2+: 0.7 mg/L

Dissolved CO2: 80 mg/L

south carolina

Signature: Haley Seaton Date: 4/27/15

QA/QC Sign Off: [Signature] Date: 5/28/15

DATE: 4/27/15



**GROUND WATER SAMPLING LOG**

Project Name: Town Of Kernersville Project No./Task No.: 838.1501.12.01

Well ID: MW-5 Sampler(s): H. Seaton/ D. Girdner

Well Location: Down hill between old cell and shooting range.

Well Diameter: 2 inches  
Initial Depth to Water (DTW): 3.70 feet  
Depth to Bottom (DTB): 11.36 feet  
Water Column Thickness (WCT): 7.66 feet [DTB-DTW]

**Calculation for One Well Volume (WV):**

For 2" Well: WCT X 0.163 = 1.2 gallons

For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = 3.6 gallons

Actual Amount Purged/Bailed: 3.6 gallons

Purged with: Disposable bailer

Sampled with: Disposable bailer

Depth to Water before Sampling: - feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
.0	0912	14.5	5.77	148	14.0	HS
1.2	0918	13.6	5.53	76	46.0	HS
2.4	0923	13.4	5.55	76	48.5	HS
3.6	0929	13.2	5.57	73	36.2	HS
Before Sampling	1655	18.8	5.72	74	12.3	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was sunny with temperatures in the 60s on 4/27/15.

Signature: Haley Seaton Date: 4/27/15  
QA/QC Sign Off: [Signature] Date: 5/28/15

DATE: 4/27/15



**GROUND WATER SAMPLING LOG**

Project Name: Town Of Kernersville Project No./Task No.: 838.1501.12.01

Well ID: MW-6 Sampler(s): H. Seaton/ D. Girdner

Well Location: On Right side of road behind old scale house location.

Well Diameter: 2 inches  
 Initial Depth to Water (DTW): 20.21 feet  
 Depth to Bottom (DTB): 20.46 feet  
 Water Column Thickness (WCT): 0.25 feet [DTB-DTW]

**Calculation for One Well Volume (WV):**

For 2" Well: WCT X 0.163 = - gallons

For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = - gallons

Actual Amount Purged/Bailed: - gallons

Purged with: -

Sampled with: -

Depth to Water before Sampling: - feet

Gallons	Time	Temp(°C)	DO	Cond. (µS)	pH	ORP	Turb.(ntu)	Initials
Dry								
Before Sampling								

Comments (weather conditions, odor, color, silt, etc.): The weather was sunny with temperatures in the 60s on 4/27/15. The well was dry and not sampled.

Signature: Haley Seaton  
QA/QC Sign Off: [Signature]

