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	November 19, 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 | FEB. 12 2016

Signature | Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1650 GEOLOGIST HANNU 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

JOYCE ENGINEERING

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February 12, 2016

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: Second Semiannual Water Quality Monitoring Report of 2015
Town of Kernersville Landfill, Permit No. 34-04
Forsyth County, North Carolina
JOYCE Project No. 00838.1601.12 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 November 2015 sampling event. Also attached is the North Carolina Environmental Monitoring Reporting Form for the November 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

SECOND SEMIANNUAL WATER QUALITY MONITORING REPORT OF 2015

JANUARY 2016

PREPARED BY:

JOYCE ENGINEERING

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GREENSBORO, NORTH CAROLINA 27407
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PHONE: (336) 323-0092
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JOYCE PROJECT NO. 838.1601.12

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

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Second 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 November 19, 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 63.26 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 SECOND 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 November 19, 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 November 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 November 20, 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 November 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 November 2015 Field Blank was analyzed for the NCSWMR Appendix I constituents while the November 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 November 2015 sampling event were received December 22, 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 November 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	294	108	42.2 J	101	60.3 J	ND
Thallium	0.28	Dry	ND	ND	**8.8**	**8.8**	ND	ND
Zinc	1,000	Dry	ND	23.1	7.3 J	10.7	16.3	ND
Benzene	1	Dry	**6.0**	ND	0.37 J	ND	ND	ND
1,4-Dichlorobenzene	6	Dry	4.8	1.4	3.5	2.5	ND	ND
1,1-Dichloroethane	6	Dry	**20.7**	0.82 J	3.1 J	1.8 J	ND	ND
1,2 Dichloroethane	0.4	Dry	0.86 J	0.40 J	**1.1**	ND	ND	ND
Cis-1,2-Dichloroethylene	70	Dry	44.4	5.6	51.2	18.8	ND	ND
1,2-Dichloropropane	0.6	Dry	**4.3**	ND	**1.1**	ND	ND	ND
Trichloroethylene	3	Dry	**4.7**	ND	ND	ND	ND	ND
Vinyl Chloride	0.03	Dry	**7.7**	**2.0**	**6.7**	**17.3**	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-3; however, it was below the NC 2B. There were no other constituent s detected at quantified concentrations or above the NC 2B standards in the surface waters during the November 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 November 2015 sampling event. The November 2015 sampling event will be the fourth and final baseline sampling event for MNA. During the November 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 November 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 November 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
21	11

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 November 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 May 2016.

7.0 REFERENCES

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

Fetter, C.W., 2001, *Applied Hydrogeology*, Fourth Edition: Prentice-Hall, Inc..

Johnson, A.I., 1967, *Specific Yield - Compilation of Specific Yields For Various Materials:* U.S. Geological Survey Water Supply Paper 1662-D.

Joyce Engineering, Inc. 2010. *Water Quality Monitoring Plan, Piedmont Landfill & Recycling Center*. September 2010.

North Carolina Department of Environment and Natural Resources, 1990-2012, *Solid Waste Management Regulations*.

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

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

Tables

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Table 5	Summary of MNA Constituents
Table 6	MNA Screening Matrix

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
19-Nov-15	-	784.62	757.18	747.60	750.53	750.66	768.69

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:		November 19, 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	805	SW	785	0.0311	1.73E+00	0.31	63.26
			760				
			Average	0.0311		Average	63.26

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
	19-Nov-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
	19-Nov-15	2.5	10.0	---	---	ND	ND	ND	2.7 J	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
	19-Nov-15	2.5	100	---	---	294	108	42.2 J	101	60.3 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
	19-Nov-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
	19-Nov-15	0.5	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
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
	19-Nov-15	2.5	10.0	---	---	ND	ND	ND	3.0 J	ND	ND
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
	19-Nov-15	2.5	10.0	---	---	ND	3.9 J	ND	ND	3.5 J	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
	19-Nov-15	2.5	10.0	---	---	ND	ND	ND	2.6 J	5.1 J	ND
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
	19-Nov-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
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
	19-Nov-15	2.5	50.0	---	---	ND	ND	ND	2.6 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
	19-Nov-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
	19-Nov-15	2.5	10.0	---	---	ND	ND	ND	ND	ND	ND
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
	19-Nov-15	5.0	5.5	---	---	ND	ND	**8.8**	**8.8**	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
	19-Nov-15	2.5	25.0	---	---	3.1 J	4.3 J	ND	6.5 J	3.9 J	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
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
	19-Nov-15	5.0	10.0	---	---	ND	23.1	7.3 J	10.7	16.3	ND
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
	19-Nov-15	10.0	100	---	---	ND	ND	ND	ND	ND	ND
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
	19-Nov-15	0.25	1.0	---	---	**6.0**	ND	0.37 J	ND	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
	19-Nov-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
	19-Nov-15	0.23	3.0	---	---	0.31 J	0.81 J	0.33 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
	19-Nov-15	0.54	10.0	---	---	ND	ND	ND	ND	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
	19-Nov-15	0.33	1.0	---	---	4.8	1.4	3.5	2.5	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
	19-Nov-15	0.32	5.0	---	---	**20.7**	0.82 J	3.1 J	1.8 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
	19-Nov-15	0.24	1.0	---	---	0.86 J	0.40 J	**1.1**	ND	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
	19-Nov-15	0.56	5.0	---	---	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
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
	19-Nov-15	0.19	5.0	---	---	44.4	5.6	51.2	18.8	ND	ND
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
	19-Nov-15	0.49	5.0	---	---	1.5 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
	19-Nov-15	0.27	1.0	---	---	**4.3**	ND	**1.1**	ND	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
	19-Nov-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
	19-Nov-15	0.46	1.0	---	---	0.90 J	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
	19-Nov-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
	19-Nov-15	0.47	1.0	---	---	**4.7**	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
	19-Nov-15	0.20	1.0	---	---	0.41 J	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
	19-Nov-15	0.62	1.0	---	---	**7.7**	**2.0**	**6.7**	**17.3**	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
	19-Nov-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	
	19-Nov-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	
	19-Nov-15	2.5	10.0	3.0	J	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	
	19-Nov-15	2.5	100	45.8	J	44.1	J	43.6	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	
	19-Nov-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	
	19-Nov-15	2.5	10.0	6.3	J	8.6	J	5.7	J	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	
	19-Nov-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
	19-Nov-15	2.5	10.0	5.2	J	6.5	J	5.9	J	ND	

TABLE 4

SUMMARY OF HISTORICAL SURFACE WATER CONSTITUENTS

Analyte	Sample Collection Date	DL	QL	SW-1		SW-2		SW-3		Blanks	
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	
	19-Nov-15	2.5	10.0	4.7	J	2.6	J	5.0	J	ND	
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	
	19-Nov-15	2.5	50.0	ND		3.0	J	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	
	19-Nov-15	2.5	25.0	13.9	J	18.8	J	14.4	J	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
	19-Nov-15	5.0	10.0	7.5	J	9.2	J	10.1		ND	

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
	19-Nov-15	10.0	100	ND		ND		ND		ND	
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	
	19-Nov-15	0.19	5.0	ND		ND		ND		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
	Nov-15	1000.0	5000	---	---	158000	147000	158000	185000
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
	Nov-15	1000	250000	---	---	1190 J	1360 J	1520 J	1240 J
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
	Nov-15	10.0	1000	---	---	69.4	15.8	13.1	19.1
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
	Nov-15	0.5	10	---	---	ND	ND	ND	ND
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
	Nov-15	3.3	6	---	---	6010	220	160	2.6 J
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
	Nov-15	500	1000	---	---	16300	27800	17400	16900
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
	Nov-15	500	1000	---	---	889 J	1210	ND	1900
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
	Nov-15	0.13	0.6	---	---	1.9	1.4	7.4	1.4
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
	Nov-15	2000	2000	---	---	5000	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
	Nov-15	12500	25000	---	---	ND	ND	ND	16000 J
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
	Nov-15	160	200	---	---	ND	ND	ND	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
	Nov-15	65	100	---	---	ND	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
	Nov-15	---	---	---	---	ND	ND	ND	ND

TABLE 5

SUMMARY OF MNA CONSTITUENTS

Analyte	Sample Collection Date	DL	QL	MW-1	MW-6	MW-2	MW-3S	MW-3D	MW-4
Ferrious Iron	Jun-14	---	---	---	---	---	0.00	0.00	0.90
(mg/L)	Nov-14	---	---	---	---	0.50	0.00	0.00	0.50
	Apr-15	---	---	---	---	0.50	0.20	0.00	0.70
	Nov-15	---	---	---	---	0.50	0.00	0.00	0.50
Oxidation Reduction Potential	Jun-14	---	---	---	---	92.6	65.7	15.4	38.3
(mV)	Nov-14	---	---	---	---	53.2	18.1	65.7	59.1
	Apr-15	---	---	---	---	55.9	31.3	43.9	41.5
	Nov-15	---	---	---	---	100.3	57.6	29.4	34.5
pH	Jun-14	---	---	---	---	5.56	6.62	6.05	6.41
(S.U.)	Nov-14	---	---	---	---	6.26	6.37	6.34	6.42
	Apr-15	---	---	---	---	6.12	6.35	6.29	6.46
	Nov-15	---	---	---	---	6.03	6.15	6.06	6.45
Dissovled Carbon Dioxide	Jun-14	---	---	---	---	---	55	80	115
(mg/L)	Nov-14	---	---	---	---	65	45	90	35
	Apr-15	---	---	---	---	55	50	85	80
	Nov-15	---	---	---	---	125	115	90	70

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	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	0	0
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	0	0
		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	0	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 November 2015.			**Total Points Awarded :**	**21**	**11**

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

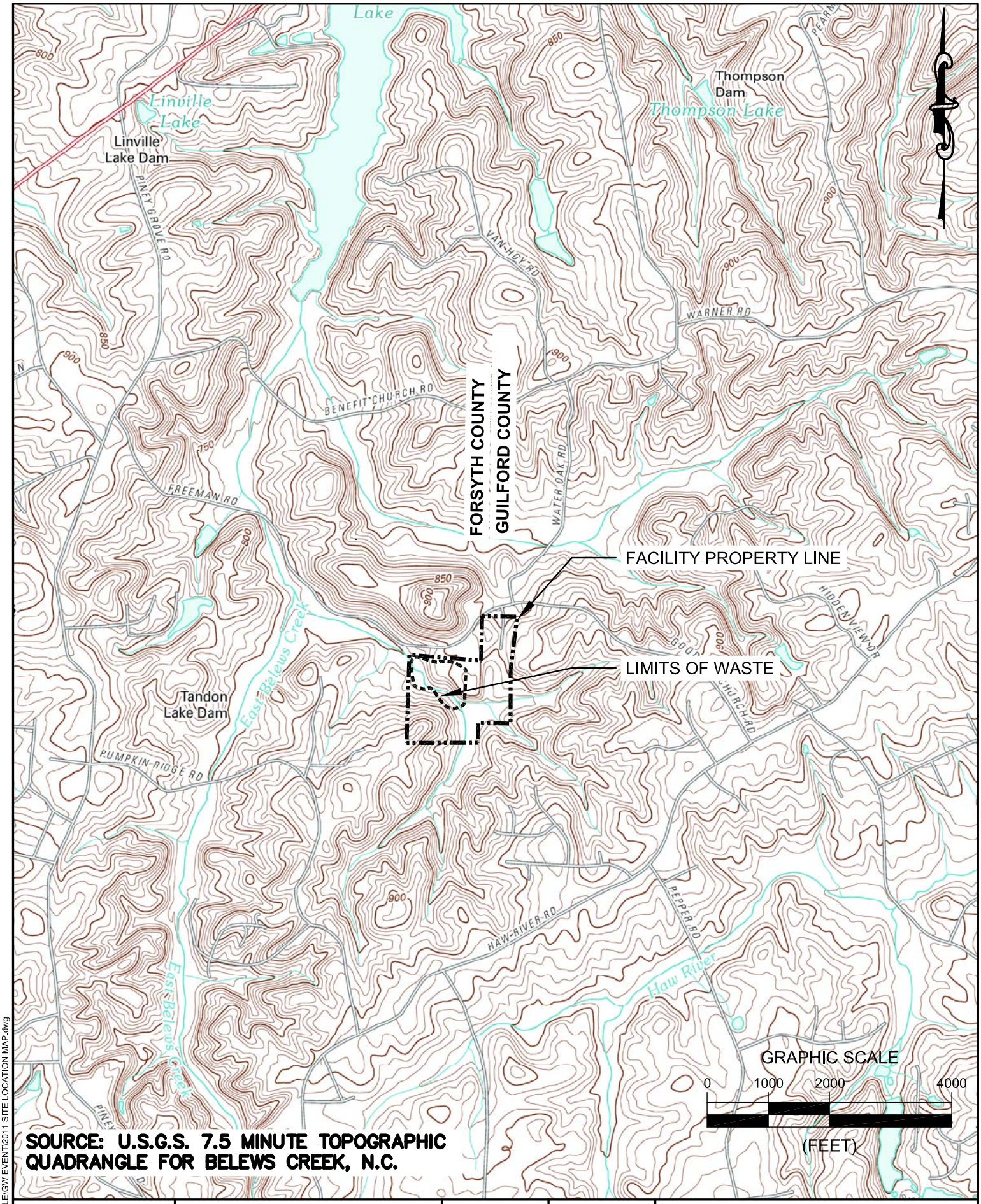
NOTE: Chloroethane, Methane, TCE, DCE, cis-1,2-DCE, MC, VC, DCA, and CO_2 are all present in the plume; however, it is uncertain whether these are primary leachate constituents or daughter products (DPs); therefore, we have two calculation columns. The first column assumes all of these are daughter products, and the second column assumes none of them are. The true score is probably between the two.

