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

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

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

Instructions:

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

Solid Waste Monitoring Data Submittal Information

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

Joyce Engineering

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

Name: Hannu Kemppinen P.G. Phone: (336)-323-0092

E-mail: hkemppin@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
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☒ Corrective action data (specify) MNA
☐ Other(specify)

Notification attached?

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

Certification

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

Hannu Kemppinen P.G. | Senior Project Consultant | (336)-323-0092

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

Hannu Kemppinen 8-10-2015

Signature | Date

Affix NC Licensed Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1490 GEOLOGIST HANNU M. A. KEMPPINEN

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. Jaclynne 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

Hannu Kemppinen 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:

2211 WEST MEADOWVIEW ROAD, SUITE 101
GREENSBORO, NORTH CAROLINA 27407
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JOYCE PROJECT NO. 838.1501.12

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 providence 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: $\boldsymbol{V=Ki/n}$. 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	
Barium	700	Dry	268	104	39.0 J	94.8 J	67.4 J	ND
Cobalt	(1)	Dry	ND	2.7 J	ND	ND	**10.7**	ND
Zinc	1,000	Dry	7.3 B	11.5 B	8.0 B	14.1 B	10.3 B	7.5 J
Benzene	1	Dry	**6.4**	0.38 J	0.48 J	0.45 J	ND	ND
1,4-Dichlorobenzene	6	Dry	4.7	2.1	4.2	2.7	ND	ND
1,1-Dichloroethane	6	Dry	**24.2**	1.4 J	4.3 J	2.4 J	ND	ND
1,2 Dichloroethane	0.4	Dry	ND	0.56 J	1.2	0.15 J	ND	ND
Cis-1,2-Dichloroethylene	70	Dry	51.8	9.7	65.3	24.0	ND	ND
1,2-Dichloropropane	0.6	Dry	**4.8**	0.59 J	**1.6**	0.57 J	ND	ND
Tetrachloroethylene	0.7	Dry	**1.4**	ND	ND	ND	ND	ND
Trichloroethylene	3	Dry	**7.1**	ND	ND	ND	ND	ND
Vinyl Chloride	0.03	Dry	**5.3**	**2.4**	**7.1**	**21.4**	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_2), cis-1,2-dichloroethylene, vinyl chloride, and 1,1-dichlroethane 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_2 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

Brown, Philip M., Chief Geologist, 1985, *Geologic Map of North Carolina*, The North Carolina Geologic Survey, scale 1:500,000.

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TABLE 1A

SUMMARY OF HISTORICAL GROUNDWATER ELEVATIONS

	Background		Downgradient				
Well ID:	**MW-1**	**MW-6**	**MW-2**	**MW-3S**	**MW-3D**	**MW-4**	**MW-5**
TOC Elevation:	806.42	804.87	762.19	764.57	764.56	760.26	773.32
Well Depth:	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	WELL ELEVATIONS		TOTAL DEPTH		SCREENED INTERVAL*				LITHOLOGY OF SCREENED INTERVAL*
		GROUND SURFACE	T.O.C.	B.G.S.	B.T.O.C.	DEPTH B.G.S.		ELEV. M.S.L.		
	inches	feet above M.S.L.		feet	feet	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 / 755	0.0353	1.73E+00	0.30	74.20
			Average	0.0353		Average	74.20

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 Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5	Blanks
Inorganic Compounds											
Antimony	30-Dec-09	1.2	6.0	---	ND	5.4 B	ND	ND	4.5 B	---	1.4 J
GWPS = 1.4 µg/L (10/23/07)	01-Jun-10	1.2	6.0	---	ND	ND	ND	ND	ND	---	3.9 J
GWPS = 1 µg/L (8/1/10)	29-Dec-10	2.6	6.0	---	ND	ND	ND	ND	ND	ND	ND
	29-Jun-11	5.0	6.0	---	ND	ND	ND	ND	ND	ND	ND
	01-Nov-11	5.0	6.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	5.0	6.0	---	ND	ND	ND	ND	ND	ND	ND
	07-Nov-12	0.48	6.0	---	---	ND	ND	ND	ND	---	ND
	09-May-13	5.0	6.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	5.0	6.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	6.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	3.8	6.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	3.8	6.0	---	---	ND	ND	ND	ND	ND	ND
Arsenic	29-Jun-11	5.0	10.0	---	ND	ND	ND	ND	ND	6.2 J	ND
NC 2L = 10 µg/L (1/11/10)	01-Nov-11	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	5.0	10.0	---	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
	07-Nov-13	5.0	10.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	2.5	10.0	---	---	ND	2.5 J	ND	ND	2.7 J	ND
	27-Apr-15	2.5	10.0	---	---	ND	ND	ND	ND	ND	ND
Barium	30-Dec-09	1.1	100	---	74.1 J	496	178	18.2 J	89.0 J	---	3.6 J
NC 2L = 700 µg/L (1/11/10)	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	413	132	41.7 J	111	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	---	---	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	---	---	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	---	---	301	113	39.5 J	83.3 J	108	ND
	27-Apr-15	2.5	100	---	---	268	104	39.0 J	94.8 J	67.4 J	ND
Beryllium	30-Dec-09	0.2	1.0	---	ND	0.5 J	ND	ND	ND	---	ND
GWPS = 4 µg/L (10/23/07)	01-Jun-10	0.2	1.0	---	0.6 J	0.7 J	ND	ND	ND	---	ND
	29-Dec-10	0.10	1.0	---	ND	ND	ND	ND	ND	0.48 J	ND
	29-Jun-11	1.0	1.0	---	ND	ND	ND	ND	ND	ND	ND
	01-Nov-11	1.0	1.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	1.0	1.0	---	ND	ND	ND	ND	ND	ND	ND
	07-Nov-12	0.049	1.00	---	---	0.34 J	ND	ND	0.099 J	---	ND
	09-May-13	1.0	1.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	1.0	1.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	1.0	1.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	0.5	1.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	0.5	1.0	---	---	ND	ND	ND	ND	ND	ND
Cadmium	30-Dec-09	0.2	1.0	---	ND	0.5 J	**5.6**	ND	ND	---	ND
NC 2L = 2 µg/L (1/11/10)	01-Jun-10	0.2	1.0	---	**2.9**	1.0 B	**5.3**	0.4 B	0.4 B	---	0.4 J
	29-Dec-10	0.50	1.0	---	ND	ND	ND	ND	ND	ND	ND
	29-Jun-11	1.0	1.0	---	ND	ND	ND	ND	ND	ND	ND
	01-Nov-11	1.0	1.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	1.0	1.0	---	ND	ND	ND	ND	ND	ND	ND
	07-Nov-12	0.026	1.00	---	---	0.15 J	ND	ND	0.043 J	---	ND
	09-May-13	1.0	1.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	1.0	1.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	1.0	1.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	0.5	1.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	0.5	1.0	---	---	ND	ND	ND	ND	ND	ND
Chromium	30-Dec-09	0.7	10.0	---	ND	2.7 J	9.7 J	ND	3.1 J	---	ND
NC 2L = 10 µg/L (1/11/10)	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	ND	ND	ND	ND	ND	ND
	01-Nov-11	5.0	10.0	---	ND	ND	ND	ND	**10.3**	ND	ND
	01-May-12	5.0	10.0	---	ND	ND	ND	ND	5.8 J	ND	ND
	07-Nov-12	0.030	10.0	---	---	0.71 J	0.12 B	0.094 B	7.31 J	---	0.099 J
	09-May-13	5.0	10.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	5.0	10.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	2.5	10.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	2.5	10.0	---	---	ND	ND	ND	7.2 J	ND	ND