Date: 4/27/15  
Date: 5/28/15

DATE: 4/27/15



**SURFACE WATER MONITORING LOG**

Project Name: Town Of Kernersville Project/Task No.: 838.1501.12.01

Surface Point ID: SW-1 Sampler(s): H. Seaton/ D. Girdner

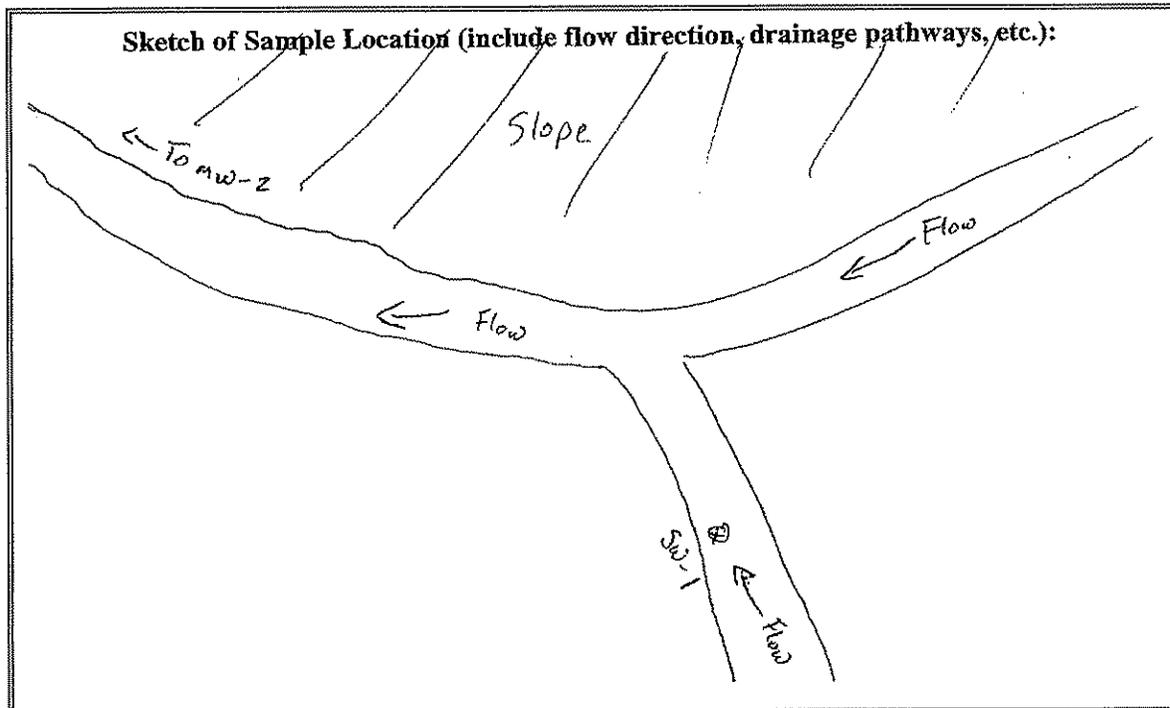
Location: Upstream of MW-2 before 2 creeks merge.

**Field Parameters:**

Time of Sampling:	<u>1050</u>
pH:	<u>6.95</u>
Temperature:	<u>12.8</u> (°C)
Conductivity:	<u>124</u> (µS)
Turbidity:	<u>4.2</u> (ntu)

Comments/Sample Description (weather conditions, odor, color, silt, etc.): \_\_\_\_\_

The weather was sunny with temperatures in the 60s on 4/27/15.



Signature: Haley Seaton Date: 4/27/15  
QA/QC Sign Off: [Signature] Date: 5/28/15

DATE: 4/27/15



**SURFACE WATER MONITORING LOG**

Project Name: Town Of Kernersville Project/Task No.: 838.1501.12.01

Surface Point ID: SW-2 Sampler(s): H. Seaton/ D. Girdner

Location: Down Stream of MW-4 at property line.

**Field Parameters:**

Time of Sampling: 1022

pH: 6.92

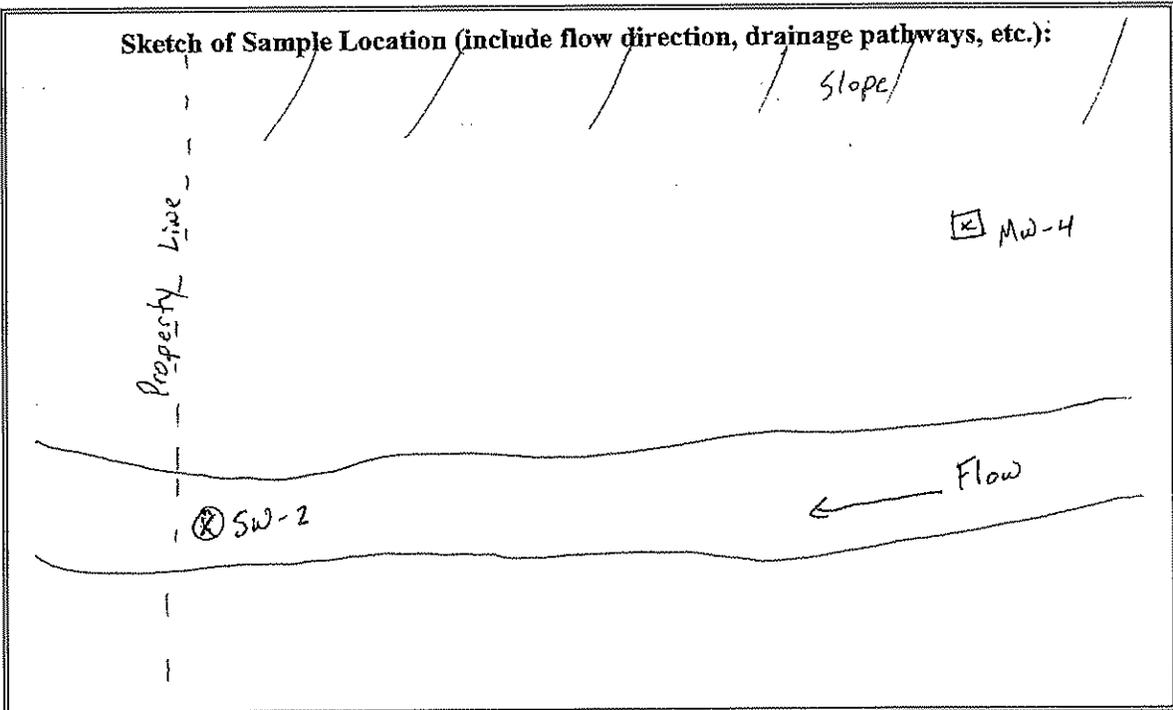
Temperature: 11.0 (°C)