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.

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

Figure

Figure 1 Site Location Map



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

FIGURE NO. 1	JOYCE ENGINEERING 2211 WEST MEADOWVIEW ROAD GREENSBORO, N.C. 27407 PHONE: (336) 323-0092 © 2016 Joyce Engineering All rights reserved.	SCALE 1"=2000'	PROJECT NO. 838.1101.12	TOWN OF KERNERSVILLE LANDFILL FORSYTH COUNTY, NORTH CAROLINA SITE LOCATION MAP

L:\KERNERSVILLE\GW EVENT\2011 SITE LOCATION MAP.dwg

Drawing

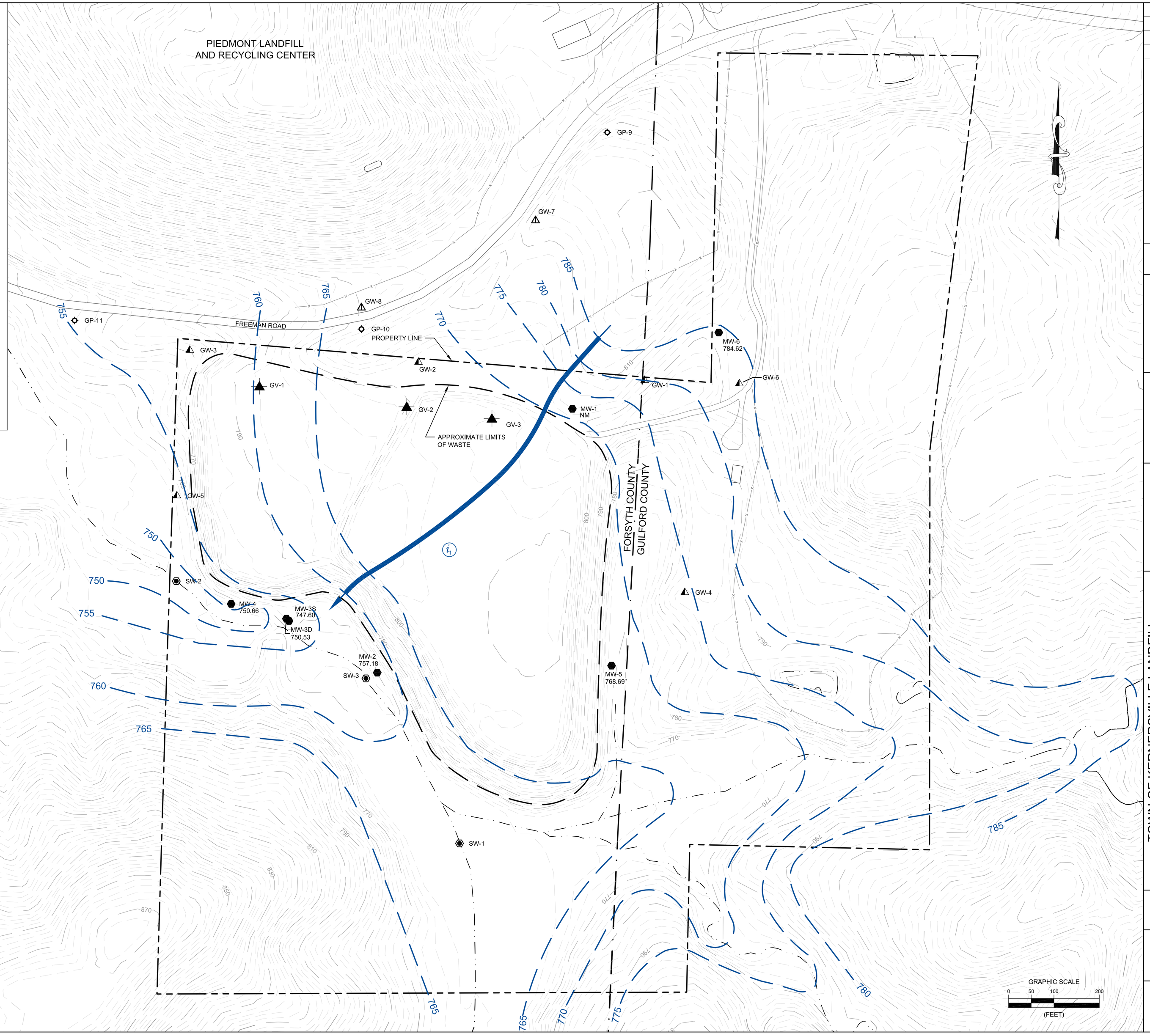
Drawing 1 Potentiometric Surface Contour Map

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-6 784.62	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 = 805 LF



NO	BY	CK	APP	DATE	REVISIONS AND RECORD OF ISSUE

DESIGNED HS
DRAWN RWH
CHECKED GVB
APPROVED GVB
DATE 01/12/16

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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
NOVEMBER 19, 2015

PROJECT NO.
838

SCALE
AS SHOWN

DRAWING NO.
1

L:\KERNERSVILLE\GW EVENT\GW Surface Contour Map NOVEMBER 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

December 22, 2015

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

RE: Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277051

Dear Mr. Everhart:
Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 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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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

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

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

SAMPLE SUMMARY

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277051

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92277051001	**3404-MW2**	Water	11/19/15 13:14	11/20/15 09:00
92277051002	**3404-MW3S**	Water	11/19/15 10:27	11/20/15 09:00
92277051003	**3404-MW3D**	Water	11/19/15 11:08	11/20/15 09:00
92277051004	**3404-MW4**	Water	11/19/15 12:05	11/20/15 09:00

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: November 17, 2015 Page 1 of 2*
	Document Number: **F-CHR-CS-003-rev.16.1**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Joyce Engineering

* Page 2 of 2 is for Internal Use Only

Courier: ☐ Fed Ex ☐ UPS ☐ USP ☐ Client ☐ Commercial ☐ Pace Other_____

Optional
Proj. Due Date:
Proj. Name:

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

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

Thermometer Used: IR Gun T1505 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor No Correction

Corrected Cooler Temp.: 2.6 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/20/15

		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.
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: Air		
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: [signature] Date: 11/20/15

SRF Review: [signature] Date: 11/21/15

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#: 92277051

92277051

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 838.1601.12
Container Order Number:

Section C — Invoice Information:

Attention: Lecia Jones
Company Name: Joyce Engineering
Address: 1604 Ownby Lane, Richmond, VA 23220
2186-19

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): NC Appendix I Metals	NC Appendix I VOC 8260's	Diss H2	Residual Chlorine (Y/N)	92277051
1	3404-MW2	WT	G			11/19/15	1314		1	X								X	X	X		001
2	3404-MW3S	WT	G				1027		1	X								X	X	X		002
3	3404-MW3D	WT	G				1108		1	X								X	X	X		003
4	3404-MW4	WT	G				1205		1	X								X	X	X		004
5	~~3404-MW5~~	WT	G															X	X			
6	~~3404-MW6~~	WT	G															X	X			
7	~~3404-SW1~~	WT	G															X	X			
8	~~3404-SW2~~	WT	G															X	X			
9	~~3404-SW3~~	WT	G															X	X			
10	~~Field Blank~~	WT	G															X	X			
11	~~Trip Blank~~	WT	G																X			
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Sexton / Joyce	11/19/15	1530	Adrian Clifton / Pace	11/20/15	9:00am	2.6	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Sexton for Kathy Eller

SIGNATURE of SAMPLER: [signature] DATE Signed:

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

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

December 3, 2015

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

RE: **92277051**
Pace Workorder: 17466

Dear Kevin Godwin:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, November 24, 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,

Ruth Welsh 12/03/2015 TM
Ruth.Welsh@pacelabs.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 12

CERTIFICATE OF ANALYSIS

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

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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Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 17466 92277051

Lab ID	Sample ID	Matrix	Date Collected	Date Received
174660001	3404-MW2	Bubble Strip	11/19/2015 13:14	11/24/2015 11:20
174660002	3404-MW3S	Bubble Strip	11/19/2015 10:27	11/24/2015 11:20
174660003	3404-MW3D	Bubble Strip	11/19/2015 11:08	11/24/2015 11:20
174660004	3404-MW4	Bubble Strip	11/19/2015 12:05	11/24/2015 11:20

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ANALYTICAL RESULTS

Workorder: 17466 92277051

Lab ID: **174660001** Date Received: 11/24/2015 11:20 Matrix: Bubble Strip
Sample ID: **3404-MW2** Date Collected: 11/19/2015 13:14

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**1.9**	nM	0.60	0.088	1	12/2/2015 08:53	GT	n

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ANALYTICAL RESULTS

Workorder: 17466 92277051

Lab ID: **174660002** Date Received: 11/24/2015 11:20 Matrix: Bubble Strip
Sample ID: **3404-MW3S** Date Collected: 11/19/2015 10:27

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**1.4**	nM	0.60	0.088	1	12/2/2015 09:06	GT	n

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ANALYTICAL RESULTS

Workorder: 17466 92277051

Lab ID: **174660003** Date Received: 11/24/2015 11:20 Matrix: Bubble Strip
Sample ID: **3404-MW3D** Date Collected: 11/19/2015 11:08

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**74**	nM	6.0	0.88	10	12/2/2015 13:18	GT	d,n

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ANALYTICAL RESULTS

Workorder: 17466 92277051

Lab ID: **174660004** Date Received: 11/24/2015 11:20 Matrix: Bubble Strip
Sample ID: **3404-MW4** Date Collected: 11/19/2015 12:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**1.4**	nM	0.60	0.088	1	12/2/2015 09:34	GT	n

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Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS QUALIFIERS

Workorder: 17466 92277051

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.
d	The analyte concentration was determined from a dilution.

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Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 17466 92277051

QC Batch: DISG/5033 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 174660001, 174660002, 174660003, 174660004

METHOD BLANK: 38977

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	0.088U	0.088	n

LABORATORY CONTROL SAMPLE & LCSD: 38978 38979

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Hydrogen	nM	24	22	22	91	90	80-120	1.1	20	n

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 17466 92277051

QUALITY CONTROL PARAMETER QUALIFIERS

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 17466 92277051

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
174660001	3404-MW2			AM20GAX	DISG/5033
174660002	3404-MW3S			AM20GAX	DISG/5033
174660003	3404-MW3D			AM20GAX	DISG/5033
174660004	3404-MW4			AM20GAX	DISG/5033

CERTIFICATE OF ANALYSIS
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Chain of Custody

17466

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www.pacelabs.com

Workorder: 92277051 **Workorder Name:** TOWN OF KERNERSVILLE **Results Requested** 12/8/2015

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 14571

Requested Analysis

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Dissolved Hydrogen	LAB USE ONLY
1	3404-MW2	11/19/2015 13:14	92277051001	Water	1	X	
2	3404-MW3S	11/19/2015 10:27	92277051002	Water	1	X	
3	3404-MW3D	11/19/2015 11:08	92277051003	Water	1	X	
4	3404-MW4	11/19/2015 12:05	92277051004	Water	1	X	
5							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	11/23/15 12:00	[illegible] PAS	11.24.15 1120
2				
3				

Comments

Cooler Temperature on Receipt n/a °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.*

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

December 03, 2015

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

RE: Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Dear Mr. Everhart:
Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 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

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CERTIFICATIONS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

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.: 92277056

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92277056001	**3404-MW2**	Water	11/19/15 12:41	11/20/15 09:00
92277056002	**3404-MW3S**	Water	11/19/15 10:02	11/20/15 09:00
92277056003	**3404-MW3D**	Water	11/19/15 11:08	11/20/15 09:00
92277056004	**3404-MW4**	Water	11/19/15 11:34	11/20/15 09:00
92277056005	**3404-MW5**	Water	11/19/15 09:41	11/20/15 09:00
92277056006	**3404-SW1**	Water	11/19/15 13:05	11/20/15 09:00
92277056007	**3404-SW2**	Water	11/19/15 12:55	11/20/15 09:00
92277056008	**3404-SW3**	Water	11/19/15 11:55	11/20/15 09:00
92277056009	**3404-FIELD BLANK**	Water	11/19/15 13:20	11/20/15 09:00
92277056010	**3404-TRIP BLANK**	Water	11/19/15 08:00	11/20/15 09:00

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SAMPLE ANALYTE COUNT

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92277056001	**3404-MW2**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056002	**3404-MW3S**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056003	**3404-MW3D**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056004	**3404-MW4**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056005	**3404-MW5**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056006	**3404-SW1**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056007	**3404-SW2**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056008	**3404-SW3**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056009	**3404-FIELD BLANK**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	50	PASI-C
92277056010	**3404-TRIP BLANK**	EPA 8260	NB	50	PASI-C