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
Cobalt	30-Dec-09	0.7	10.0	---	ND	6.4 J	11.2	ND	1.8 J	---	ND
GWPS = 70 µg/L (10/23/07)	01-Jun-10	0.7	10.0	---	1.8 J	2.5 J	8.5 J	ND	1.7 J	---	ND
GWPS = 1 µg/L (10/1/10)	29-Dec-10	0.60	10.0	---	ND	4.9 J	1.7 J	ND	1.6 J	**10.2**	ND
	29-Jun-11	5.0	10.0	---	ND	ND	ND	ND	ND	9.9 J	ND
	01-Nov-11	5.0	10.0	---	ND	ND	ND	ND	ND	5.2 J	ND
	01-May-12	5.0	10.0	---	ND	ND	ND	ND	ND	**13.9**	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
	07-Nov-13	5.0	10.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	10.0	---	ND	ND	ND	ND	ND	**12.0**	ND
	20-Nov-14	2.5	10.0	---	---	ND	2.5 J	ND	ND	**10.2**	ND
	27-Apr-15	2.5	10.0	---	---	ND	2.7 J	ND	ND	**10.7**	ND
Copper	30-Dec-09	2.0	10.0	---	ND	ND	10.6	ND	1.5 J	---	ND
NC 2L = 1,000 µg/L (10/23/07)	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	16.6	ND
	01-Nov-11	5.0	10.0	---	ND	ND	ND	ND	5.4 J	ND	ND
	01-May-12	5.0	10.0	---	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
	07-Nov-13	5.0	10.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	10.0	---	ND	ND	ND	ND	ND	6.1 J	ND
	20-Nov-14	2.5	10.0	---	---	ND	ND	ND	ND	5.3 J	ND
	27-Apr-15	2.5	10.0	---	---	ND	ND	ND	3.5 B	3.6 B	3.2 J
Lead	30-Dec-09	2.0	10.0	---	ND	ND	10.2	ND	ND	---	ND
NC 2L = 15 µg/L (10/23/07)	01-Jun-10	2.0	10.0	---	9.1 B	8.2 B	8.7 B	3.0 B	3.9 B	---	3.2 J
	29-Dec-10	4.0	10.0	---	ND	ND	ND	ND	ND	6.5 J	ND
	29-Jun-11	5.0	10.0	---	ND	ND	ND	ND	ND	**19.9**	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
	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
	07-Nov-13	5.0	10.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	2.5	10.0	---	---	ND	ND	ND	ND	4.2 J	ND
	27-Apr-15	2.5	10.0	---	---	ND	ND	ND	ND	ND	ND
Nickel	30-Dec-09	0.6	50.0	---	ND	ND	8.1 J	1.8 J	1.6 J	---	ND
NC 2L = 100 µg/L (10/23/07)	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	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
	07-Nov-13	5.0	50.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	50.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	2.5	50.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	2.5	50.0	---	---	ND	ND	ND	3.4 J	ND	ND
Selenium	30-Dec-09	6.3	10.0	---	ND	ND	8.4 J	ND	ND	---	ND
NC 2L = 20 µg/L (1/11/10)	01-Jun-10	6.3	10.0	---	ND	ND	6.3 J	ND	ND	---	ND
	29-Dec-10	3.8	10.0	---	ND	ND	ND	ND	ND	ND	ND
	29-Jun-11	10.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	01-Nov-11	10.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	10.0	10.0	---	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
	07-Nov-13	10.0	10.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	10.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	5.0	10.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	5.0	10.0	---	---	ND	ND	ND	ND	ND	ND
Silver	30-Dec-09	1.1	10.0	---	ND	1.7 B	2.2 B	ND	ND	---	1.9 J
NC 2L = 20 µg/L (1/11/10)	01-Jun-10	1.1	10.0	---	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	ND
	29-Jun-11	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	01-Nov-11	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	5.0	10.0	---	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
	07-Nov-13	5.0	10.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	10.0	---	ND	ND	ND	ND	ND	ND	ND
	20-Nov-14	2.5	10.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	2.5	10.0	---	---	ND	ND	ND	ND	ND	ND

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
Thallium	30-Dec-09	2.7	5.5	---	ND	ND	ND	ND	ND	---	3.7 J
GWPS = 0.28 µg/L (10/23/07)	01-Jun-10	2.7	5.5	---	ND	ND	ND	ND	ND	---	ND
GWPS = 0.2 µg/L (10/1/10)	29-Dec-10	3.0	5.5	---	ND	3.2 J	ND	ND	4.8 J	ND	ND
	29-Jun-11	5.4	5.5	---	ND	ND	ND	ND	ND	ND	ND
	01-Nov-11	5.4	5.5	---	ND	ND	ND	ND	ND	ND	ND
	01-May-12	5.4	5.5	---	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
	20-Nov-14	5.0	5.5	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	5.0	5.5	---	---	ND	ND	ND	ND	ND	ND
Vanadium	30-Dec-09	0.4	25.0	---	ND	1.4 J	**37.4**	1.5 J	4.3 J	---	ND
GWPS = 3.5 µg/L (10/23/07)	01-Jun-10	0.4	25.0	---	1.2 J	3.4 J	**84.2**	1.4 J	4.8 J	---	ND
GWPS = 0.3 µg/L (10/1/10)	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	22.0 J	ND
	01-Nov-11	5.0	25.0	---	7.2 J	ND	ND	ND	12.0 J	7.2 J	ND
	01-May-12	5.0	25.0	---	ND	ND	ND	ND	7.2 J	7.6 J	ND
	07-Nov-12	0.085	25.0	---	---	2.48 J	2.02 J	2.35 J	4.55 J	---	ND
	09-May-13	5.0	25.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	5.0	25.0	---	---	ND	ND	ND	ND	---	ND
	05-Jun-14	5.0	25.0	---	ND	ND	11.4 J	ND	ND	ND	ND
	20-Nov-14	2.5	25.0	---	---	ND	3.2 J	ND	ND	9.4 J	ND
	27-Apr-15	2.5	25.0	---	---	ND	ND	ND	8.9 J	5.6 J	ND
Zinc	30-Dec-09	2.7	10.0	---	ND	10.1 B	204	15.9 B	24.8 B	---	5.8 J
NC 2L = 1,000 µg/L (1/11/10)	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
	01-May-12	10.0	10.0	---	ND	ND	13.5	ND	10.2	12.0	ND
	07-Nov-12	1.31	10.0	---	---	8.61 J	5.20 J	3.98 J	4.65 J	---	ND
	09-May-13	10.0	10.0	---	ND	ND	ND	ND	ND	---	ND
	07-Nov-13	10.0	10.0	---	---	13.8	10.4	ND	ND	---	ND
	05-Jun-14	10.0	10.0	---	ND	ND	89.0	ND	ND	19.4	ND
	20-Nov-14	5.0	10.0	---	---	ND	20.9	ND	ND	55.0	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
Organic Compounds											
Acetone	29-Jun-11	2.2	100	---	ND	2.3 B	2.4 B	3.9 B	ND	3.8 B	5.3 J
NC 2L = 6,000 µg/L (1/11/10)	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	---	ND
	09-May-13	10.0	100	---	ND	ND	ND	ND	ND	---	12.0 J
	07-Nov-13	10.0	100	---	---	ND	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 J
Benzene	30-Dec-09	0.1	1.0	---	ND	**8.4**	0.3 J	0.4 J	0.3 J	---	ND
NC 2L = 1 µg/L (10/23/07)	01-Jun-10	0.1	1.0	---	ND	**2.9**	ND	ND	ND	---	ND
	29-Dec-10	0.25	1.0	---	ND	**8.1**	ND	ND	ND	ND	ND
	29-Jun-11	0.25	1.0	---	ND	**7.2**	0.38 J	0.45 J	0.42 J	ND	ND
	01-Nov-11	0.25	1.0	---	ND	**8.6**	ND	ND	ND	ND	ND
	01-May-12	0.25	1.0	---	ND	**6.7**	0.36 J	0.45 J	0.42 J	ND	ND
	07-Nov-12	0.111	1.0	---	---	**8.63**	0.430 J	0.504 J	0.478 J	---	ND
	09-May-13	0.25	1.0	---	ND	**5.2**	0.27 J	0.32 J	0.30 J	---	ND
	07-Nov-13	0.25	1.0	---	---	**6.9**	0.33 J	0.38 J	0.39 J	---	ND
	05-Jun-14	0.25	1.0	---	ND	**6.0**	ND	0.42 J	0.40 J	ND	ND
	20-Nov-14	0.25	1.0	---	---	**6.2**	0.30 J	ND	0.32 J	ND	ND
	27-Apr-15	0.25	1.0	---	---	**6.4**	0.38 J	0.48 J	0.45 J	ND	ND
Bromoform	09-May-13	0.26	3.0	---	ND	ND	0.37 B	ND	ND	---	0.37 J
NC 2L = µg/L 4 (10/23/07)	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	ND
	20-Nov-14	0.26	3.0	---	---	ND	ND	ND	ND	ND	ND
	27-Apr-15	0.26	3.0	---	---	ND	ND	ND	ND	ND	ND
Chlorobenzene	30-Dec-09	0.1	3.0	---	ND	0.5 J	0.6 J	ND	ND	---	ND
NC 2L = 50 µg/L (10/23/07)	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	ND
	29-Jun-11	0.23	3.0	---	ND	0.46 J	1.0 J	0.37 J	ND	ND	ND
	01-Nov-11	0.23	3.0	---	ND	0.59 J	1.1 J	0.37 J	ND	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	ND
	20-Nov-14	0.23	3.0	---	---	0.37 J	0.95 J	0.36 J	ND	ND	ND
	27-Apr-15	0.23	3.0	---	---	0.27 J	1.0 J	0.40 J	ND	ND	ND