Conductivity: 115 (µS)

Turbidity: 3.92 (ntu)

Comments/Sample Description (weather conditions, odor, color, silt, etc.): \_\_\_\_\_

The weather was sunny with temperatures in the 60s on 4/27/15.



Signature: Daley Seaton Date: 4/27/15  
QA/QC Sign Off: [Signature] Date: 5/28/15

DATE: 4/27/15



**SURFACE WATER MONITORING LOG**

Project Name: Town Of Kernersville Project/Task No.: 838.1501.12.01

Surface Point ID: SW-3 Sampler(s): Dan Girdner

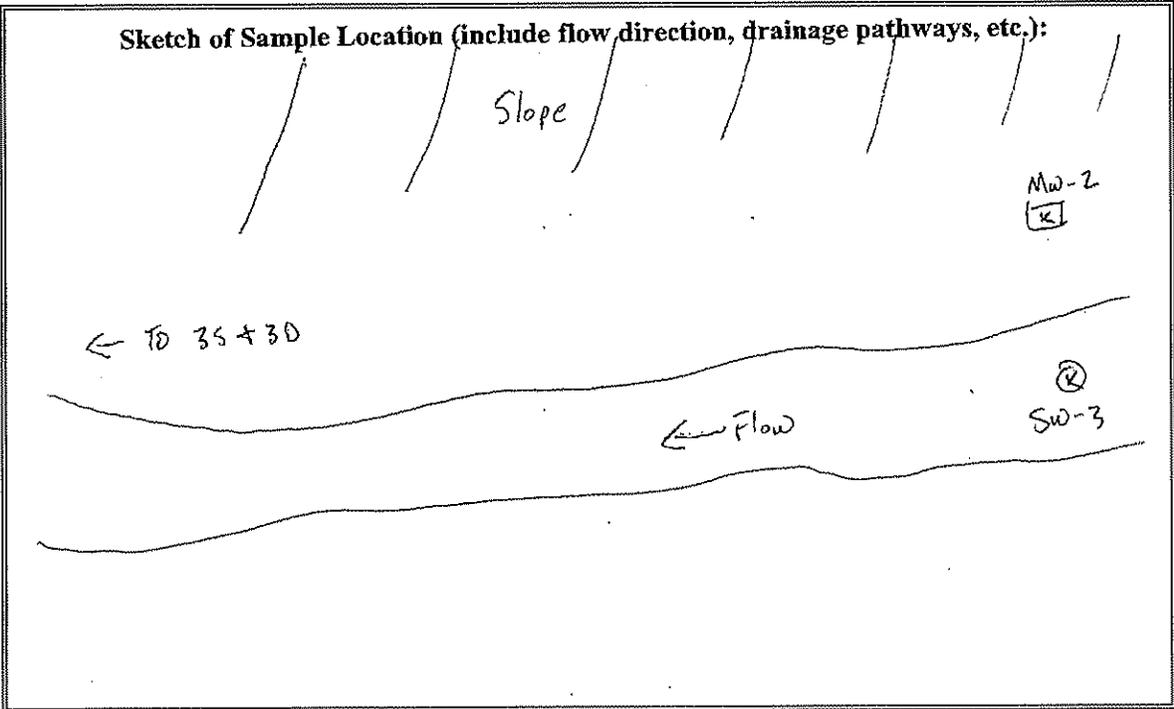
Location: In the stream directly across from MW-2

**Field Parameters:**

Time of Sampling:	<u>1625</u>	
pH:	<u>6.87</u>	
Temperature:	<u>16.5</u>	(°C)
Conductivity:	<u>119</u>	(µS)
Turbidity:	<u>6.0</u>	(ntu)

Comments/Sample Description (weather conditions, odor, color, silt, etc.): \_\_\_\_\_

The weather was sunny with temperatures in the 60s on 4/27/15.