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SUMMARY OF DETECTION

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92277056001	**3404-MW2**					
EPA 6010	Barium	294	ug/L	100	11/30/15 19:19	
EPA 6010	Vanadium	3.1J	ug/L	25.0	11/30/15 19:19	
EPA 8260	Benzene	6.0	ug/L	1.0	11/21/15 15:43	
EPA 8260	Chlorobenzene	0.31J	ug/L	3.0	11/21/15 15:43	
EPA 8260	1,4-Dichlorobenzene	4.8	ug/L	1.0	11/21/15 15:43	
EPA 8260	1,1-Dichloroethane	20.7	ug/L	5.0	11/21/15 15:43	
EPA 8260	1,2-Dichloroethane	0.86J	ug/L	1.0	11/21/15 15:43	
EPA 8260	cis-1,2-Dichloroethene	44.4	ug/L	5.0	11/21/15 15:43	
EPA 8260	trans-1,2-Dichloroethene	1.5J	ug/L	5.0	11/21/15 15:43	
EPA 8260	1,2-Dichloropropane	4.3	ug/L	1.0	11/21/15 15:43	
EPA 8260	Tetrachloroethene	0.90J	ug/L	1.0	11/21/15 15:43	
EPA 8260	Trichloroethene	4.7	ug/L	1.0	11/21/15 15:43	
EPA 8260	Trichlorofluoromethane	0.41J	ug/L	1.0	11/21/15 15:43	
EPA 8260	Vinyl chloride	7.7	ug/L	1.0	11/21/15 15:43	M1
92277056002	**3404-MW3S**					
EPA 6010	Barium	108	ug/L	100	11/30/15 19:22	
EPA 6010	Cobalt	3.9J	ug/L	10.0	11/30/15 19:22	
EPA 6010	Vanadium	4.3J	ug/L	25.0	11/30/15 19:22	
EPA 6010	Zinc	23.1	ug/L	10.0	11/30/15 19:22	
EPA 8260	Chlorobenzene	0.81J	ug/L	3.0	11/21/15 16:00	
EPA 8260	1,4-Dichlorobenzene	1.4	ug/L	1.0	11/21/15 16:00	
EPA 8260	1,1-Dichloroethane	0.82J	ug/L	5.0	11/21/15 16:00	
EPA 8260	1,2-Dichloroethane	0.40J	ug/L	1.0	11/21/15 16:00	
EPA 8260	cis-1,2-Dichloroethene	5.6	ug/L	5.0	11/21/15 16:00	
EPA 8260	Vinyl chloride	2.0	ug/L	1.0	11/21/15 16:00	
92277056003	**3404-MW3D**					
EPA 6010	Barium	42.2J	ug/L	100	12/03/15 01:09	
EPA 6010	Thallium	8.8	ug/L	5.5	12/03/15 01:09	
EPA 6010	Zinc	7.3J	ug/L	10.0	12/03/15 01:09	
EPA 8260	Benzene	0.37J	ug/L	1.0	11/21/15 16:34	
EPA 8260	Chlorobenzene	0.33J	ug/L	3.0	11/21/15 16:34	
EPA 8260	1,4-Dichlorobenzene	3.5	ug/L	1.0	11/21/15 16:34	
EPA 8260	1,1-Dichloroethane	3.1J	ug/L	5.0	11/21/15 16:34	
EPA 8260	1,2-Dichloroethane	1.1	ug/L	1.0	11/21/15 16:34	
EPA 8260	cis-1,2-Dichloroethene	51.2	ug/L	5.0	11/21/15 16:34	
EPA 8260	1,2-Dichloropropane	1.1	ug/L	1.0	11/21/15 16:34	
EPA 8260	Vinyl chloride	6.7	ug/L	1.0	11/21/15 16:34	
92277056004	**3404-MW4**					
EPA 6010	Arsenic	2.7J	ug/L	10.0	12/03/15 01:17	
EPA 6010	Barium	101	ug/L	100	12/03/15 01:17	
EPA 6010	Chromium	3.0J	ug/L	10.0	12/03/15 01:17	
EPA 6010	Copper	2.6J	ug/L	10.0	12/03/15 01:17	
EPA 6010	Nickel	2.6J	ug/L	50.0	12/03/15 01:17	
EPA 6010	Thallium	8.8	ug/L	5.5	12/03/15 01:17	
EPA 6010	Vanadium	6.5J	ug/L	25.0	12/03/15 01:17	
EPA 6010	Zinc	10.7	ug/L	10.0	12/03/15 01:17	