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
Chloroethane	30-Dec-09	0.1	10.0	---	ND	ND	0.5 J	0.5 J	ND	---	0.1 J
NC 2L = 3,000 µg/L (1/11/10)	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	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	30-Dec-09	0.1	1.0	---	ND	3.8	2.2	2.3	3.1	---	ND
NC 2L = 6 µg/L (1/11/10)	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	30-Dec-09	0.2	5.0	---	ND	**22.8**	1.9 J	4.0 J	2.4 J	---	ND
NC 2L = 6 µg/L (1/11/10)	01-Jun-10	0.2	5.0	---	ND	**11.0**	1.1 J	ND	1.2 J	---	ND
	29-Dec-10	0.32	5.0	---	ND	**28.2**	2.4 J	4.1 J	2.6 J	ND	ND
	29-Jun-11	0.32	5.0	---	ND	**25.0**	2.5 J	3.9 J	2.6 J	ND	ND
	01-Nov-11	0.32	5.0	---	ND	**27.2**	2.3 J	4.0 J	2.3 J	ND	ND
	01-May-12	0.32	5.0	---	ND	**22.6**	2.0 J	3.8 J	2.0 J	ND	ND
	07-Nov-12	0.208	5.0	---	---	**28.1**	2.06 J	4.08 J	ND	---	ND
	09-May-13	0.32	5.0	---	ND	**18.7**	1.4 J	3.0 J	1.6 J	---	ND
	07-Nov-13	0.32	5.0	---	---	**26.6**	1.7 J	4.2 J	2.2 J	---	ND
	05-Jun-14	0.32	5.0	---	ND	**21.9**	1.4 J	3.9 J	1.9 J	ND	ND
	20-Nov-14	0.32	5.0	---	---	**21.5**	1.3 J	3.2 J	1.8 J	ND	ND
	27-Apr-15	0.32	5.0	---	---	**24.2**	1.4 J	4.3 J	2.4 J	ND	ND
1,2-Dichloroethane	30-Dec-09	0.1	1.0	---	ND	**1.2**	0.7 J	**1.2**	ND	---	ND
NC 2L = 0.4 µg/L (1/11/10)	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	**1.1**	ND	ND	ND
	29-Jun-11	0.12	1.0	---	ND	0.76 J	0.86 J	**1.3**	ND	ND	ND
	01-Nov-11	0.12	1.0	---	ND	0.95 J	ND	**1.3**	ND	ND	ND
	01-May-12	0.12	1.0	---	ND	0.71 J	0.70 J	**1.1**	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	ND	---	ND
	07-Nov-13	0.12	1.0	---	---	0.93 J	0.66 J	**1.3**	ND	---	ND
	05-Jun-14	0.12	1.0	---	ND	0.76 J	0.52 J	0.99 J	ND	ND	ND
	20-Nov-14	0.12	1.0	---	---	0.68 J	0.47 J	0.81 J	ND	ND	ND
	27-Apr-15	0.12	1.0	---	---	ND	0.56 J	**1.2**	0.15 J	ND	ND
1,1-Dichloroethene	30-Dec-09	0.1	5.0	---	ND	0.4 J	ND	ND	ND	---	ND
NC 2L = 7 µg/L (10/23/07)	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
NC 2L = 350 µg/L (04/01/2013)	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	30-Dec-09	0.1	5.0	---	ND	68.2	11.0	51.0	21.8	---	ND
NC 2L = 70 µg/L (10/23/07)	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	**71.3**	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 Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5	Blanks
trans-1,2-Dichloroethene	30-Dec-09	0.1	5.0	---	ND	1.4 J	ND	0.2 J	0.2 J	---	ND
NC 2L = 100 µg/L (10/23/07)	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	30-Dec-09	0.1	1.0	---	ND	**5.7**	0.6 J	1.1	0.7 J	---	ND
NC 2L = 0.6 µg/L (1/11/10)	01-Jun-10	0.1	1.0	---	ND	**1.9**	ND	ND	ND	---	ND
	29-Dec-10	0.27	1.0	---	ND	**5.3**	ND	ND	ND	ND	ND
	29-Jun-11	0.27	1.0	---	ND	**4.8**	0.90 J	**1.3**	0.73 J	ND	ND
	01-Nov-11	0.27	1.0	---	ND	**4.9**	0.76 J	**1.3**	ND	ND	ND
	01-May-12	0.27	1.0	---	ND	**4.4**	0.76 J	**1.4**	0.62 J	ND	ND
	07-Nov-12	0.150	1.0	---	---	**4.93**	ND	**1.66**	ND	---	ND
	09-May-13	0.27	1.0	---	ND	**3.3**	0.51 J	0.96 J	0.45 J	---	ND
	07-Nov-13	0.27	1.0	---	---	**4.4**	0.63 J	**1.3**	0.57 J	---	ND
	05-Jun-14	0.27	1.0	---	ND	**4.0**	0.51 J	ND	0.41 J	ND	ND
	20-Nov-14	0.27	1.0	---	---	**4.1**	0.56 J	**1.2**	0.36 J	ND	ND
	27-Apr-15	0.27	1.0	---	---	**4.8**	0.59 J	**1.6**	0.57 J	ND	ND
Ethylbenzene	30-Dec-09	0.1	1.0	---	ND	ND	ND	0.4 J	ND	---	ND
NC 2L = 600 µg/L (10/23/07)	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	30-Dec-09	0.2	1.0	---	ND	**1.2**	ND	ND	ND	---	ND
NC 2L = 0.7 µg/L (10/23/07)	01-Jun-10	0.2	1.0	---	ND	**1.4**	ND	ND	ND	---	ND
	29-Dec-10	0.46	1.0	---	ND	**2.8**	ND	ND	ND	ND	ND
	29-Jun-11	0.46	1.0	---	ND	**3.6**	ND	ND	ND	ND	ND
	01-Nov-11	0.46	1.0	---	ND	**2.9**	ND	ND	ND	ND	ND
	01-May-12	0.46	1.0	---	ND	**3.0**	ND	ND	ND	ND	ND
	07-Nov-12	0.193	1.00	---	---	**2.52**	ND	ND	ND	---	ND
	09-May-13	0.46	1.0	---	ND	**1.9**	ND	ND	ND	---	ND
	07-Nov-13	0.46	1.0	---	---	**1.8**	ND	ND	ND	---	ND
	05-Jun-14	0.46	1.0	---	ND	**2.3**	ND	ND	ND	ND	ND
	20-Nov-14	0.46	1.0	---	---	**1.1**	ND	ND	ND	ND	ND
	27-Apr-15	0.46	1.0	---	---	**1.4**	ND	ND	ND	ND	ND