Signature: Haley Seaton Date: 4/27/15

QA/QC Sign Off: [Signature] Date: 5/28/15

## *Appendix II*

Summary of Detections

# Summary of Detections

WELL ID	PARAMETER	RESULT	UNITS	SWSL	COLLECT DATE
3404-MW2	1,1-Dichloroethane	24.2	µg/L	5	4/27/2015
3404-MW2	1,2-Dichloropropane	4.8	µg/L	1	4/27/2015
3404-MW2	1,4-Dichlorobenzene	4.7	µg/L	1	4/27/2015
3404-MW2	Barium	268	µg/L	100	4/27/2015
3404-MW2	Benzene	6.4	µg/L	1	4/27/2015
3404-MW2	cis-1,2-Dichloroethene	51.8	µg/L	5	4/27/2015
3404-MW2	Tetrachloroethene	1.4	µg/L	1	4/27/2015
3404-MW2	Trichloroethene	7.1	µg/L	1	4/27/2015
3404-MW2	Vinyl chloride	5.3	µg/L	1	4/27/2015
3404-MW3D	1,2-Dichloroethane	1.2	µg/L	1	4/27/2015
3404-MW3D	1,2-Dichloropropane	1.6	µg/L	1	4/27/2015
3404-MW3D	1,4-Dichlorobenzene	4.2	µg/L	1	4/27/2015
3404-MW3D	cis-1,2-Dichloroethene	65.3	µg/L	5	4/27/2015
3404-MW3D	Vinyl chloride	7.1	µg/L	1	4/27/2015
3404-MW3S	1,4-Dichlorobenzene	2.1	µg/L	1	4/27/2015
3404-MW3S	Barium	104	µg/L	100	4/27/2015
3404-MW3S	cis-1,2-Dichloroethene	9.7	µg/L	5	4/27/2015
3404-MW3S	Vinyl chloride	2.4	µg/L	1	4/27/2015
3404-MW4	1,4-Dichlorobenzene	2.7	µg/L	1	4/27/2015
3404-MW4	cis-1,2-Dichloroethene	24.0	µg/L	5	4/27/2015
3404-MW4	Vinyl chloride	21.4	µg/L	1	4/27/2015
3404-MW5	Cobalt	10.7	µg/L	10	4/27/2015

Notes:                   µg/L = Micorgrams per liter  
                               SWSL = NC Soild Waste Section Reporting Limit  
                               Laboratory Reporting limit used when SWSL has not been established

## ***Appendix III***

Summary of Exceedances

## Summary of Exceedances

WELL ID	PARAMETER	RESULT	UNITS	NC2L/GWPS	GPS	SWSL	COLLECT DATE
3404-MW2	1,2-Dichloropropane	4.8	µg/L	0.6	0.6	1	4/27/2015
3404-MW2	Benzene	6.4	µg/L	1	1	1	4/27/2015
3404-MW2	Tetrachloroethene	1.4	µg/L	0.7	0.7	1	4/27/2015
3404-MW2	Trichloroethene	7.1	µg/L	3	3	1	4/27/2015
3404-MW2	Vinyl chloride	5.3	µg/L	0.03	0.03	1	4/27/2015
3404-MW3D	1,2-Dichloroethane	1.2	µg/L	0.4	0.4	1	4/27/2015
3404-MW3D	1,2-Dichloropropane	1.6	µg/L	0.6	0.6	1	4/27/2015
3404-MW3D	Vinyl chloride	7.1	µg/L	0.03	0.03	1	4/27/2015
3404-MW3S	Vinyl chloride	2.4	µg/L	0.03	0.03	1	4/27/2015
3404-MW4	Vinyl chloride	21.4	µg/L	0.03	0.03	1	4/27/2015
3404-MW5	Cobalt	10.7	µg/L	1	1	10	4/27/2015