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SUMMARY OF DETECTION

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92277056004	**3404-MW4**					
EPA 8260	1,4-Dichlorobenzene	2.5	ug/L	1.0	11/21/15 16:51	
EPA 8260	1,1-Dichloroethane	1.8J	ug/L	5.0	11/21/15 16:51	
EPA 8260	cis-1,2-Dichloroethene	18.8	ug/L	5.0	11/21/15 16:51	
EPA 8260	Vinyl chloride	17.3	ug/L	1.0	11/21/15 16:51	
92277056005	**3404-MW5**					
EPA 6010	Barium	60.3J	ug/L	100	12/03/15 01:21	
EPA 6010	Cobalt	3.5J	ug/L	10.0	12/03/15 01:21	
EPA 6010	Copper	5.1J	ug/L	10.0	12/03/15 01:21	
EPA 6010	Vanadium	3.9J	ug/L	25.0	12/03/15 01:21	
EPA 6010	Zinc	16.3	ug/L	10.0	12/03/15 01:21	
92277056006	**3404-SW1**					
EPA 6010	Arsenic	3.0J	ug/L	10.0	12/03/15 01:24	
EPA 6010	Barium	45.8J	ug/L	100	12/03/15 01:24	
EPA 6010	Chromium	6.3J	ug/L	10.0	12/03/15 01:24	
EPA 6010	Copper	5.2J	ug/L	10.0	12/03/15 01:24	
EPA 6010	Lead	4.7J	ug/L	10.0	12/03/15 01:24	
EPA 6010	Vanadium	13.9J	ug/L	25.0	12/03/15 01:24	
EPA 6010	Zinc	7.5J	ug/L	10.0	12/03/15 01:24	
92277056007	**3404-SW2**					
EPA 6010	Barium	44.1J	ug/L	100	12/03/15 01:27	
EPA 6010	Chromium	8.6J	ug/L	10.0	12/03/15 01:27	
EPA 6010	Copper	6.5J	ug/L	10.0	12/03/15 01:27	
EPA 6010	Lead	2.6J	ug/L	10.0	12/03/15 01:27	
EPA 6010	Nickel	3.0J	ug/L	50.0	12/03/15 01:27	
EPA 6010	Vanadium	18.8J	ug/L	25.0	12/03/15 01:27	
EPA 6010	Zinc	9.2J	ug/L	10.0	12/03/15 01:27	
92277056008	**3404-SW3**					
EPA 6010	Barium	43.6J	ug/L	100	12/03/15 01:30	
EPA 6010	Chromium	5.7J	ug/L	10.0	12/03/15 01:30	
EPA 6010	Copper	5.9J	ug/L	10.0	12/03/15 01:30	
EPA 6010	Lead	5.0J	ug/L	10.0	12/03/15 01:30	
EPA 6010	Vanadium	14.4J	ug/L	25.0	12/03/15 01:30	
EPA 6010	Zinc	10.1	ug/L	10.0	12/03/15 01:30	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW2 **Lab ID: 92277056001** Collected: 11/19/15 12:41 Received: 11/20/15 09:00 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	11/25/15 22:00	11/30/15 19:19	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:19	7440-38-2	
Barium	**294**	ug/L	100	2.5	1	11/25/15 22:00	11/30/15 19:19	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 22:00	11/30/15 19:19	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 22:00	11/30/15 19:19	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:19	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:19	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:19	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:19	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	11/25/15 22:00	11/30/15 19:19	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 22:00	11/30/15 19:19	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:19	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	11/25/15 22:00	12/01/15 19:12	7440-28-0	
Vanadium	**3.1J**	ug/L	25.0	2.5	1	11/25/15 22:00	11/30/15 19:19	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	11/25/15 22:00	11/30/15 19:19	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 15:43	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 15:43	107-13-1	
Benzene	**6.0**	ug/L	1.0	0.25	1		11/21/15 15:43	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 15:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 15:43	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 15:43	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 15:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 15:43	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 15:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 15:43	56-23-5	
Chlorobenzene	**0.31J**	ug/L	3.0	0.23	1		11/21/15 15:43	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 15:43	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 15:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 15:43	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 15:43	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 15:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 15:43	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 15:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 15:43	95-50-1	
1,4-Dichlorobenzene	**4.8**	ug/L	1.0	0.33	1		11/21/15 15:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 15:43	110-57-6	M1
1,1-Dichloroethane	**20.7**	ug/L	5.0	0.32	1		11/21/15 15:43	75-34-3	
1,2-Dichloroethane	**0.86J**	ug/L	1.0	0.24	1		11/21/15 15:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 15:43	75-35-4	
cis-1,2-Dichloroethene	**44.4**	ug/L	5.0	0.19	1		11/21/15 15:43	156-59-2	
trans-1,2-Dichloroethene	**1.5J**	ug/L	5.0	0.49	1		11/21/15 15:43	156-60-5	
1,2-Dichloropropane	**4.3**	ug/L	1.0	0.27	1		11/21/15 15:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 15:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 15:43	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW2 **Lab ID: 92277056001** Collected: 11/19/15 12:41 Received: 11/20/15 09:00 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		11/21/15 15:43	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 15:43	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 15:43	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 15:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 15:43	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 15:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 15:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 15:43	79-34-5	
Tetrachloroethene	**0.90J**	ug/L	1.0	0.46	1		11/21/15 15:43	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 15:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 15:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 15:43	79-00-5	
Trichloroethene	**4.7**	ug/L	1.0	0.47	1		11/21/15 15:43	79-01-6	
Trichlorofluoromethane	**0.41J**	ug/L	1.0	0.20	1		11/21/15 15:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 15:43	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 15:43	108-05-4	
Vinyl chloride	**7.7**	ug/L	1.0	0.62	1		11/21/15 15:43	75-01-4	M1
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 15:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/21/15 15:43	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		11/21/15 15:43	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/21/15 15:43	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW3S **Lab ID: 92277056002** Collected: 11/19/15 10:02 Received: 11/20/15 09:00 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	11/25/15 22:00	11/30/15 19:22	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:22	7440-38-2	
Barium	**108**	ug/L	100	2.5	1	11/25/15 22:00	11/30/15 19:22	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 22:00	11/30/15 19:22	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 22:00	11/30/15 19:22	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:22	7440-47-3	
Cobalt	**3.9J**	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:22	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:22	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:22	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	11/25/15 22:00	11/30/15 19:22	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 22:00	11/30/15 19:22	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 22:00	11/30/15 19:22	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	11/25/15 22:00	12/01/15 19:15	7440-28-0	
Vanadium	**4.3J**	ug/L	25.0	2.5	1	11/25/15 22:00	11/30/15 19:22	7440-62-2	
Zinc	**23.1**	ug/L	10.0	5.0	1	11/25/15 22:00	11/30/15 19:22	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 16:00	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 16:00	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		11/21/15 16:00	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 16:00	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 16:00	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 16:00	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 16:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 16:00	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 16:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 16:00	56-23-5	
Chlorobenzene	**0.81J**	ug/L	3.0	0.23	1		11/21/15 16:00	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 16:00	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 16:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 16:00	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 16:00	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 16:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 16:00	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 16:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 16:00	95-50-1	
1,4-Dichlorobenzene	**1.4**	ug/L	1.0	0.33	1		11/21/15 16:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 16:00	110-57-6	
1,1-Dichloroethane	**0.82J**	ug/L	5.0	0.32	1		11/21/15 16:00	75-34-3	
1,2-Dichloroethane	**0.40J**	ug/L	1.0	0.24	1		11/21/15 16:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 16:00	75-35-4	
cis-1,2-Dichloroethene	**5.6**	ug/L	5.0	0.19	1		11/21/15 16:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 16:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/21/15 16:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 16:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 16:00	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW3S **Lab ID: 92277056002** Collected: 11/19/15 10:02 Received: 11/20/15 09:00 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		11/21/15 16:00	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 16:00	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 16:00	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 16:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 16:00	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 16:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 16:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 16:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 16:00	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 16:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 16:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 16:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 16:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 16:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 16:00	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 16:00	108-05-4	
Vinyl chloride	**2.0**	ug/L	1.0	0.62	1		11/21/15 16:00	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 16:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		11/21/15 16:00	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		11/21/15 16:00	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/21/15 16:00	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW3D **Lab ID: 92277056003** Collected: 11/19/15 11:08 Received: 11/20/15 09:00 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	11/25/15 23:30	12/03/15 01:09	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:09	7440-38-2	
Barium	**42.2J**	ug/L	100	2.5	1	11/25/15 23:30	12/03/15 01:09	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:09	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:09	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:09	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:09	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:09	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	11/25/15 23:30	12/03/15 01:09	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:09	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:09	7440-22-4	
Thallium	**8.8**	ug/L	5.5	5.0	1	11/25/15 23:30	12/03/15 01:09	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	11/25/15 23:30	12/03/15 01:09	7440-62-2	
Zinc	**7.3J**	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:09	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 16:34	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 16:34	107-13-1	
Benzene	**0.37J**	ug/L	1.0	0.25	1		11/21/15 16:34	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 16:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 16:34	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 16:34	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 16:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 16:34	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 16:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 16:34	56-23-5	
Chlorobenzene	**0.33J**	ug/L	3.0	0.23	1		11/21/15 16:34	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 16:34	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 16:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 16:34	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 16:34	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 16:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 16:34	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 16:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 16:34	95-50-1	
1,4-Dichlorobenzene	**3.5**	ug/L	1.0	0.33	1		11/21/15 16:34	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 16:34	110-57-6	
1,1-Dichloroethane	**3.1J**	ug/L	5.0	0.32	1		11/21/15 16:34	75-34-3	
1,2-Dichloroethane	**1.1**	ug/L	1.0	0.24	1		11/21/15 16:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 16:34	75-35-4	
cis-1,2-Dichloroethene	**51.2**	ug/L	5.0	0.19	1		11/21/15 16:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 16:34	156-60-5	
1,2-Dichloropropane	**1.1**	ug/L	1.0	0.27	1		11/21/15 16:34	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 16:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 16:34	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW3D **Lab ID: 92277056003** Collected: 11/19/15 11:08 Received: 11/20/15 09:00 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		11/21/15 16:34	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 16:34	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 16:34	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 16:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 16:34	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 16:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 16:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 16:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 16:34	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 16:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 16:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 16:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 16:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 16:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 16:34	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 16:34	108-05-4	
Vinyl chloride	**6.7**	ug/L	1.0	0.62	1		11/21/15 16:34	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 16:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		11/21/15 16:34	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		11/21/15 16:34	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/21/15 16:34	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW4 **Lab ID: 92277056004** Collected: 11/19/15 11:34 Received: 11/20/15 09:00 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	11/25/15 23:30	12/03/15 01:17	7440-36-0	
Arsenic	**2.7J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:17	7440-38-2	
Barium	**101**	ug/L	100	2.5	1	11/25/15 23:30	12/03/15 01:17	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:17	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:17	7440-43-9	
Chromium	**3.0J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:17	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:17	7440-48-4	
Copper	**2.6J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:17	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:17	7439-92-1	
Nickel	**2.6J**	ug/L	50.0	2.5	1	11/25/15 23:30	12/03/15 01:17	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:17	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:17	7440-22-4	
Thallium	**8.8**	ug/L	5.5	5.0	1	11/25/15 23:30	12/03/15 01:17	7440-28-0	
Vanadium	**6.5J**	ug/L	25.0	2.5	1	11/25/15 23:30	12/03/15 01:17	7440-62-2	
Zinc	**10.7**	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:17	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 16:51	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 16:51	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		11/21/15 16:51	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 16:51	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 16:51	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 16:51	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 16:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 16:51	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 16:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 16:51	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		11/21/15 16:51	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 16:51	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 16:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 16:51	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 16:51	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 16:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 16:51	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 16:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 16:51	95-50-1	
1,4-Dichlorobenzene	**2.5**	ug/L	1.0	0.33	1		11/21/15 16:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 16:51	110-57-6	
1,1-Dichloroethane	**1.8J**	ug/L	5.0	0.32	1		11/21/15 16:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/21/15 16:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 16:51	75-35-4	
cis-1,2-Dichloroethene	**18.8**	ug/L	5.0	0.19	1		11/21/15 16:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 16:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/21/15 16:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 16:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 16:51	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW4 **Lab ID: 92277056004** Collected: 11/19/15 11:34 Received: 11/20/15 09:00 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		11/21/15 16:51	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 16:51	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 16:51	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 16:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 16:51	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 16:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 16:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 16:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 16:51	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 16:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 16:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 16:51	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 16:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 16:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 16:51	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 16:51	108-05-4	
Vinyl chloride	**17.3**	ug/L	1.0	0.62	1		11/21/15 16:51	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 16:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		11/21/15 16:51	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/21/15 16:51	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/21/15 16:51	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW5 **Lab ID: 92277056005** Collected: 11/19/15 09:41 Received: 11/20/15 09:00 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	11/25/15 23:30	12/03/15 01:21	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:21	7440-38-2	
Barium	**60.3J**	ug/L	100	2.5	1	11/25/15 23:30	12/03/15 01:21	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:21	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:21	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:21	7440-47-3	
Cobalt	**3.5J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:21	7440-48-4	
Copper	**5.1J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:21	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:21	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	11/25/15 23:30	12/03/15 01:21	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:21	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:21	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	11/25/15 23:30	12/03/15 01:21	7440-28-0	
Vanadium	**3.9J**	ug/L	25.0	2.5	1	11/25/15 23:30	12/03/15 01:21	7440-62-2	
Zinc	**16.3**	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:21	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 17:09	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 17:09	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		11/21/15 17:09	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 17:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 17:09	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 17:09	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 17:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 17:09	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 17:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 17:09	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		11/21/15 17:09	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 17:09	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 17:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 17:09	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 17:09	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 17:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 17:09	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 17:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 17:09	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		11/21/15 17:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 17:09	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		11/21/15 17:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/21/15 17:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 17:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		11/21/15 17:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 17:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/21/15 17:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 17:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 17:09	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-MW5 **Lab ID: 92277056005** Collected: 11/19/15 09:41 Received: 11/20/15 09:00 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		11/21/15 17:09	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 17:09	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 17:09	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 17:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 17:09	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 17:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 17:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 17:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 17:09	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 17:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 17:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 17:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 17:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 17:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 17:09	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 17:09	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		11/21/15 17:09	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 17:09	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		11/21/15 17:09	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		11/21/15 17:09	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/21/15 17:09	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-SW1 **Lab ID: 92277056006** Collected: 11/19/15 13:05 Received: 11/20/15 09:00 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	11/25/15 23:30	12/03/15 01:24	7440-36-0	
Arsenic	**3.0J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:24	7440-38-2	
Barium	**45.8J**	ug/L	100	2.5	1	11/25/15 23:30	12/03/15 01:24	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:24	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:24	7440-43-9	
Chromium	**6.3J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:24	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:24	7440-48-4	
Copper	**5.2J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:24	7440-50-8	
Lead	**4.7J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:24	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	11/25/15 23:30	12/03/15 01:24	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:24	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:24	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	11/25/15 23:30	12/03/15 01:24	7440-28-0	
Vanadium	**13.9J**	ug/L	25.0	2.5	1	11/25/15 23:30	12/03/15 01:24	7440-62-2	
Zinc	**7.5J**	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:24	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 17:26	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 17:26	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		11/21/15 17:26	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 17:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 17:26	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 17:26	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 17:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 17:26	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 17:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 17:26	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		11/21/15 17:26	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 17:26	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 17:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 17:26	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 17:26	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 17:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 17:26	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 17:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 17:26	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		11/21/15 17:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 17:26	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		11/21/15 17:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/21/15 17:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 17:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		11/21/15 17:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 17:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/21/15 17:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 17:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 17:26	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-SW1 **Lab ID: 92277056006** Collected: 11/19/15 13:05 Received: 11/20/15 09:00 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		11/21/15 17:26	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 17:26	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 17:26	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 17:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 17:26	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 17:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 17:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 17:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 17:26	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 17:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 17:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 17:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 17:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 17:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 17:26	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 17:26	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		11/21/15 17:26	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 17:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		11/21/15 17:26	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		11/21/15 17:26	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/21/15 17:26	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-SW2 **Lab ID: 92277056007** Collected: 11/19/15 12:55 Received: 11/20/15 09:00 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	11/25/15 23:30	12/03/15 01:27	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:27	7440-38-2	
Barium	**44.1J**	ug/L	100	2.5	1	11/25/15 23:30	12/03/15 01:27	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:27	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:27	7440-43-9	
Chromium	**8.6J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:27	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:27	7440-48-4	
Copper	**6.5J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:27	7440-50-8	
Lead	**2.6J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:27	7439-92-1	
Nickel	**3.0J**	ug/L	50.0	2.5	1	11/25/15 23:30	12/03/15 01:27	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:27	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:27	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	11/25/15 23:30	12/03/15 01:27	7440-28-0	
Vanadium	**18.8J**	ug/L	25.0	2.5	1	11/25/15 23:30	12/03/15 01:27	7440-62-2	
Zinc	**9.2J**	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:27	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 17:43	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 17:43	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		11/21/15 17:43	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 17:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 17:43	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 17:43	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 17:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 17:43	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 17:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 17:43	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		11/21/15 17:43	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 17:43	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 17:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 17:43	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 17:43	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 17:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 17:43	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 17:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 17:43	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		11/21/15 17:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 17:43	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		11/21/15 17:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/21/15 17:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 17:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		11/21/15 17:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 17:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/21/15 17:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 17:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 17:43	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-SW2 **Lab ID: 92277056007** Collected: 11/19/15 12:55 Received: 11/20/15 09:00 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		11/21/15 17:43	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 17:43	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 17:43	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 17:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 17:43	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 17:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 17:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 17:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 17:43	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 17:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 17:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 17:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 17:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 17:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 17:43	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 17:43	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		11/21/15 17:43	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 17:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		11/21/15 17:43	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		11/21/15 17:43	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		11/21/15 17:43	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-SW3 **Lab ID: 92277056008** Collected: 11/19/15 11:55 Received: 11/20/15 09:00 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	11/25/15 23:30	12/03/15 01:30	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:30	7440-38-2	
Barium	**43.6J**	ug/L	100	2.5	1	11/25/15 23:30	12/03/15 01:30	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:30	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:30	7440-43-9	
Chromium	**5.7J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:30	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:30	7440-48-4	
Copper	**5.9J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:30	7440-50-8	
Lead	**5.0J**	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:30	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	11/25/15 23:30	12/03/15 01:30	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:30	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:30	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	11/25/15 23:30	12/03/15 01:30	7440-28-0	
Vanadium	**14.4J**	ug/L	25.0	2.5	1	11/25/15 23:30	12/03/15 01:30	7440-62-2	
Zinc	**10.1**	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:30	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 18:00	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 18:00	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		11/21/15 18:00	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 18:00	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 18:00	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 18:00	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 18:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 18:00	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 18:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 18:00	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		11/21/15 18:00	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 18:00	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 18:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 18:00	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 18:00	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 18:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 18:00	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 18:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 18:00	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		11/21/15 18:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 18:00	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		11/21/15 18:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/21/15 18:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 18:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		11/21/15 18:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 18:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/21/15 18:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 18:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 18:00	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-SW3 **Lab ID: 92277056008** Collected: 11/19/15 11:55 Received: 11/20/15 09:00 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		11/21/15 18:00	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 18:00	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 18:00	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 18:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 18:00	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 18:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 18:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 18:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 18:00	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 18:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 18:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 18:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 18:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 18:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 18:00	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 18:00	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		11/21/15 18:00	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 18:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/21/15 18:00	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/21/15 18:00	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/21/15 18:00	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-FIELD BLANK **Lab ID: 92277056009** Collected: 11/19/15 13:20 Received: 11/20/15 09:00 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	11/25/15 23:30	12/03/15 01:33	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:33	7440-38-2	
Barium	ND	ug/L	100	2.5	1	11/25/15 23:30	12/03/15 01:33	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:33	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	11/25/15 23:30	12/03/15 01:33	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:33	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:33	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:33	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:33	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	11/25/15 23:30	12/03/15 01:33	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:33	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	11/25/15 23:30	12/03/15 01:33	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	11/25/15 23:30	12/03/15 01:33	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	11/25/15 23:30	12/03/15 01:33	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	11/25/15 23:30	12/03/15 01:33	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 20:33	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 20:33	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		11/21/15 20:33	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 20:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 20:33	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 20:33	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 20:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 20:33	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 20:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 20:33	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		11/21/15 20:33	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 20:33	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 20:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 20:33	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 20:33	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 20:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 20:33	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 20:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 20:33	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		11/21/15 20:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 20:33	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		11/21/15 20:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/21/15 20:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 20:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		11/21/15 20:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 20:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/21/15 20:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 20:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 20:33	10061-02-6	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-FIELD BLANK **Lab ID: 92277056009** Collected: 11/19/15 13:20 Received: 11/20/15 09:00 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		11/21/15 20:33	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 20:33	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 20:33	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 20:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 20:33	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 20:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 20:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 20:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 20:33	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 20:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 20:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 20:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 20:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 20:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 20:33	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 20:33	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		11/21/15 20:33	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		11/21/15 20:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/21/15 20:33	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		11/21/15 20:33	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/21/15 20:33	2037-26-5	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-TRIP BLANK **Lab ID: 92277056010** Collected: 11/19/15 08:00 Received: 11/20/15 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		11/21/15 20:50	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		11/21/15 20:50	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		11/21/15 20:50	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		11/21/15 20:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		11/21/15 20:50	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		11/21/15 20:50	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		11/21/15 20:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		11/21/15 20:50	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		11/21/15 20:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		11/21/15 20:50	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		11/21/15 20:50	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		11/21/15 20:50	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		11/21/15 20:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		11/21/15 20:50	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		11/21/15 20:50	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		11/21/15 20:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		11/21/15 20:50	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		11/21/15 20:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		11/21/15 20:50	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		11/21/15 20:50	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		11/21/15 20:50	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		11/21/15 20:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/21/15 20:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		11/21/15 20:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		11/21/15 20:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		11/21/15 20:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/21/15 20:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		11/21/15 20:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		11/21/15 20:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		11/21/15 20:50	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		11/21/15 20:50	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		11/21/15 20:50	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		11/21/15 20:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		11/21/15 20:50	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		11/21/15 20:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		11/21/15 20:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		11/21/15 20:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		11/21/15 20:50	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		11/21/15 20:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		11/21/15 20:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		11/21/15 20:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		11/21/15 20:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		11/21/15 20:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		11/21/15 20:50	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		11/21/15 20:50	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		11/21/15 20:50	75-01-4	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