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
Toluene	29-Jun-11	0.26	1.0	---	ND	ND	ND	ND	ND	0.76 J	ND
NC 2L = 600 µg/L (1/11/10)	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	30-Dec-09	0.1	1.0	---	ND	**8.0**	ND	ND	0.2 J	---	ND
NC 2L = 3 µg/L (1/11/10)	01-Jun-10	0.1	1.0	---	ND	**6.4**	ND	ND	ND	---	ND
	29-Dec-10	0.47	1.0	---	ND	**10.1**	ND	ND	ND	ND	ND
	29-Jun-11	0.47	1.0	---	ND	**14.6**	ND	ND	ND	ND	ND
	01-Nov-11	0.47	1.0	---	ND	**10.2**	ND	ND	ND	ND	ND
	01-May-12	0.47	1.0	---	ND	**11.6**	ND	ND	ND	ND	ND
	07-Nov-12	0.161	1.00	---	---	**9.97**	ND	ND	ND	---	ND
	09-May-13	0.47	1.0	---	ND	**8.4**	ND	ND	ND	---	ND
	07-Nov-13	0.47	1.0	---	---	**8.0**	ND	ND	ND	---	ND
	05-Jun-14	0.47	1.0	---	ND	**8.9**	ND	ND	ND	ND	ND
	20-Nov-14	0.47	1.0	---	---	**5.1**	ND	ND	ND	ND	ND
	27-Apr-15	0.47	1.0	---	---	**7.1**	ND	ND	ND	ND	ND
Trichlorofluoromethane	29-Jun-11	0.20	1.0	---	ND	0.95 J	ND	ND	ND	ND	ND
NC 2L = 2000 µg/L (1/11/10)	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 Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4	MW-5	Blanks
Vinyl chloride	30-Dec-09	0.1	1.0	---	ND	**4.0**	**2.8**	**4.1**	**26.2**	---	ND
NC 2L = 0.03 µg/L (1/11/10)	01-Jun-10	0.1	1.0	---	ND	**2.2**	**3.0**	ND	**26.7**	---	ND
	29-Dec-10	0.62	1.0	---	ND	**3.5**	**2.4**	**4.7**	**25.6**	ND	ND
	29-Jun-11	0.62	1.0	---	ND	**2.8**	**2.8**	**4.6**	**28.7**	ND	ND
	01-Nov-11	0.62	1.0	---	ND	**5.1**	**2.6**	**6.9**	**24.0**	ND	ND
	01-May-12	0.62	1.0	---	ND	**3.5**	**2.0**	**4.8**	**21.8**	ND	ND
	07-Nov-12	0.127	1.00	---	---	**7.94**	**2.73**	**6.99**	**29.9**	---	ND
	09-May-13	0.62	1.0	---	ND	**2.8**	**1.9**	**4.2**	**18.6**	---	ND
	07-Nov-13	0.62	1.0	---	---	**6.3**	**2.1**	**6.0**	**21.9**	---	ND
	05-Jun-14	0.62	1.0	---	ND	**7.1**	**5.6**	**8.9**	**21.9**	ND	ND
	20-Nov-14	0.62	1.0	---	---	**5.2**	**2.1**	**5.3**	**16.2**	ND	ND
	27-Apr-15	0.62	1.0	---	---	**5.3**	**2.4**	**7.1**	**21.4**	ND	ND
Xylene (Total)	30-Dec-09	0.3	4.0	---	ND	ND	ND	3.5 J	ND	---	ND
NC 2L = 500 µg/L (1/11/10)	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	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 Collection Date	DL	QL	SW-1		SW-2		SW-3		Blanks	
Inorganic Compounds											
Antimony	30-Dec-09	1.2	6.0	1.5	B	6.4	B	NS		1.4	J
NC 2B = NE µg/L (05/01/07)	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	07-Nov-12	0.094	10.0	0.17	B	0.26	B	0.24	B	1.0	J
NC 2B = 50 µg/L (05/01/07)	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	30-Dec-09	1.1	100	25.1	J	34	J	NS		3.4	J
NC 2B = NE µg/L (05/01/07)	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	30-Dec-09	0.2	1.0	ND		ND		NS		ND	
NC 2B = 2 µg/L (05/01/07)	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 Collection Date	DL	QL	SW-1		SW-2		SW-3		Blanks	
Chromium	30-Dec-09	0.7	10.0	ND		ND		NS		ND	
NC 2B = 50 µg/L (05/01/07)	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	30-Dec-09	0.7	10.0	ND		ND		NS		ND	
NC 2B = NE µg/L (05/01/07)	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	30-Dec-09	2.0	10.0	ND		ND		NS		ND	
NC 2B = 7 µg/L (05/01/07)	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	30-Dec-09	2.0	10.0	ND		ND		NS		ND	
NC 2B = 25 µg/L (05/01/07)	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 Collection Date	DL	QL	SW-1		SW-2		SW-3		Blanks	
Nickel	07-Nov-12	0.26	50.0	0.46	B	0.39	B	0.35	B	0.84	J
NC 2B = 88 µg/L (05/01/07)	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	30-Dec-09	0.4	25.0	2.0	J	0.8	J	NS		ND	
NC 2B = NE µg/L (05/01/07)	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	30-Dec-09	2.7	10.0	6.7	B	ND		NS		4.7	J
NC 2B = 50 µg/L (05/01/07)	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 Collection Date	DL	QL	SW-1		SW-2		SW-3		Blanks	
Organic Compounds											
Acetone	29-Jun-11	2.2	100	2.8	B	3.3	B	4.4	B	5.3	J
NC 2B = NE µg/L (05/01/07)	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	30-Dec-09	0.1	5.0	ND		ND		NS		ND	
NC 2B = NE µg/L (05/01/07)	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 (ug/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 Qualifed
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	Jun-14	1000.0	5000	---	4600	J	148000		147000		160000		186000	
(ug/L)	Nov-14	1000.0	5000	---	---		159000		151000		159000		181000	
	Apr-15	1000.0	5000	---	---		141000		134000		146000		166000	
Sulfate	Jun-14	2000	250000	---	6500	J	ND		ND		ND		ND	
(ug/L)	Nov-14	1000	250000	---	---		1760	J	1730	J	1870	J	1560	J
	Apr-15	1000	250000	---	---		ND		ND		ND		ND	
Nitrogen, Nitrate	Jun-14	20.0	1000	---	72	J	56	J	ND		ND		ND	
(ug/L)	Nov-14	10.0	1000	---	---		45	J	ND		ND		ND	
	Apr-15	10.0	1000	---	---		ND		ND		ND		ND	
Ethene	Jun-14	0.5	10	---	---		ND		ND		ND		ND	
(ug/L)	Nov-14	0.5	10	---	---		ND		ND		ND		ND	
	Apr-15	0.5	10	---	---		ND		ND		ND		4.1	
Methane	Jun-14	3.3	6.6	---	---		5530		254		242		515	
(ug/L)	Nov-14	3.3	6.6	---	---		4980		159		182		186	
	Apr-15	3.3	6.6	---	---		4160		178		188		536	
Chloride	Jun-14	1000	1000	---	2220		11200		25900		16800		15600	
(ug/L)	Nov-14	500	1000	---	---		17100		27900		17300		17100	
	Apr-15	500	1000	---	---		12200		26900		17200		17000	
Total Organic Carbon	Jun-14	1000	1000	---	3100		10600		8300		1500		8200	
(ug/L)	Nov-14	500	1000	---	---		2150		1750		1370		1100	
	Apr-15	500	1000	---	---		1510		1720		1380		1630	
Hydrogen	Jun-14	0.13	0.6	---	---		1.5		1.2		120		3.5	
(nM)	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	Jun-14	2000	2000	---	ND		ND		ND		ND		ND	
(ug/L)	Nov-14	2000	2000	---	---		4900		ND		ND		ND	
	Apr-15	2000	2000	---	---		5670		ND		ND		ND	
Chemical Oxygen Demand	Jun-14	12500	25000	---	ND		ND		ND		ND		ND	
(ug/L)	Nov-14	12500	25000	---	---		ND		ND		431000		ND	
	Apr-15	12500	25000	---	---		ND		ND		ND		ND	
Acetic Acid	Jun-14	890	5000	---	---		ND		ND		ND		ND	
(ug/L)	Nov-14	890	5000	---	---		ND		ND		ND		ND	
	Apr-15	890	5000	---	---		2500	J	ND		1700	J	ND	
Propionic Acid	Jun-14	730	5000	---	---		ND		ND		ND		ND	
(ug/L)	Nov-14	730	5000	---	---		ND		ND		ND		ND	
	Apr-15	730	5000	---	---		750	J	ND		ND		ND	
Total Volatile Fatty Acids	Jun-14	---	---	---	---		ND		ND		ND		ND	
(ug/L)	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	3	0	0
		concentrations			
	> 5 mg/L	Not tolerated; however, vinyl chloride may be oxidized	-3	0	0
		aerobically			
Nitrate	< 1 mg/L	At higher concentrations may compete with reductive	2	2	2
		pathway			
Iron II (Ferrous Iron)	> 1 mg/L	Reductive pathway possible; vinyl chloride may be	3	0	0
		oxidized under Fe (III) - reducing conditions			
Sulfate	< 20 mg/L	At higher concentrations may compete with reductive	2	2	2
		pathway			
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	3	0	0
		accumulates			
Oxidation Reduction	< 50 mV	Reductive pathway possible	1	1	1
Potential	< -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	2	0	0
		be natural or anthropogenic			
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_2 and	1	1	1
		aquifer minerals			
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	2	2	2
		complex compounds; carbon and energy source			
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 trichlorethene	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	0	0	0
		under reducing conditions	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
Based on data collected in April 2015.			**Total Points Awarded :**	**25**	**13**