Notes:

- µg/L = Micrograms per liter
- SWSL = NC Solid Waste Section Reporting Limit
- Laboratory Reporting limit used when SWSL has not been established
- NC2L = NC Groundwater Standard from 15A NCAC 2L.0202
- GWPS = NC Solid Waste Section Groundwater Protection Standard (for constituents with no NC2L)
- GPS = Groundwater Protection Standard as defined by 15A NCAC 13B.1634(g)
- NA= Not Applicable

## *Appendix IV*

Summary of Field Parameters

# Summary of Field Parameters

WELL ID	PARAMETER	RESULT	UNITS	COLLECT DATE
MW-2	Dissolved Oxygen	2.4	mg/L	4/27/2015
MW-2	Oxidation Reduction Potential	55.9	mV	4/27/2015
MW-2	pH	6.12	S.U.	4/27/2015
MW-2	Temperature	13.6	°C	4/27/2015
MW-2	Conductivity	252.1	µS	4/27/2015
MW-2	Turbidity	14.85	NTU	4/27/2015
MW-2	Static Water Level	3.7	ft	4/27/2015
MW-2	Well Depth	13.18	ft	4/27/2015
MW-3S	pH	6.35	S.U.	4/27/2015
MW-3S	Temperature	14.7	°C	4/27/2015
MW-3S	Conductivity	288.5	µS	4/27/2015
MW-3S	Turbidity	6.88	NTU	4/27/2015
MW-3S	Static Water Level	13.46	ft	4/27/2015
MW-3S	Well Depth	24	ft	4/27/2015
MW-3S	Dissolved Oxygen	1.38	mg/L	4/27/2015
MW-3S	Oxidation Reduction Potential	31.3	mV	4/27/2015
MW-3D	Dissolved Oxygen	1.64	mg/L	4/27/2015
MW-3D	Oxidation Reduction Potential	43.9	mV	4/27/2015
MW-3D	pH	6.29	S.U.	4/27/2015
MW-3D	Temperature	15.9	°C	4/27/2015
MW-3D	Conductivity	289.7	µS	4/27/2015
MW-3D	Turbidity	9.55	NTU	4/27/2015
MW-3D	Static Water Level	12.22	ft	4/27/2015
MW-3D	Well Depth	56.96	ft	4/27/2015
MW-4	pH	6.46	S.U.	4/27/2015
MW-4	Temperature	12.6	°C	4/27/2015
MW-4	Conductivity	292.2	µS	4/27/2015
MW-4	Turbidity	15	NTU	4/27/2015
MW-4	Static Water Level	6.65	ft	4/27/2015
MW-4	Well Depth	14.4	ft	4/27/2015
MW-4	Dissolved Oxygen	2.04	mg/L	4/27/2015
MW-4	Oxidation Reduction Potential	41.5	mV	4/27/2015
MW-5	pH	5.72	S.U.	4/27/2015
MW-5	Temperature	18.8	°C	4/27/2015
MW-5	Conductivity	73	µS	4/27/2015
MW-5	Turbidity	12	NTU	4/27/2015
MW-5	Static Water Level	3.7	ft	4/27/2015
MW-5	Well Depth	11.36	ft	4/27/2015
SW-1	pH	6.95	S.U.	4/27/2015
SW-1	Temperature	12.8	°C	4/27/2015
SW-1	Conductivity	124	µS	4/27/2015
SW-1	Turbidity	4.2	NTU	4/27/2015
SW-2	pH	6.92	S.U.	4/27/2015
SW-2	Temperature	11	°C	4/27/2015
SW-2	Conductivity	115	µS	4/27/2015
SW-2	Turbidity	3.92	NTU	4/27/2015

# Summary of Field Parameters

WELL ID	PARAMETER	RESULT	UNITS	COLLECT DATE
SW-3	pH	6.87	S.U.	4/27/2015
SW-3	Temperature	16.5	°C	4/27/2015
SW-3	Conductivity	119	μS	4/27/2015
SW-3	Turbidity	6	NTU	4/27/2015

Notes: °C= degrees Centigrade  
S.U.= Standard Units  
μS = microsemens  
NTU = Nephelometric Turbidity Units  
ft = feet  
mV = millivolts  
mg/L = milligrams per liter