Sample: 3404-TRIP BLANK **Lab ID: 92277056010** Collected: 11/19/15 08:00 Received: 11/20/15 09:00 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		11/21/15 20:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		11/21/15 20:50	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		11/21/15 20:50	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/21/15 20:50	2037-26-5	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

QC Batch: MPRP/20122 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92277056001, 92277056002

METHOD BLANK: 1615891 | Matrix: Water
Associated Lab Samples: 92277056001, 92277056002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	3.8	12/01/15 16:21	
Arsenic	ug/L	ND	10.0	2.5	12/01/15 16:21	
Barium	ug/L	ND	100	2.5	12/01/15 16:21	
Beryllium	ug/L	ND	1.0	0.50	12/01/15 16:21	
Cadmium	ug/L	ND	1.0	0.50	12/01/15 16:21	
Chromium	ug/L	ND	10.0	2.5	12/01/15 16:21	
Cobalt	ug/L	ND	10.0	2.5	12/01/15 16:21	
Copper	ug/L	ND	10.0	2.5	12/01/15 16:21	
Lead	ug/L	ND	10.0	2.5	12/01/15 16:21	
Nickel	ug/L	ND	50.0	2.5	12/01/15 16:21	
Selenium	ug/L	ND	10.0	5.0	12/01/15 16:21	
Silver	ug/L	ND	10.0	2.5	12/01/15 16:21	
Thallium	ug/L	ND	5.5	5.0	12/01/15 17:42	
Vanadium	ug/L	ND	25.0	2.5	12/01/15 16:21	
Zinc	ug/L	ND	10.0	5.0	12/01/15 16:21	

LABORATORY CONTROL SAMPLE: 1615892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	485	97	80-120	
Arsenic	ug/L	500	463	93	80-120	
Barium	ug/L	500	479	96	80-120	
Beryllium	ug/L	500	480	96	80-120	
Cadmium	ug/L	500	477	95	80-120	
Chromium	ug/L	500	474	95	80-120	
Cobalt	ug/L	500	479	96	80-120	
Copper	ug/L	500	484	97	80-120	
Lead	ug/L	500	474	95	80-120	
Nickel	ug/L	500	478	96	80-120	
Selenium	ug/L	500	468	94	80-120	
Silver	ug/L	250	228	91	80-120	
Thallium	ug/L	500	465	93	80-120	
Vanadium	ug/L	500	475	95	80-120	
Zinc	ug/L	500	474	95	80-120	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1615893 1615894

Parameter	Units	92276295009 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	493	461	98	92	75-125	7	25	
Arsenic	ug/L	ND	500	500	480	447	96	89	75-125	7	25	
Barium	ug/L	92.7	500	500	578	554	97	92	75-125	4	25	
Beryllium	ug/L	ND	500	500	489	461	98	92	75-125	6	25	
Cadmium	ug/L	ND	500	500	487	453	97	91	75-125	7	25	
Chromium	ug/L	ND	500	500	481	457	96	91	75-125	5	25	
Cobalt	ug/L	2.5J	500	500	478	449	95	89	75-125	6	25	
Copper	ug/L	ND	500	500	498	467	99	93	75-125	6	25	
Lead	ug/L	ND	500	500	473	442	94	88	75-125	7	25	
Nickel	ug/L	ND	500	500	476	447	95	89	75-125	6	25	
Selenium	ug/L	ND	500	500	478	445	95	89	75-125	7	25	
Silver	ug/L	ND	250	250	236	220	94	88	75-125	7	25	
Thallium	ug/L	ND	500	500	488	453	97	90	75-125	8	25	
Vanadium	ug/L	3.7J	500	500	491	462	98	92	75-125	6	25	
Zinc	ug/L	ND	500	500	468	442	94	88	75-125	6	25	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

QC Batch: MPRP/20123 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92277056003, 92277056004, 92277056005, 92277056006, 92277056007, 92277056008, 92277056009

METHOD BLANK: 1615895 Matrix: Water
Associated Lab Samples: 92277056003, 92277056004, 92277056005, 92277056006, 92277056007, 92277056008, 92277056009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	3.8	12/03/15 00:53	
Arsenic	ug/L	ND	10.0	2.5	12/03/15 00:53	
Barium	ug/L	ND	100	2.5	12/03/15 00:53	
Beryllium	ug/L	ND	1.0	0.50	12/03/15 00:53	
Cadmium	ug/L	ND	1.0	0.50	12/03/15 00:53	
Chromium	ug/L	ND	10.0	2.5	12/03/15 00:53	
Cobalt	ug/L	ND	10.0	2.5	12/03/15 00:53	
Copper	ug/L	ND	10.0	2.5	12/03/15 00:53	
Lead	ug/L	ND	10.0	2.5	12/03/15 00:53	
Nickel	ug/L	ND	50.0	2.5	12/03/15 00:53	
Selenium	ug/L	ND	10.0	5.0	12/03/15 00:53	
Silver	ug/L	ND	10.0	2.5	12/03/15 00:53	
Thallium	ug/L	ND	5.5	5.0	12/03/15 00:53	
Vanadium	ug/L	ND	25.0	2.5	12/03/15 00:53	
Zinc	ug/L	ND	10.0	5.0	12/03/15 00:53	

LABORATORY CONTROL SAMPLE: 1615896

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	507	101	80-120	
Arsenic	ug/L	500	474	95	80-120	
Barium	ug/L	500	493	99	80-120	
Beryllium	ug/L	500	493	99	80-120	
Cadmium	ug/L	500	496	99	80-120	
Chromium	ug/L	500	496	99	80-120	
Cobalt	ug/L	500	500	100	80-120	
Copper	ug/L	500	508	102	80-120	
Lead	ug/L	500	494	99	80-120	
Nickel	ug/L	500	497	99	80-120	
Selenium	ug/L	500	496	99	80-120	
Silver	ug/L	250	236	95	80-120	
Thallium	ug/L	500	456	91	80-120	
Vanadium	ug/L	500	502	100	80-120	
Zinc	ug/L	500	491	98	80-120	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1615897 1615898

Parameter	Units	92277056003 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	538	504	107	101	75-125	7	25	
Arsenic	ug/L	ND	500	500	507	475	101	95	75-125	6	25	
Barium	ug/L	42.2J	500	500	566	535	105	99	75-125	6	25	
Beryllium	ug/L	ND	500	500	531	497	106	99	75-125	7	25	
Cadmium	ug/L	ND	500	500	524	493	105	99	75-125	6	25	
Chromium	ug/L	ND	500	500	528	498	105	99	75-125	6	25	
Cobalt	ug/L	ND	500	500	519	489	104	98	75-125	6	25	
Copper	ug/L	ND	500	500	544	511	109	102	75-125	6	25	
Lead	ug/L	ND	500	500	514	484	103	97	75-125	6	25	
Nickel	ug/L	ND	500	500	514	485	103	97	75-125	6	25	
Selenium	ug/L	ND	500	500	521	487	104	97	75-125	7	25	
Silver	ug/L	ND	250	250	251	236	100	94	75-125	6	25	
Thallium	ug/L	8.8	500	500	475	455	93	89	75-125	4	25	
Vanadium	ug/L	ND	500	500	543	513	108	102	75-125	6	25	
Zinc	ug/L	7.3J	500	500	514	486	101	96	75-125	6	25	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

QC Batch: MSV/34379 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92277056001, 92277056002, 92277056003, 92277056004, 92277056005, 92277056006, 92277056007, 92277056008

METHOD BLANK: 1612653 Matrix: Water
Associated Lab Samples: 92277056001, 92277056002, 92277056003, 92277056004, 92277056005, 92277056006, 92277056007, 92277056008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	0.33	11/21/15 11:45	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	11/21/15 11:45	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	0.40	11/21/15 11:45	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	11/21/15 11:45	
1,1-Dichloroethane	ug/L	ND	5.0	0.32	11/21/15 11:45	
1,1-Dichloroethene	ug/L	ND	5.0	0.56	11/21/15 11:45	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.41	11/21/15 11:45	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	2.0	11/21/15 11:45	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	11/21/15 11:45	
1,2-Dichlorobenzene	ug/L	ND	5.0	0.30	11/21/15 11:45	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	11/21/15 11:45	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	11/21/15 11:45	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	11/21/15 11:45	
2-Butanone (MEK)	ug/L	ND	100	0.96	11/21/15 11:45	
2-Hexanone	ug/L	ND	50.0	0.46	11/21/15 11:45	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	0.33	11/21/15 11:45	
Acetone	ug/L	ND	100	10.0	11/21/15 11:45	
Acrylonitrile	ug/L	ND	200	1.9	11/21/15 11:45	
Benzene	ug/L	ND	1.0	0.25	11/21/15 11:45	
Bromochloromethane	ug/L	ND	3.0	0.17	11/21/15 11:45	
Bromodichloromethane	ug/L	ND	1.0	0.18	11/21/15 11:45	
Bromoform	ug/L	ND	3.0	0.26	11/21/15 11:45	
Bromomethane	ug/L	ND	10.0	0.29	11/21/15 11:45	
Carbon disulfide	ug/L	ND	100	1.2	11/21/15 11:45	
Carbon tetrachloride	ug/L	ND	1.0	0.25	11/21/15 11:45	
Chlorobenzene	ug/L	ND	3.0	0.23	11/21/15 11:45	
Chloroethane	ug/L	ND	10.0	0.54	11/21/15 11:45	
Chloroform	ug/L	ND	5.0	0.14	11/21/15 11:45	
Chloromethane	ug/L	ND	1.0	0.11	11/21/15 11:45	
cis-1,2-Dichloroethene	ug/L	ND	5.0	0.19	11/21/15 11:45	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	11/21/15 11:45	
Dibromochloromethane	ug/L	ND	3.0	0.21	11/21/15 11:45	
Dibromomethane	ug/L	ND	10.0	0.21	11/21/15 11:45	
Ethylbenzene	ug/L	ND	1.0	0.30	11/21/15 11:45	
Iodomethane	ug/L	ND	10.0	0.32	11/21/15 11:45	
Methylene Chloride	ug/L	ND	1.0	0.97	11/21/15 11:45	
Styrene	ug/L	ND	1.0	0.26	11/21/15 11:45	
Tetrachloroethene	ug/L	ND	1.0	0.46	11/21/15 11:45	
Toluene	ug/L	ND	1.0	0.26	11/21/15 11:45	
trans-1,2-Dichloroethene	ug/L	ND	5.0	0.49	11/21/15 11:45	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

METHOD BLANK: 1612653 Matrix: Water

Associated Lab Samples: 92277056001, 92277056002, 92277056003, 92277056004, 92277056005, 92277056006, 92277056007, 92277056008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	11/21/15 11:45	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	1.0	11/21/15 11:45	
Trichloroethene	ug/L	ND	1.0	0.47	11/21/15 11:45	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	11/21/15 11:45	
Vinyl acetate	ug/L	ND	50.0	0.35	11/21/15 11:45	
Vinyl chloride	ug/L	ND	1.0	0.62	11/21/15 11:45	
Xylene (Total)	ug/L	ND	5.0	0.66	11/21/15 11:45	
1,2-Dichloroethane-d4 (S)	%	100	70-130		11/21/15 11:45	
4-Bromofluorobenzene (S)	%	105	70-130		11/21/15 11:45	
Toluene-d8 (S)	%	99	70-130		11/21/15 11:45	

LABORATORY CONTROL SAMPLE: 1612654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	46.1	92	80-125	
1,1,1-Trichloroethane	ug/L	50	49.0	98	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	43.2	86	79-124	
1,1,2-Trichloroethane	ug/L	50	49.6	99	85-125	
1,1-Dichloroethane	ug/L	50	49.0	98	73-126	
1,1-Dichloroethene	ug/L	50	54.2	108	66-135	
1,2,3-Trichloropropane	ug/L	50	47.9	96	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	41.8	84	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	45.7	91	83-124	
1,2-Dichlorobenzene	ug/L	50	46.7	93	80-133	
1,2-Dichloroethane	ug/L	50	47.2	94	67-128	
1,2-Dichloropropane	ug/L	50	46.8	94	75-132	
1,4-Dichlorobenzene	ug/L	50	46.8	94	78-130	
2-Butanone (MEK)	ug/L	100	105	105	61-144	
2-Hexanone	ug/L	100	90.2	90	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	72-135	
Acetone	ug/L	100	107	107	48-146	
Acrylonitrile	ug/L	250	254	102	40-160	
Benzene	ug/L	50	50.1	100	80-125	
Bromochloromethane	ug/L	50	51.3	103	71-125	
Bromodichloromethane	ug/L	50	45.7	91	78-124	
Bromoform	ug/L	50	39.9	80	71-128	
Bromomethane	ug/L	50	49.3	99	40-160	
Carbon disulfide	ug/L	50	53.3J	107	50-160	
Carbon tetrachloride	ug/L	50	51.5	103	69-131	
Chlorobenzene	ug/L	50	45.5	91	81-122	
Chloroethane	ug/L	50	53.6	107	39-148	
Chloroform	ug/L	50	50.8	102	73-127	
Chloromethane	ug/L	50	51.7	103	44-146	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