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

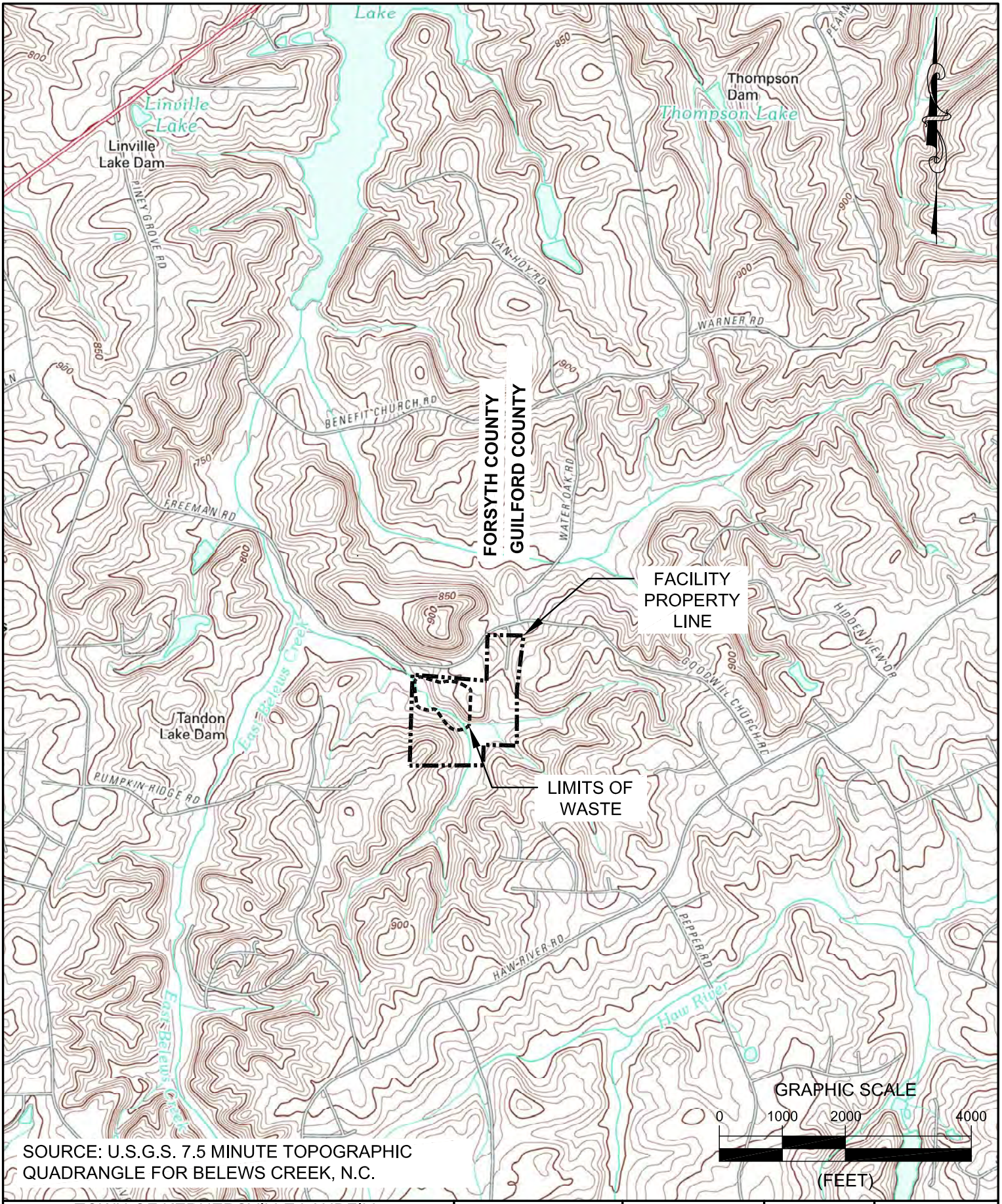
NOTE: Chloroethane, Methane, TCE, DCE, cis-1,2-DCE, MC, VC, DCA, and CO_2 are all present in the plume; however, it is uncertain whether these are primary leachate constituents or daughter products (DPs); therefore, we have two calculation columns. The first column assumes all of these are daughter products, 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 Stated 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	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	SCALE AS SHOWN	PROJECT NO. 838
SITE LOCATION MAP		© 2015 Joyce Engineering, Inc. All rights reserved.	NC CORP LIC: C-0782	FIGURE NO. 1

L:\KERNERSVILLE\, SITE LOCATION MAP.dwg

Drawing

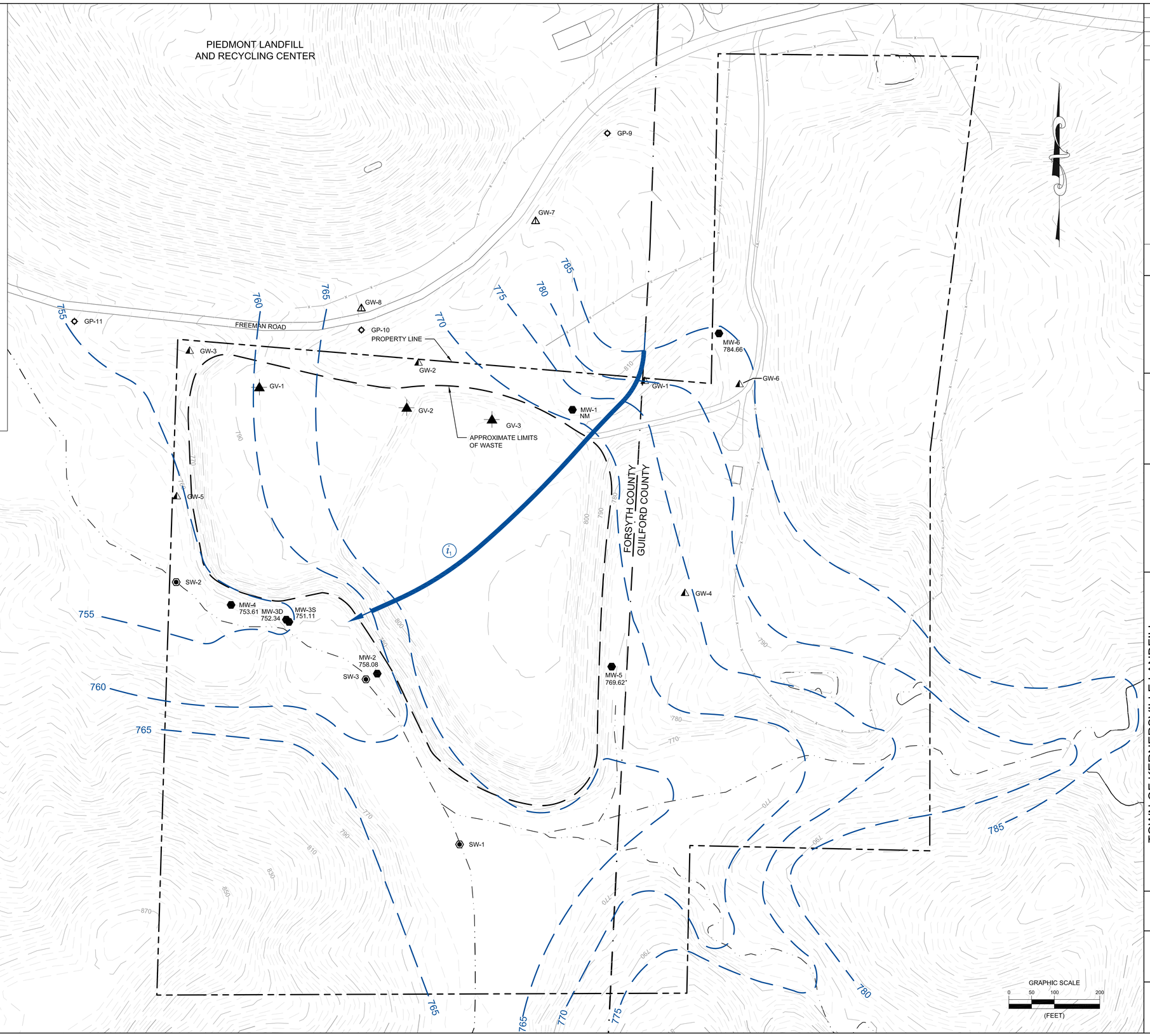
Drawing 1 Potentiometric Surface Contour Map

LEGEND

- 800 — EXISTING 10' TOPOGRAPHIC CONTOUR
- EXISTING 2' TOPOGRAPHIC CONTOUR
- PROPERTY LINE
- EXISTING ROAD
- APPROXIMATE LIMITS OF WASTE
- CENTERLINE OF STREAM
- 770 — GROUNDWATER CONTOUR AND ELEVATION
- SW-1 — APPROXIMATE SURFACE WATER SAMPLING POINT LOCATION AND IDENTIFICATION
- MW-1 771.73 — MONITORING WELL IDENTIFICATION AND WATER LEVEL READING
- GROUNDWATER FLOW DIRECTION WITH GRADIENT CALCULATION SEGMENT
- i_1 — SEGMENT USED FOR GRADIENT CALCULATIONS
- GW- 1 — LANDFILL GAS WELL - TOWN OF KERNERSVILLE
- GV-1 — LANDFILL PASSIVE GAS VENT
- GP- 1 — LANDFILL GAS PROBE - WM PIEDMONT
- NM — NOT MONITORED

SEGMENT FLOW LENGTH

i_1 = 851 LF



NO	BY	CK	APP	REVISIONS AND RECORD OF ISSUE	DATE

DESIGNED HS
DRAWN RWH
CHECKED GVB
APPROVED GVB
DATE 07/20/15

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JOYCE ENGINEERING
2211 W. MEADOWVIEW ROAD
GREENSBORO, NC 27407
PHONE: (336) 323-0092
NC CORP LIC: C-0782

TOWN OF KERNERSVILLE LANDFILL
FORSYTH COUNTY, NORTH CAROLINA

POTENTIOMETRIC SURFACE CONTOUR MAP
APRIL 27, 2015

PROJECT NO.
838

SCALE
AS SHOWN

DRAWING NO.
1

L:\KERNERSVILLE\GW EVENT\GW Surface Contour Map APRIL 2015.dwg Layout=Layout1

Appendix I

Laboratory Analytical Report and Field Data Logs

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

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

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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

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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
92247433001	**3404-FIELD BLANK**					
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	
92247433002	**3404-MW2**					
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	
92247433003	**3404-MW3D**					
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	
92247433004	**3404-MW3S**					
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	
92247433005	**3404-MW4**					
EPA 6010	Barium	94.8J	ug/L	100	05/01/15 00:22	