LABORATORY CONTROL SAMPLE: 1612654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	51.2	102	74-124	
cis-1,3-Dichloropropene	ug/L	50	47.8	96	72-132	
Dibromochloromethane	ug/L	50	44.4	89	78-125	
Dibromomethane	ug/L	50	52.5	105	82-120	
Ethylbenzene	ug/L	50	45.1	90	79-121	
Iodomethane	ug/L	100	102	102	39-154	
Methylene Chloride	ug/L	50	51.5	103	64-133	
Styrene	ug/L	50	46.5	93	84-126	
Tetrachloroethene	ug/L	50	48.4	97	78-122	
Toluene	ug/L	50	48.0	96	80-121	
trans-1,2-Dichloroethene	ug/L	50	54.0	108	71-127	
trans-1,3-Dichloropropene	ug/L	50	46.2	92	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	36.9J	74	40-160	
Trichloroethene	ug/L	50	49.7	99	78-122	
Trichlorofluoromethane	ug/L	50	53.1	106	53-137	
Vinyl acetate	ug/L	100	97.7	98	40-160	
Vinyl chloride	ug/L	50	60.1	120	58-137	
Xylene (Total)	ug/L	150	135	90	81-126	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			107	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 1612655

Parameter	Units	92277056001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	19.4	97	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	22.5	113	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.1	91	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	21.1	106	70-130	
1,1-Dichloroethane	ug/L	20.7	20	43.5	114	70-130	
1,1-Dichloroethene	ug/L	ND	20	25.1	124	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	19.4	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	18.7	93	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.3	97	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	20.2	100	70-130	
1,2-Dichloroethane	ug/L	0.86J	20	22.4	108	70-130	
1,2-Dichloropropane	ug/L	4.3	20	24.5	101	70-130	
1,4-Dichlorobenzene	ug/L	4.8	20	25.5	104	70-130	
2-Butanone (MEK)	ug/L	ND	40	45.0J	113	70-130	
2-Hexanone	ug/L	ND	40	38.7J	97	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	44.4J	111	70-130	
Acetone	ug/L	ND	40	43.1J	108	70-130	
Acrylonitrile	ug/L	ND	100	109J	109	70-130	
Benzene	ug/L	6.0	20	28.9	114	70-148	
Bromochloromethane	ug/L	ND	20	22.9	115	70-130	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

MATRIX SPIKE SAMPLE: 1612655

Parameter	Units	92277056001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	ND	20	20.1	101	70-130	
Bromoform	ug/L	ND	20	16.3	82	70-130	
Bromomethane	ug/L	ND	20	19.5	97	70-130	
Carbon disulfide	ug/L	ND	20	24.0J	120	70-130	
Carbon tetrachloride	ug/L	ND	20	23.4	117	70-130	
Chlorobenzene	ug/L	0.31J	20	20.2	99	70-146	
Chloroethane	ug/L	ND	20	23.8	119	70-130	
Chloroform	ug/L	ND	20	23.0	115	70-130	
Chloromethane	ug/L	ND	20	22.5	113	70-130	
cis-1,2-Dichloroethene	ug/L	44.4	20	68.1	119	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	20.3	101	70-130	
Dibromochloromethane	ug/L	ND	20	18.8	94	70-130	
Dibromomethane	ug/L	ND	20	22.4	112	70-130	
Ethylbenzene	ug/L	ND	20	19.9	100	70-130	
Iodomethane	ug/L	ND	40	38.1	95	70-130	
Methylene Chloride	ug/L	ND	20	24.3	122	70-130	
Styrene	ug/L	ND	20	19.8	99	70-130	
Tetrachloroethene	ug/L	0.90J	20	21.9	105	70-130	
Toluene	ug/L	ND	20	21.8	109	70-155	
trans-1,2-Dichloroethene	ug/L	1.5J	20	26.0	123	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	20.0	100	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	13.1J	65	70-130	M1
Trichloroethene	ug/L	4.7	20	27.1	112	69-151	
Trichlorofluoromethane	ug/L	0.41J	20	25.3	124	70-130	
Vinyl acetate	ug/L	ND	40	37.4J	93	70-130	
Vinyl chloride	ug/L	7.7	20	35.0	137	70-130	M1
1,2-Dichloroethane-d4 (S)	%				100	70-130	
4-Bromofluorobenzene (S)	%				105	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1612656

Parameter	Units	92277056002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	0.82J	0.85J		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	0.40J	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

SAMPLE DUPLICATE: 1612656

Parameter	Units	92277056002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,4-Dichlorobenzene	ug/L	1.4	1.2	11	30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Acrylonitrile	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	0.81J	0.81J		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	5.6	5.3	4	30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Iodomethane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
trans-1,4-Dichloro-2-butene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	2.0	1.9	2	30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	102	101	1		
4-Bromofluorobenzene (S)	%	105	105	0		
Toluene-d8 (S)	%	101	100	1		

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

QC Batch: MSV/34380 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92277056009, 92277056010

METHOD BLANK: 1612657 | Matrix: Water
Associated Lab Samples: 92277056009, 92277056010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	0.33	11/21/15 12:02	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	11/21/15 12:02	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	0.40	11/21/15 12:02	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	11/21/15 12:02	
1,1-Dichloroethane	ug/L	ND	5.0	0.32	11/21/15 12:02	
1,1-Dichloroethene	ug/L	ND	5.0	0.56	11/21/15 12:02	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.41	11/21/15 12:02	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	2.0	11/21/15 12:02	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	11/21/15 12:02	
1,2-Dichlorobenzene	ug/L	ND	5.0	0.30	11/21/15 12:02	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	11/21/15 12:02	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	11/21/15 12:02	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	11/21/15 12:02	
2-Butanone (MEK)	ug/L	ND	100	0.96	11/21/15 12:02	
2-Hexanone	ug/L	ND	50.0	0.46	11/21/15 12:02	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	0.33	11/21/15 12:02	
Acetone	ug/L	ND	100	10.0	11/21/15 12:02	
Acrylonitrile	ug/L	ND	200	1.9	11/21/15 12:02	
Benzene	ug/L	ND	1.0	0.25	11/21/15 12:02	
Bromochloromethane	ug/L	ND	3.0	0.17	11/21/15 12:02	
Bromodichloromethane	ug/L	ND	1.0	0.18	11/21/15 12:02	
Bromoform	ug/L	ND	3.0	0.26	11/21/15 12:02	
Bromomethane	ug/L	ND	10.0	0.29	11/21/15 12:02	
Carbon disulfide	ug/L	ND	100	1.2	11/21/15 12:02	
Carbon tetrachloride	ug/L	ND	1.0	0.25	11/21/15 12:02	
Chlorobenzene	ug/L	ND	3.0	0.23	11/21/15 12:02	
Chloroethane	ug/L	ND	10.0	0.54	11/21/15 12:02	
Chloroform	ug/L	ND	5.0	0.14	11/21/15 12:02	
Chloromethane	ug/L	ND	1.0	0.11	11/21/15 12:02	
cis-1,2-Dichloroethene	ug/L	ND	5.0	0.19	11/21/15 12:02	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	11/21/15 12:02	
Dibromochloromethane	ug/L	ND	3.0	0.21	11/21/15 12:02	
Dibromomethane	ug/L	ND	10.0	0.21	11/21/15 12:02	
Ethylbenzene	ug/L	ND	1.0	0.30	11/21/15 12:02	
Iodomethane	ug/L	ND	10.0	0.32	11/21/15 12:02	
Methylene Chloride	ug/L	ND	1.0	0.97	11/21/15 12:02	
Styrene	ug/L	ND	1.0	0.26	11/21/15 12:02	
Tetrachloroethene	ug/L	ND	1.0	0.46	11/21/15 12:02	
Toluene	ug/L	ND	1.0	0.26	11/21/15 12:02	
trans-1,2-Dichloroethene	ug/L	ND	5.0	0.49	11/21/15 12:02	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	11/21/15 12:02	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

METHOD BLANK: 1612657 Matrix: Water
Associated Lab Samples: 92277056009, 92277056010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	100	1.0	11/21/15 12:02	
Trichloroethene	ug/L	ND	1.0	0.47	11/21/15 12:02	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	11/21/15 12:02	
Vinyl acetate	ug/L	ND	50.0	0.35	11/21/15 12:02	
Vinyl chloride	ug/L	ND	1.0	0.62	11/21/15 12:02	
Xylene (Total)	ug/L	ND	5.0	0.66	11/21/15 12:02	
1,2-Dichloroethane-d4 (S)	%	100	70-130		11/21/15 12:02	
4-Bromofluorobenzene (S)	%	105	70-130		11/21/15 12:02	
Toluene-d8 (S)	%	101	70-130		11/21/15 12:02	

LABORATORY CONTROL SAMPLE: 1612658

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	46.2	92	80-125	
1,1,1-Trichloroethane	ug/L	50	48.8	98	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	44.0	88	79-124	
1,1,2-Trichloroethane	ug/L	50	49.4	99	85-125	
1,1-Dichloroethane	ug/L	50	49.2	98	73-126	
1,1-Dichloroethene	ug/L	50	53.2	106	66-135	
1,2,3-Trichloropropane	ug/L	50	48.1	96	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	44.7	89	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	47.7	95	83-124	
1,2-Dichlorobenzene	ug/L	50	47.4	95	80-133	
1,2-Dichloroethane	ug/L	50	48.3	97	67-128	
1,2-Dichloropropane	ug/L	50	46.1	92	75-132	
1,4-Dichlorobenzene	ug/L	50	48.0	96	78-130	
2-Butanone (MEK)	ug/L	100	105	105	61-144	
2-Hexanone	ug/L	100	92.9	93	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	72-135	
Acetone	ug/L	100	110	110	48-146	
Acrylonitrile	ug/L	250	259	104	40-160	
Benzene	ug/L	50	49.7	99	80-125	
Bromochloromethane	ug/L	50	52.4	105	71-125	
Bromodichloromethane	ug/L	50	45.7	91	78-124	
Bromoform	ug/L	50	40.8	82	71-128	
Bromomethane	ug/L	50	49.5	99	40-160	
Carbon disulfide	ug/L	50	53.4J	107	50-160	
Carbon tetrachloride	ug/L	50	51.3	103	69-131	
Chlorobenzene	ug/L	50	45.6	91	81-122	
Chloroethane	ug/L	50	52.6	105	39-148	
Chloroform	ug/L	50	50.7	101	73-127	
Chloromethane	ug/L	50	52.3	105	44-146	
cis-1,2-Dichloroethene	ug/L	50	51.0	102	74-124	
cis-1,3-Dichloropropene	ug/L	50	48.2	96	72-132	

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

QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

LABORATORY CONTROL SAMPLE: 1612658

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	44.7	89	78-125	
Dibromomethane	ug/L	50	52.2	104	82-120	
Ethylbenzene	ug/L	50	45.2	90	79-121	
Iodomethane	ug/L	100	99.4	99	39-154	
Methylene Chloride	ug/L	50	52.4	105	64-133	
Styrene	ug/L	50	45.8	92	84-126	
Tetrachloroethene	ug/L	50	47.1	94	78-122	
Toluene	ug/L	50	47.4	95	80-121	
trans-1,2-Dichloroethene	ug/L	50	54.2	108	71-127	
trans-1,3-Dichloropropene	ug/L	50	46.8	94	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	39.3J	79	40-160	
Trichloroethene	ug/L	50	47.9	96	78-122	
Trichlorofluoromethane	ug/L	50	53.0	106	53-137	
Vinyl acetate	ug/L	100	99.3	99	40-160	
Vinyl chloride	ug/L	50	59.0	118	58-137	
Xylene (Total)	ug/L	150	133	88	81-126	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			106	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1612659

Parameter	Units	92277140001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20.5	103	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	23.6	118	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.7	94	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	22.5	113	70-130	
1,1-Dichloroethane	ug/L	ND	20	23.8	119	70-130	
1,1-Dichloroethene	ug/L	ND	20	26.1	131	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	20.0	100	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	19.4	97	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.8	99	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	20.8	104	70-130	
1,2-Dichloroethane	ug/L	ND	20	22.8	114	70-130	
1,2-Dichloropropane	ug/L	ND	20	21.9	110	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.8	104	70-130	
2-Butanone (MEK)	ug/L	ND	40	45.8J	114	70-130	
2-Hexanone	ug/L	ND	40	40.9J	102	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	47.9J	120	70-130	
Acetone	ug/L	ND	40	51.6J	115	70-130	
Acrylonitrile	ug/L	ND	100	119J	119	70-130	
Benzene	ug/L	ND	20	23.5	117	70-148	
Bromochloromethane	ug/L	ND	20	24.9	125	70-130	
Bromodichloromethane	ug/L	ND	20	21.2	106	70-130	
Bromoform	ug/L	ND	20	17.4	87	70-130	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