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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
92247433005	**3404-MW4**					
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	
92247433006	**3404-MW5**					
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	
92247433007	**3404-SW1**					
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	
92247433008	**3404-SW2**					
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	
92247433009	**3404-SW3**					
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	
92247433010	**3404-TRIP BLANK**					
EPA 8260	Acetone	23.1J	ug/L	100	05/07/15 04:05	

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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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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
8260 MSV Low Level Landfill	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	**1.2**	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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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	**268**	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	**7.3J**	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:13	7440-66-6	B
8260 MSV Low Level Landfill	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	**6.4**	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	**0.27J**	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	**4.7**	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	**24.2**	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	**51.8**	ug/L	5.0	0.19	1		05/07/15 01:52	156-59-2	
trans-1,2-Dichloroethene	**1.6J**	ug/L	5.0	0.49	1		05/07/15 01:52	156-60-5	
1,2-Dichloropropane	**4.8**	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		05/07/15 01:52	79-34-5	
Tetrachloroethene	**1.4**	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	**7.1**	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	**5.3**	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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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	**39.0J**	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	**8.0J**	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:16	7440-66-6	B
8260 MSV Low Level Landfill	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	**0.48J**	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	**0.40J**	ug/L	3.0	0.23	1		05/07/15 02:09	108-90-7	
Chloroethane	**0.65J**	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	**4.2**	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	**4.3J**	ug/L	5.0	0.32	1		05/07/15 02:09	75-34-3	
1,2-Dichloroethane	**1.2**	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	**65.3**	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	**1.6**	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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	**104**	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	**2.7J**	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	**11.5**	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:19	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**14.8J**	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	**0.38J**	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	**1.0J**	ug/L	3.0	0.23	1		05/07/15 02:25	108-90-7	
Chloroethane	**0.95J**	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	**2.1**	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	**1.4J**	ug/L	5.0	0.32	1		05/07/15 02:25	75-34-3	
1,2-Dichloroethane	**0.56J**	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	**9.7**	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	**0.59J**	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	**2.4**	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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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	**94.8J**	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	**7.2J**	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	**3.5J**	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	**3.4J**	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	**8.9J**	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:22	7440-62-2	
Zinc	**14.1**	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:22	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**21.3J**	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	**0.45J**	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	**0.57J**	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	**2.7**	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	**2.4J**	ug/L	5.0	0.32	1		05/07/15 02:42	75-34-3	
1,2-Dichloroethane	**0.15J**	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	**24.0**	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	**0.57J**	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	**21.4**	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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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	**67.4J**	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	**10.7**	ug/L	10.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-48-4	
Copper	**3.6J**	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	**5.6J**	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:25	7440-62-2	
Zinc	**10.3**	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:25	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**14.1J**	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	
1,1,2,2-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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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	**28.9J**	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	**3.5J**	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	**8.9J**	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:28	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**12.4J**	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	
1,1,2,2-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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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	**33.7J**	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	**7.2J**	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	**2.8J**	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:31	7440-62-2	
Zinc	**10.5**	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:31	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**10.6J**	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	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	**36.0J**	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	**3.8J**	ug/L	25.0	2.5	1	04/30/15 09:40	05/01/15 00:43	7440-62-2	
Zinc	**9.3J**	ug/L	10.0	5.0	1	04/30/15 09:40	05/01/15 00:43	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**13.8J**	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	**0.39J**	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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	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	
Surrogates									
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 Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**23.1J**	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
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Xylene (Total)	ND	ug/L	5.0	0.66	1		05/07/15 04:05	1330-20-7	
Surrogates									
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

QC Batch: MPRP/18377 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92247433001, 92247433002, 92247433003, 92247433004, 92247433005, 92247433006, 92247433007, 92247433008, 92247433009

METHOD BLANK: 1446614 | Matrix: Water
Associated Lab Samples: 92247433001, 92247433002, 92247433003, 92247433004, 92247433005, 92247433006, 92247433007, 92247433008, 92247433009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	04/30/15 23:24	
Arsenic	ug/L	ND	10.0	04/30/15 23:24	
Barium	ug/L	ND	100	04/30/15 23:24	
Beryllium	ug/L	ND	1.0	04/30/15 23:24	
Cadmium	ug/L	ND	1.0	04/30/15 23:24	
Chromium	ug/L	ND	10.0	04/30/15 23:24	
Cobalt	ug/L	ND	10.0	04/30/15 23:24	
Copper	ug/L	ND	10.0	04/30/15 23:24	
Lead	ug/L	ND	10.0	04/30/15 23:24	
Nickel	ug/L	ND	50.0	04/30/15 23:24	
Selenium	ug/L	ND	10.0	04/30/15 23:24	
Silver	ug/L	ND	10.0	04/30/15 23:24	
Thallium	ug/L	ND	5.5	04/30/15 23:24	
Vanadium	ug/L	ND	25.0	04/30/15 23:24	
Zinc	ug/L	5.2J	10.0	04/30/15 23:24	

LABORATORY CONTROL SAMPLE: 1446615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	484	97	80-120	
Arsenic	ug/L	500	464	93	80-120	
Barium	ug/L	500	478	96	80-120	
Beryllium	ug/L	500	478	96	80-120	
Cadmium	ug/L	500	480	96	80-120	
Chromium	ug/L	500	477	95	80-120	
Cobalt	ug/L	500	469	94	80-120	
Copper	ug/L	500	478	96	80-120	
Lead	ug/L	500	466	93	80-120	
Nickel	ug/L	500	468	94	80-120	
Selenium	ug/L	500	469	94	80-120	
Silver	ug/L	250	238	95	80-120	
Thallium	ug/L	500	467	93	80-120	
Vanadium	ug/L	500	476	95	80-120	
Zinc	ug/L	500	467	93	80-120	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92247433

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446616 1446617

Parameter	Units	92247382014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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	

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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	

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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	

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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(704)875-9092

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.

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QUALIFIERS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92247433

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.

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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		

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Pace Analytical	Document Number: F-CHR-CS-003-rev.15	Issuing Authority: Pace Huntersville Quality Office

ent Name: Joyce Engineering

er: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other_____

[redacted]

dy Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

ing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

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

Correction Factor T1401 No Correction

cted Cooler Temp.: 3.4 °C Biological Tissue is Frozen: Yes No N/A

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

should be above freezing to 6°C

		Comments:
of Custody Present:	☑Yes ☐No ☐N/A	1.
of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
ler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
les Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
t Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
cient Volume:	☑Yes ☐No ☐N/A	8.
ect Containers Used:	☑Yes ☐No ☐N/A	9.
Pace Containers Used:	☑Yes ☐No ☐N/A	
ainers Intact:	☑Yes ☐No ☐N/A	10.
red volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
ple Labels match COC:	☑Yes ☐No ☐N/A	12.
Includes date/time/ID/Analysis Matrix:_____		
ntainers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
ontainers needing preservation are found to be in pliance with EPA recommendation.	☑Yes ☐No ☐N/A	
ptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
nples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
adspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Blank Present:	☑Yes ☐No ☐N/A	16.
Blank Custody Seals Present	☑Yes ☐No ☐N/A	
ce Trip Blank Lot # (if purchased):_____		

Field Data Required? Y / N

ent Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

omments/ Resolution: _____

CURF Review: JY Date: 4/29/15

SRF Review: JY Date: 4/29/15

lote: 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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:

Company:	Joyce Engineering
Address:	2211 West Meadowview Road
	Suite 101, Greensboro, NC 27407
Email:	
Phone:	Fax:
Requested Due Date:	

Section B Required Project Information:

Report To:	Girdner, Dan
Copy To:	Alex Everhart
Purchase Order #:	
Project Name:	Town of Kernersville
Project #:	

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	kevin.godwin@pacelabs.com,
Pace Profile #:	12186-19

Regulatory Agency

State / Location

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): Trip BLANK	DI Water	APP 1 8260	App 1 6010	Residual Chlorine (Y/N)	92247433
1	3404-Field Blank	WT				4/27/15	1700		4											X	X		001
2	3404-MW2	WT				4/27/15	1000		4											X	X		002
3	3404-MW3D	WT				"	1315		4											X	X		003
4	3404-MW3S	WT					1415		4											X	X		004
5	3404-MW4	WT					1545		4											X	X		005
6	3404-MW5	WT					1655		4											X	X		006
~~7~~	~~3404-MW6~~	~~WT~~																		~~X~~	~~X~~		DRY, No Samples
8	3404-SW1	WT					1050		4											X	X		007
9	3404-SW2	WT					1022		4											X	X		008
10	3404-SW3	WT				↓	1625		4											X	X		009
11	3404-Trip Blank	WT				4/27/15	0800		2									X					010
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Jay Elliott / Joyce	4/28/15	1207	[illegible]	4/28/15	1207				
	[illegible] / PACE	4-28-15	1635	Pam Phillips	4.28.15	1635	3.4	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel Girdner Haley Seaton

SIGNATURE of SAMPLER: Daniel Girdner Haley Seaton

DATE Signed: 4/27/15

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

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

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

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CERTIFICATIONS

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

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

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 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

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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-Cl-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-Cl-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-Cl-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-Cl-E	SER	1	PASI-A
		SM 5220D	MAB	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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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
92247296001	**3040-MW2**					
RSK 175	Methane	4160	ug/L	10.0	05/01/15 22:17	
SM 2320B	Alkalinity, Total as CaCO3	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	
92247296002	**3040-MW3S**					
RSK 175	Methane	178	ug/L	10.0	05/01/15 22:25	
SM 2320B	Alkalinity, Total as CaCO3	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	
92247296003	**3040-MW3D**					
RSK 175	Methane	188	ug/L	10.0	05/02/15 23:32	
SM 2320B	Alkalinity, Total as CaCO3	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	
92247296004	**3040-MW4**					
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 CaCO3	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	

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(704)875-9092

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
RSK 175 AIR Headspace	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	**4160**	ug/L	10.0	0.63	1		05/01/15 22:17	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**141000**	ug/L	5000	1000	1		05/07/15 18:29		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		04/30/15 15:45	18496-25-8	M1
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**5670**	ug/L	2000	2000	1	04/28/15 16:05	05/03/15 12:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1590J**	ug/L	250000	1000	1		05/01/15 02:22	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.062J**	mg/L	10.0	0.010	1		04/29/15 07:26		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**12200**	ug/L	1000	500	1		04/30/15 01:10	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		05/04/15 09:35		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1510**	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
RSK 175 AIR Headspace	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	**178**	ug/L	10.0	0.63	1		05/01/15 22:25	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**134000**	ug/L	5000	1000	1		05/07/15 18:42		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		04/30/15 15:45	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	04/28/15 16:05	05/03/15 12:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1360J**	ug/L	250000	1000	1		05/01/15 02:36	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	10.0	0.010	1		04/29/15 07:41		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**26900**	ug/L	1000	500	1		04/30/15 01:11	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**13000J**	ug/L	25000	12500	1		05/04/15 09:35		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1720**	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
RSK 175 AIR Headspace	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	**188**	ug/L	10.0	0.63	1		05/02/15 23:32	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**146000**	ug/L	5000	1000	1		05/07/15 18:55		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		04/30/15 15:45	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	04/28/15 16:05	05/03/15 12:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1850J**	ug/L	250000	1000	1		05/01/15 02:49	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	10.0	0.010	1		04/29/15 07:39		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**17200**	ug/L	1000	500	1		04/30/15 01:12	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		05/04/15 09:35		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1380**	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
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Ethane	ND	ug/L	10.0	5.0	1		05/02/15 23:40	74-84-0	
Ethene	**4.1J**	ug/L	10.0	0.47	1		05/02/15 23:40	74-85-1	
Methane	**536**	ug/L	10.0	0.63	1		05/02/15 23:40	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**166000**	ug/L	5000	1000	1		05/07/15 19:07		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		04/30/15 15:45	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	04/28/15 16:05	05/03/15 12:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1610J**	ug/L	250000	1000	1		05/01/15 03:30	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	10.0	0.010	1		04/29/15 07:44		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**17000**	ug/L	1000	500	1		04/30/15 01:13	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		05/04/15 09:35		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1630**	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 1952964

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
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 Result	Dup Result	RPD	Max RPD	Qualifiers
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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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

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

QC Batch: AIR/23143 | Analysis Method: RSK 175
QC Batch Method: RSK 175 | Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 92247296003, 92247296004

METHOD BLANK: 1952967 | Matrix: Water
Associated Lab Samples: 92247296003, 92247296004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	10.0	05/01/15 22:41	
Ethene	ug/L	ND	10.0	05/01/15 22:41	
Methane	ug/L	1.5J	10.0	05/01/15 22:41	

LABORATORY CONTROL SAMPLE & LCSD: 1952968 1952969

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	114	117	100	103	85-115	3	20	
Ethene	ug/L	106	106	109	100	103	85-115	3	20	
Methane	ug/L	60.7	60.8	62.4	100	103	85-115	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 CaCO3	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 CaCO3	ug/L	50000	46200	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1452571 1452572

Parameter	Units	92248145009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	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 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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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REPORT OF LABORATORY ANALYSIS

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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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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	92247296001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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 Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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.

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Huntersville, NC 28078
(704)875-9092

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

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REPORT OF LABORATORY ANALYSIS

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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.

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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-Cl-E	WETA/22741		
92247296002	**3040-MW3S**	SM 4500-Cl-E	WETA/22741		
92247296003	**3040-MW3D**	SM 4500-Cl-E	WETA/22741		
92247296004	**3040-MW4**	SM 4500-Cl-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		

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Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: June 10, 2014 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.14	Issuing Authorities: Pace Asheville Quality Office

Client Name: Sojo

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: RDB 4/28/15

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

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JJ Date: 4/28/15

SRF Review: JJ Date: 4/29/15

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

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company: Joyce Engineering
Address: 2211 West Meadowview Rd
Greensboro, NC 27407
Email To: aeverhart@joyceengineering.com
Phone: (336) 323-0092 Fax:
Requested Due Date/TAT: 10 Day (Default)

Section B
Required Project Information:

Report To: Alex Everhart
Copy To:
Purchase Order No.
Client Project ID: Town of Kernersville MNA
Container Order Number:

Section C
Invoice Information:

Attention: Lecia Jones
Company Name: Joyce Engineering
Address: 1604 Ownby Lane, Richmond, VA 23220

Regulatory Agency:
State / Location: North Carolina

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	Nitrate	Sulfate	Chloride	Sulfide	Alkalinity	TOC	Methane, Ethane, Ethene	Volatile Fatty Acids	Dissolved Hydrogen	BOD	COD	Residual Chlorine (Y/N)	92247296
1	3404-MW2	WT	G			4/27/15	1000		15										X	X	X	X	X	X	X	X	X	X	X		001
2	3404-MW3S	WT	G			4/27/15	1415		15										X	X	X	X	X	X	X	X	X	X	X		002
3	3404-MW3D	WT	G			"	1315		15										X	X	X	X	X	X	X	X	X	X	X		003
4	3404-MW4	WT	G			↓	1545		15										X	X	X	X	X	X	X	X	X	X	X		004
~~5~~	~~3404-MW6~~	WT	G																X	X	X	X	X	X	X	X	X	X	X		DRY, No Samples
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Daniel Girdner/JOYCE	4/27/15	1830	Bill Daisy Thatcher	4/28/15	11:00	2.3	Y	N	Y
							3.0			

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Daniel Girdner, Haley Seaton
SIGNATURE of SAMPLER: Daniel Girdner, Haley Seaton
DATE Signed: 4/27/15

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

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

May 12, 2015

Kevin Godwin
Pace Analytical Services, Inc.
9800 Kincey 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.

Total Number of Pages 18

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LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	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
EDonors - MICR								
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
RISK - MICR								
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
EDonors - MICR								
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 / Kemersville 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
RISK - MICR								
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
EDonors - MICR								
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
RISK - MICR								
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
EDonors - MICR								
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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Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

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
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	4.4	nM	0.60	0.13	1	5/9/2015 05:37	TD	n

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 15357 92247296 / Kernersville MNA

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 Quanitation 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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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

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

Pace Analytical®
www.pacelabs.com

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@pacelabs.com

Subcontract To

Microseeps

P.O. KRG 14500

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	VFA AMZ16	Hydrogen AMZ06AX	LAB USE ONLY
1	3040-MW2	4/27/2015 10:00	92247296001	Water	3	X	X	
2	3040-MW3S	4/27/2015 14:15	92247296002	Water	3	X	X	
3	3040-MW3D	4/27/2015 13:15	92247296003	Water	3	X	X	
4	3040-MW4	4/27/2015 15:45	92247296004	Water	3	X	X	
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	4/29/15 17:00	[illegible] PACE	4.30.15
2				1115
3				

Comments

* report data in ug/L
* please report MDL & J-Flag

Cooler Temperature on Receipt 4 °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.*

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: 4°C 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

JOYCE ENGINEERING

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: [illegible] **Date:** 5/28/15

DATE: 4/27/15

JOYCE ENGINEERING

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: [illegible] **Date:** 5/28/15

DATE: 4/27/15

JOYCE ENGINEERING

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: [illegible] **Date:** 5/28/15

DATE: 4/27/15

JOYCE ENGINEERING

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: [illegible] **Date:** 5/28/15

DATE: 4/27/15

JOYCE ENGINEERING

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: [illegible] **Date:** 5/28/15

DATE: 4/27/15

JOYCE ENGINEERING

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 **Date:** 4/27/15

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

DATE: 4/27/15

JOYCE ENGINEERING

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.