MATRIX SPIKE SAMPLE: 1612659

Parameter	Units	92277140001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	ND	20	20.8	104	70-130	
Carbon disulfide	ug/L	ND	20	25.1J	125	70-130	
Carbon tetrachloride	ug/L	ND	20	24.1	121	70-130	
Chlorobenzene	ug/L	ND	20	20.8	104	70-146	
Chloroethane	ug/L	ND	20	25.9	130	70-130	
Chloroform	ug/L	ND	20	25.0	120	70-130	
Chloromethane	ug/L	ND	20	25.2	126	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	24.9	125	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	21.8	109	70-130	
Dibromochloromethane	ug/L	ND	20	19.0	95	70-130	
Dibromomethane	ug/L	ND	20	23.8	119	70-130	
Ethylbenzene	ug/L	ND	20	20.4	102	70-130	
Iodomethane	ug/L	ND	40	46.1	115	70-130	
Methylene Chloride	ug/L	ND	20	24.8	124	70-130	
Styrene	ug/L	ND	20	19.6	98	70-130	
Tetrachloroethene	ug/L	ND	20	22.1	111	70-130	
Toluene	ug/L	ND	20	22.7	112	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	25.6	128	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	21.1	105	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	15.0J	75	70-130	
Trichloroethene	ug/L	ND	20	23.1	115	69-151	
Trichlorofluoromethane	ug/L	ND	20	26.1	130	70-130	
Vinyl acetate	ug/L	ND	40	39.2J	98	70-130	
Vinyl chloride	ug/L	ND	20	28.9	144	70-130	M1
1,2-Dichloroethane-d4 (S)	%				101	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1612660

Parameter	Units	92277140002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

SAMPLE DUPLICATE: 1612660

Parameter	Units	92277140002 Result	Dup Result	RPD	Max RPD	Qualifiers
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Acrylonitrile	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	0.18J		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Iodomethane	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
trans-1,4-Dichloro-2-butene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	101	103	2		
4-Bromofluorobenzene (S)	%	106	103	2		
Toluene-d8 (S)	%	102	101	1		

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QUALIFIERS

Project: TOWN OF KERNERSVILLE
Pace Project No.: 92277056

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

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
Pace Project No.: 92277056

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92277056001	**3404-MW2**	EPA 3010	MPRP/20122	EPA 6010	ICP/18151
92277056002	**3404-MW3S**	EPA 3010	MPRP/20122	EPA 6010	ICP/18151
92277056003	**3404-MW3D**	EPA 3010	MPRP/20123	EPA 6010	ICP/18152
92277056004	**3404-MW4**	EPA 3010	MPRP/20123	EPA 6010	ICP/18152
92277056005	**3404-MW5**	EPA 3010	MPRP/20123	EPA 6010	ICP/18152
92277056006	**3404-SW1**	EPA 3010	MPRP/20123	EPA 6010	ICP/18152
92277056007	**3404-SW2**	EPA 3010	MPRP/20123	EPA 6010	ICP/18152
92277056008	**3404-SW3**	EPA 3010	MPRP/20123	EPA 6010	ICP/18152
92277056009	**3404-FIELD BLANK**	EPA 3010	MPRP/20123	EPA 6010	ICP/18152
92277056001	**3404-MW2**	EPA 8260	MSV/34379		
92277056002	**3404-MW3S**	EPA 8260	MSV/34379		
92277056003	**3404-MW3D**	EPA 8260	MSV/34379		
92277056004	**3404-MW4**	EPA 8260	MSV/34379		
92277056005	**3404-MW5**	EPA 8260	MSV/34379		
92277056006	**3404-SW1**	EPA 8260	MSV/34379		
92277056007	**3404-SW2**	EPA 8260	MSV/34379		
92277056008	**3404-SW3**	EPA 8260	MSV/34379		
92277056009	**3404-FIELD BLANK**	EPA 8260	MSV/34380		
92277056010	**3404-TRIP BLANK**	EPA 8260	MSV/34380		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: November 17, 2015 Page 1 of 2*
	Document Number: **F-CHR-CS-003-rev.16.1**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Joyce

* Page 2 of 2 is for Internal Use Only

Courier: ☐ Fed Ex ☐ UPS ☐ USP ☐ Client ☐ Commercial ☐ Pace Other_____

Optional
Proj. Due Date:
Proj. Name:

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

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

Thermometer Used: IR Gun T1505 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor No Correction

Corrected Cooler Temp.: 2.6 °C **Biological Tissue is Frozen:** Yes No N/A

Date and Initials of person examining contents: AC 11/20/15

Temp should be above freezing to 6°C

		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.
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: [signature] **Date:** 11/20/15

SRF Review: [signature] **Date:** 11/21/15

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# : 92277056

92277056

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 838.1601.12
Container Order Number:

Section C — Invoice Information:

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

21866

Regulatory Agency

State / Location: North Carolina

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	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	NC Appendix I Metals	NC Appendix I VOC 8260's	Residual Chlorine (Y/N)	92277056
1	3404-MW2	WT	G			11/19/15	1241		4			X	X						X	X		001
2	3404-MW3S	WT	G				1102		4			X	X						X	X		002
3	3404-MW3D	WT	G				1108		4			X	X						X	X		003
4	3404-MW4	WT	G				1134		4			X	X						X	X		004
5	3404-MW5	WT	G				0941		4			X	X						X	X		005
6	3404-MW6 DRY	~~WT~~	~~G~~						~~4~~			~~X~~	~~X~~						~~X~~	~~X~~		
7	3404-SW1	WT	G				1305		4			X	X						X	X		006
8	3404-SW2	WT	G				1255		4			X	X						X	X		007
9	3404-SW3	WT	G				1155		4			X	X						X	X		008
10	Field Blank	WT	G				1320		4			X	X						X	X		009
11	Trip Blank	WT	G				800		2				X							X		010
12																						

Preservatives: Unpreserved, H2SO4, HNO3, HCl, NaOH, Na2S2O3, Methanol, Other

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Sexton / Joyce	11/19/15		[illegible] / Ice	11/20/15	9:00am	2.6	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Sexton, Gretta Eller

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/19/15

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

Pace Analytical Services, Inc.
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(704)875-9092

December 22, 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.: 92277063

Dear Mr. Everhart:
Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 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.

Report revised 12/22/15 to update Nitrate units from mg/L to ug/L.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

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Enclosures

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.: 92277063

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
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.: 92277063

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92277063001	**3404-MW2**	Water	11/19/15 12:41	11/20/15 09:30
92277063002	**3404-MW3S**	Water	11/19/15 10:02	11/20/15 09:30
92277063003	**3404-MW3D**	Water	11/19/15 10:45	11/20/15 09:30
92277063004	**3404-MW4**	Water	11/19/15 11:34	11/20/15 09:30

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SAMPLE ANALYTE COUNT

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92277063001	**3404-MW2**	RSK 175	JRB	3	PASI-M
		SM 2320B	MLS	1	PASI-A
		SM 4500-S2D	MJP	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92277063002	**3404-MW3S**	RSK 175	JRB	3	PASI-M
		SM 2320B	MLS	1	PASI-A
		SM 4500-S2D	MJP	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92277063003	**3404-MW3D**	RSK 175	JRB	3	PASI-M
		SM 2320B	MLS	1	PASI-A
		SM 4500-S2D	MJP	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A
92277063004	**3404-MW4**	RSK 175	JRB	3	PASI-M
		SM 2320B	MLS	1	PASI-A
		SM 4500-S2D	MJP	1	PASI-A
		SM 5210B	BRJ	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
		SM 5220D	WRC	1	PASI-A
		SM 5310B	MDW	1	PASI-A

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SUMMARY OF DETECTION

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92277063001	**3404-MW2**					
RSK 175	Methane	6010	ug/L	10.0	11/24/15 19:18	
SM 2320B	Alkalinity, Total as CaCO3	158000	ug/L	5000	12/01/15 19:13	
SM 5210B	BOD, 5 day	5000	ug/L	2000	11/25/15 22:05	
EPA 300.0	Sulfate	1190J	ug/L	250000	11/30/15 11:59	
EPA 353.2	Nitrogen, Nitrate	69.4J	ug/L	10000	11/21/15 09:42	B
SM 4500-Cl-E	Chloride	16300	ug/L	1000	12/01/15 23:14	
SM 5310B	Total Organic Carbon	889J	ug/L	1000	11/30/15 20:30	
92277063002	**3404-MW3S**					
RSK 175	Methane	220	ug/L	10.0	11/24/15 19:34	
SM 2320B	Alkalinity, Total as CaCO3	147000	ug/L	5000	12/01/15 19:45	
EPA 300.0	Sulfate	1360J	ug/L	250000	11/30/15 12:40	
EPA 353.2	Nitrogen, Nitrate	15.8J	ug/L	10000	11/21/15 09:17	B
SM 4500-Cl-E	Chloride	27800	ug/L	1000	12/01/15 23:15	
SM 5310B	Total Organic Carbon	1210	ug/L	1000	11/30/15 20:40	
92277063003	**3404-MW3D**					
RSK 175	Methane	160	ug/L	10.0	11/24/15 19:42	
SM 2320B	Alkalinity, Total as CaCO3	158000	ug/L	5000	12/01/15 19:58	
EPA 300.0	Sulfate	1520J	ug/L	250000	11/30/15 12:54	
EPA 353.2	Nitrogen, Nitrate	13.1J	ug/L	10000	11/21/15 09:18	B
SM 4500-Cl-E	Chloride	17400	ug/L	1000	12/01/15 23:15	
92277063004	**3404-MW4**					
RSK 175	Methane	2.6J	ug/L	10.0	11/24/15 19:50	
SM 2320B	Alkalinity, Total as CaCO3	185000	ug/L	5000	12/01/15 20:11	
EPA 300.0	Sulfate	1240J	ug/L	250000	11/30/15 13:07	
EPA 353.2	Nitrogen, Nitrate	19.1J	ug/L	10000	11/21/15 09:37	B
SM 4500-Cl-E	Chloride	16900	ug/L	1000	12/01/15 23:16	
SM 5220D	Chemical Oxygen Demand	16000J	ug/L	25000	11/24/15 15:40	
SM 5310B	Total Organic Carbon	1900	ug/L	1000	11/30/15 21:05	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

Sample: 3404-MW2 **Lab ID: 92277063001** Collected: 11/19/15 12:41 Received: 11/20/15 09:30 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		11/24/15 19:18	74-84-0	
Ethene	ND	ug/L	10.0	0.47	1		11/24/15 19:18	74-85-1	
Methane	**6010**	ug/L	10.0	0.63	1		11/24/15 19:18	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**158000**	ug/L	5000	1000	1		12/01/15 19:13		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		11/23/15 23:30	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**5000**	ug/L	2000	2000	1	11/21/15 03:50	11/25/15 22:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1190J**	ug/L	250000	1000	1		11/30/15 11:59	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**69.4J**	ug/L	10000	10.0	1		11/21/15 09:42		B
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**16300**	ug/L	1000	500	1		12/01/15 23:14	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		11/24/15 15:40		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**889J**	ug/L	1000	500	1		11/30/15 20:30	7440-44-0	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

Sample: 3404-MW3S **Lab ID: 92277063002** Collected: 11/19/15 10:02 Received: 11/20/15 09:30 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		11/24/15 19:34	74-84-0	
Ethene	ND	ug/L	10.0	0.47	1		11/24/15 19:34	74-85-1	
Methane	**220**	ug/L	10.0	0.63	1		11/24/15 19:34	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**147000**	ug/L	5000	1000	1		12/01/15 19:45		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		11/23/15 23:30	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	11/21/15 03:50	11/25/15 22:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1360J**	ug/L	250000	1000	1		11/30/15 12:40	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**15.8J**	ug/L	10000	10.0	1		11/21/15 09:17		B
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**27800**	ug/L	1000	500	1		12/01/15 23:15	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		11/24/15 15:40		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1210**	ug/L	1000	500	1		11/30/15 20:40	7440-44-0	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

Sample: 3404-MW3D **Lab ID: 92277063003** Collected: 11/19/15 10:45 Received: 11/20/15 09:30 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		11/24/15 19:42	74-84-0	
Ethene	ND	ug/L	10.0	0.47	1		11/24/15 19:42	74-85-1	
Methane	**160**	ug/L	10.0	0.63	1		11/24/15 19:42	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**158000**	ug/L	5000	1000	1		12/01/15 19:58		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		11/23/15 23:30	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	11/21/15 03:50	11/25/15 22:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1520J**	ug/L	250000	1000	1		11/30/15 12:54	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**13.1J**	ug/L	10000	10.0	1		11/21/15 09:18		B
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**17400**	ug/L	1000	500	1		12/01/15 23:15	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		11/24/15 15:40		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	ug/L	1000	500	1		11/30/15 20:51	7440-44-0	