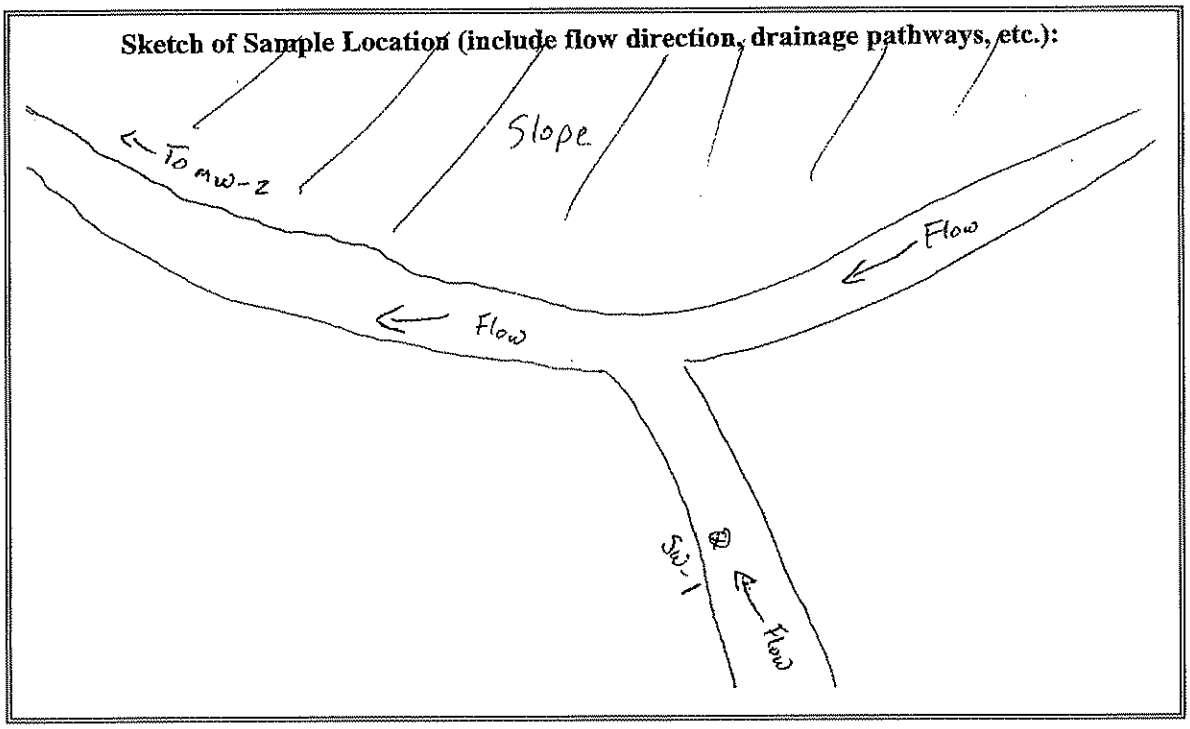
Field Parameters:

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

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

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

Sketch of Sample Location (include flow direction, drainage pathways, etc.):



Signature: Haley Seaton **Date:** 4/27/15

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

DATE: 4/27/15

JOYCE ENGINEERING

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.

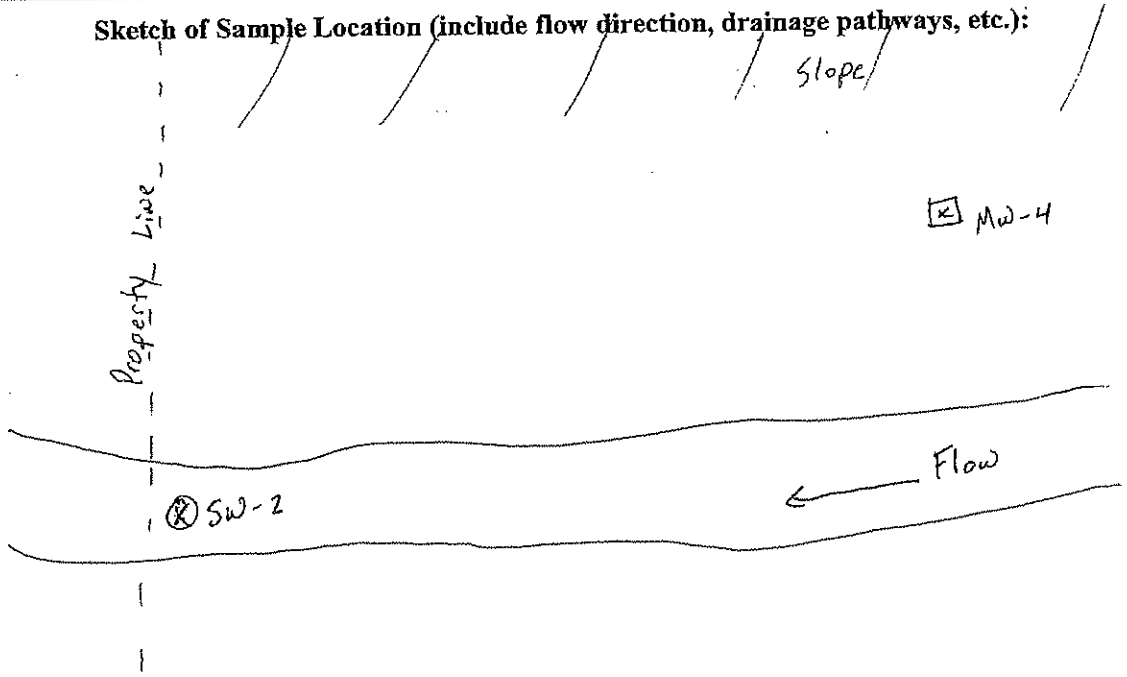
Field Parameters:

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.

Sketch of Sample Location (include flow direction, drainage pathways, etc.):



Signature: Haley Seaton **Date:** 4/27/15

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

DATE: 4/27/15

JOYCE ENGINEERING

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

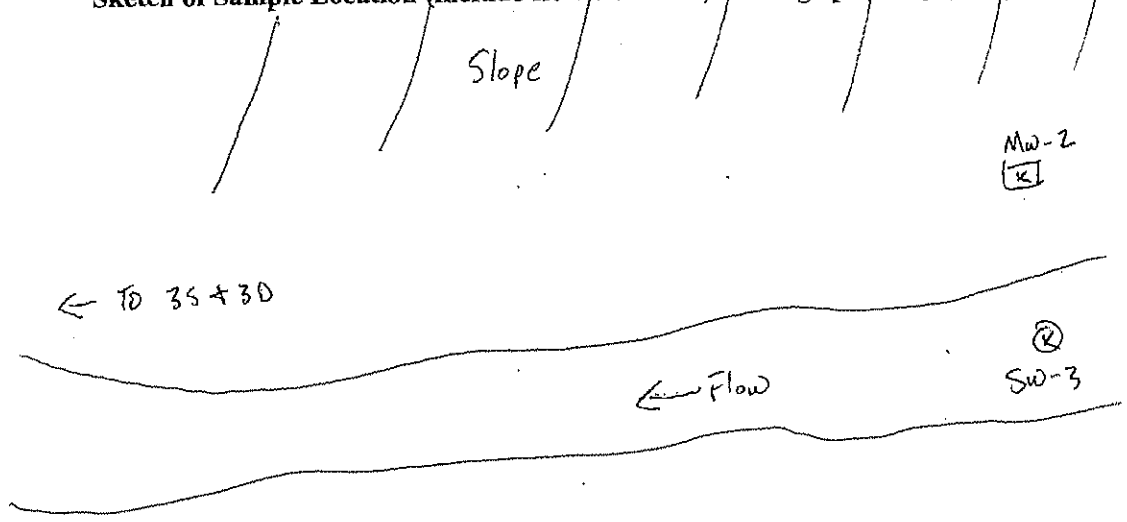
Field Parameters:

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

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

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

Sketch of Sample Location (include flow direction, drainage pathways, etc.):



Signature: Haley Seaton **Date:** 4/27/15

QA/QC Sign Off: [illegible] **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 = Micorgrams per liter
SWSL = NC Soild 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	ºC	4/27/2015
MW-2	Conductivity	252.1	µS	4/27/2015
MW-2	Turbididty	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	ºC	4/27/2015
MW-3S	Conductivity	288.5	µS	4/27/2015
MW-3S	Turbididty	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	ºC	4/27/2015
MW-3D	Conductivity	289.7	µS	4/27/2015
MW-3D	Turbididty	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	ºC	4/27/2015
MW-4	Conductivity	292.2	µS	4/27/2015
MW-4	Turbididty	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	ºC	4/27/2015
MW-5	Conductivity	73	µS	4/27/2015
MW-5	Turbididty	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	ºC	4/27/2015
SW-1	Conductivity	124	µS	4/27/2015
SW-1	Turbididty	4.2	NTU	4/27/2015
SW-2	pH	6.92	S.U.	4/27/2015
SW-2	Temperature	11	ºC	4/27/2015
SW-2	Conductivity	115	µS	4/27/2015
SW-2	Turbididty	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	ºC	4/27/2015
SW-3	Conductivity	119	µS	4/27/2015
SW-3	Turbididty	6	NTU	4/27/2015

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