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ANALYTICAL RESULTS

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

Sample: 3404-MW4 **Lab ID: 92277063004** Collected: 11/19/15 11:34 Received: 11/20/15 09:30 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		11/24/15 19:50	74-84-0	
Ethene	ND	ug/L	10.0	0.47	1		11/24/15 19:50	74-85-1	
Methane	**2.6J**	ug/L	10.0	0.63	1		11/24/15 19:50	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**185000**	ug/L	5000	1000	1		12/01/15 20:11		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		11/23/15 23:30	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	11/21/15 03:50	11/25/15 22:05		B2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1240J**	ug/L	250000	1000	1		11/30/15 13:07	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**19.1J**	ug/L	10000	10.0	1		11/21/15 09:37		B
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**16900**	ug/L	1000	500	1		12/01/15 23:16	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**16000J**	ug/L	25000	12500	1		11/24/15 15:40		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1900**	ug/L	1000	500	1		11/30/15 21:05	7440-44-0	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: AIR/24713 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 2143732 Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	ND	10.0	5.0	11/24/15 19:09	
Ethene	ug/L	ND	10.0	0.47	11/24/15 19:09	
Methane	ug/L	1.4J	10.0	0.63	11/24/15 19:09	

LABORATORY CONTROL SAMPLE & LCSD: 2143733 2143734

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	116	116	102	102	85-115	0	20	
Ethene	ug/L	106	107	108	101	102	85-115	1	20	
Methane	ug/L	60.7	60.7	60.4	100	100	85-115	1	20	

SAMPLE DUPLICATE: 2143735

Parameter	Units	92277063001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	6010	5550	8	20	

SAMPLE DUPLICATE: 2143736

Parameter	Units	92277119007 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	16300	17500	7	20	

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

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: WET/41659 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 1616790 Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	ug/L	ND	5000	1000	12/01/15 14:38	

LABORATORY CONTROL SAMPLE: 1616791

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	ug/L	50000	49900	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616792 1616793

Parameter	Units	92277119005 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	50700	50600	100	100	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616798 1616799

Parameter	Units	92277515002 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	70.3 mg/L	50000	50000	119000	122000	98	103	80-120	2	25	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: WET/41571 — Analysis Method: SM 4500-S2D
QC Batch Method: SM 4500-S2D — Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 1613121 — Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	ug/L	ND	1000	100	11/23/15 23:30	

LABORATORY CONTROL SAMPLE: 1613122

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	ug/L	500	511J	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1613123 — 1613124

Parameter	Units	92276764001 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	479J	479J	96	96	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1613125 — 1613126

Parameter	Units	92276295016 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	460J	460J	92	92	90-110	0	10	

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: WET/41545 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 1612650 Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
BOD, 5 day	ug/L	ND	2000	2000	11/25/15 22:05	

LABORATORY CONTROL SAMPLE: 1612651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	ug/L	198000	182000	92	84.6-115.4	

SAMPLE DUPLICATE: 1612652

Parameter	Units	92276796001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	ug/L	2.8 mg/L	3100	10	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: WETA/25567 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 1616290 Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	ug/L	ND	250000	1000	11/30/15 11:32	

LABORATORY CONTROL SAMPLE: 1616291

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	19500J	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616292 1616293

Parameter	Units	92277063001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	1190J	20000	20000	21200J	21200J	100	100	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616294 1616295

Parameter	Units	92277063002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	1360J	20000	20000	20200J	20000J	94	93	90-110	1	10	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: WETA/25491 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 1612600 | Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	ug/L	15.1J	10000	10.0	11/21/15 09:13	

LABORATORY CONTROL SAMPLE: 1612601

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	2500	2410J	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1612602 1612603

Parameter	Units	92277045001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	2.5 mg/L	2500	2500	4860J	4870J	94	94	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1612604 1612605

Parameter	Units	92277042001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	0.26 mg/L	2500	2500	2640J	2640J	95	95	90-110	0	10	

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: WETA/25595 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 1617477 Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	ug/L	ND	1000	500	12/01/15 23:04	

LABORATORY CONTROL SAMPLE: 1617478

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	20000	19900	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1617479 1617480

Parameter	Units	92277541002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	7.5 mg/L	20000	20000	28900	28600	107	106	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1617481 1617482

Parameter	Units	92277541003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	2.6 mg/L	20000	20000	23600	23400	105	104	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1617701 1617702

Parameter	Units	92277771001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	21.8 mg/L	100000	100000	57400	56600	36	35	90-110	1	10	M1

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: WETA/25529 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 1614082 Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	ug/L	ND	25000	12500	11/24/15 15:40	

LABORATORY CONTROL SAMPLE: 1614083

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	ug/L	750000	740000	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1614084 1614085

Parameter	Units	92276957001 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	833 mg/L	1500000	1500000	2150000	2150000	88	88	90-110	0	3	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

QC Batch: WETA/25563 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

METHOD BLANK: 1616105 Matrix: Water
Associated Lab Samples: 92277063001, 92277063002, 92277063003, 92277063004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	ug/L	ND	1000	500	11/30/15 17:31	

LABORATORY CONTROL SAMPLE: 1616106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	25000	22900	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616107 1616108

Parameter	Units	92276855001 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	22900	25400	85	95	90-110	10	5	M1,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616109 1616110

Parameter	Units	92277063004 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	1900	25000	25000	24300	24500	90	90	90-110	1	5	

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QUALIFIERS

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

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

B	Analyte was detected in the associated method blank.
B2	Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TOWN OF KERNERSVILLE MNA
Pace Project No.: 92277063

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92277063001	**3404-MW2**	RSK 175	AIR/24713		
92277063002	**3404-MW3S**	RSK 175	AIR/24713		
92277063003	**3404-MW3D**	RSK 175	AIR/24713		
92277063004	**3404-MW4**	RSK 175	AIR/24713		
92277063001	**3404-MW2**	SM 2320B	WET/41659		
92277063002	**3404-MW3S**	SM 2320B	WET/41659		
92277063003	**3404-MW3D**	SM 2320B	WET/41659		
92277063004	**3404-MW4**	SM 2320B	WET/41659		
92277063001	**3404-MW2**	SM 4500-S2D	WET/41571		
92277063002	**3404-MW3S**	SM 4500-S2D	WET/41571		
92277063003	**3404-MW3D**	SM 4500-S2D	WET/41571		
92277063004	**3404-MW4**	SM 4500-S2D	WET/41571		
92277063001	**3404-MW2**	SM 5210B	WET/41545	SM 5210B	WET/41547
92277063002	**3404-MW3S**	SM 5210B	WET/41545	SM 5210B	WET/41547
92277063003	**3404-MW3D**	SM 5210B	WET/41545	SM 5210B	WET/41547
92277063004	**3404-MW4**	SM 5210B	WET/41545	SM 5210B	WET/41547
92277063001	**3404-MW2**	EPA 300.0	WETA/25567		
92277063002	**3404-MW3S**	EPA 300.0	WETA/25567		
92277063003	**3404-MW3D**	EPA 300.0	WETA/25567		
92277063004	**3404-MW4**	EPA 300.0	WETA/25567		
92277063001	**3404-MW2**	EPA 353.2	WETA/25491		
92277063002	**3404-MW3S**	EPA 353.2	WETA/25491		
92277063003	**3404-MW3D**	EPA 353.2	WETA/25491		
92277063004	**3404-MW4**	EPA 353.2	WETA/25491		
92277063001	**3404-MW2**	SM 4500-Cl-E	WETA/25595		
92277063002	**3404-MW3S**	SM 4500-Cl-E	WETA/25595		
92277063003	**3404-MW3D**	SM 4500-Cl-E	WETA/25595		
92277063004	**3404-MW4**	SM 4500-Cl-E	WETA/25595		
92277063001	**3404-MW2**	SM 5220D	WETA/25529		
92277063002	**3404-MW3S**	SM 5220D	WETA/25529		
92277063003	**3404-MW3D**	SM 5220D	WETA/25529		
92277063004	**3404-MW4**	SM 5220D	WETA/25529		
92277063001	**3404-MW2**	SM 5310B	WETA/25563		
92277063002	**3404-MW3S**	SM 5310B	WETA/25563		
92277063003	**3404-MW3D**	SM 5310B	WETA/25563		
92277063004	**3404-MW4**	SM 5310B	WETA/25563		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: November 17, 2015 Page 1 of 2*
	Document Number: **F-CHR-CS-003-rev.16.1**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Joyce Engineering

* Page 2 of 2 is for Internal Use Only

Courier: ☐ Fed Ex ☑ UPS ☐ USP ☐ Client ☐ Commercial ☐ Pace Other_____

Optional
Proj. Due Date:
Proj. Name:

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

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

Thermometer Used: IR Gun T1505 **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor No Correction

Corrected Cooler Temp.: 2.4 °C **Biological Tissue is Frozen:** Yes No (N/A)

Temp should be above freezing to 6°C

Date and Initials of person examining contents: U 11-20

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.
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: Haley Seaton Date/Time: 11/20/15 1237

Comments/ Resolution: Dissolved Hydrogen were sent with a separate COC. We did not receive the Containers for this Chain of Custody. The Containers were logged to WO# 92277057

SCURF Review: [illegible] Date: 11/20/15

SRF Review: [illegible] Date: ~~11/20/15~~ RG 11/21/15

WO# : 92277063

92277063

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

CHAIN-OF-CUSTODY / 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
	2186-19

Regulatory Agency

State / Location
North Carolina

Requested Analysis Filtered (Y/N)

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

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)	92277063
1	3404-MW2	WT	G			11/19/15	1241		15	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X				001
2	3404-MW3S	WT	G				1002		15	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X				002
3	3404-MW3D	WT	G				1045		15	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X				003
4	3404-MW4	WT	G				1134		15	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X				004
5	3404-MW6 DR X	WT	G						15	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X				
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Haley Seaton / Joyce	11/19/15	1530	[illegible]	11-20	930	2.4	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Haley Seaton, Gretta Eller

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/19/15

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

ENCO Laboratories

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10775 Central Port Drive
Orlando FL, 32824
Phone: 407.826.5314 FAX: 407.850.6945

Thursday, December 3, 2015
Pace Analytical (Huntersville NC)
Attn: Kevin Godwin
9800 Kincey Ave. Suite 100
Huntersville, NC 28078

RE: Laboratory Results for
Project Number: 92277063, Project Name/Desc: TOWN OF KERNERSVILLE MNA
ENCO Workorder(s): A507727

Dear Kevin Godwin,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, November 24, 2015.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

David Camacho
Project Manager
Enclosure(s)

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 3404-MW2 **Lab ID: A507727-01** **Sampled: 11/19/15 12:41** **Received: 11/24/15 09:45**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
Volatile Fatty Acids	12/03/15	12/01/15 09:17	12/01/15 12:07

Client ID: 3404-MW3S **Lab ID: A507727-02** **Sampled: 11/19/15 10:02** **Received: 11/24/15 09:45**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
Volatile Fatty Acids	12/03/15	12/01/15 09:17	12/01/15 12:56

Client ID: 3404-MW3D **Lab ID: A507727-03** **Sampled: 11/19/15 10:45** **Received: 11/24/15 09:45**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
Volatile Fatty Acids	12/03/15	12/01/15 09:17	12/01/15 13:44

Client ID: 3404-MW4 **Lab ID: A507727-04** **Sampled: 11/19/15 11:34** **Received: 11/24/15 09:45**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
Volatile Fatty Acids	12/03/15	12/01/15 09:17	12/01/15 14:33

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

SAMPLE DETECTION SUMMARY

No positive results detected.

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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ANALYTICAL RESULTS

Description: 3404-MW2 **Lab Sample ID:** A507727-01 **Received:** 11/24/15 09:45
Matrix: Water **Sampled:** 11/19/15 12:41 **Work Order:** A507727
Project: TOWN OF KERNERSVILLE MNA **Sampled By:**

Volatile Fatty Acids by HPLC

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Acetic Acid [64-19-7]	0.16	U	mg/L	1	0.16	0.20	5L01014	Volatile Fatty Acids	12/01/15 12:07	jfi	
Butyric Acid [107-92-6]	0.089	U	mg/L	1	0.089	0.10	5L01014	Volatile Fatty Acids	12/01/15 12:07	jfi	
Lactic Acid [50-21-5]	0.095	U	mg/L	1	0.095	0.14	5L01014	Volatile Fatty Acids	12/01/15 12:07	jfi	
Propionic Acid [79-09-4]	0.065	U	mg/L	1	0.065	0.10	5L01014	Volatile Fatty Acids	12/01/15 12:07	jfi	
Pyruvic Acid [127-17-3]	0.012	U	mg/L	1	0.012	0.070	5L01014	Volatile Fatty Acids	12/01/15 12:07	jfi	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
Trimethylacetic acid	*19*	*1*	*20.0*	*97 %*	*50-150*	*5L01014*	*Volatile Fatty Acids*	*12/01/15 12:07*	*jfi*	

Description: 3404-MW3S **Lab Sample ID:** A507727-02 **Received:** 11/24/15 09:45
Matrix: Water **Sampled:** 11/19/15 10:02 **Work Order:** A507727
Project: TOWN OF KERNERSVILLE MNA **Sampled By:**

Volatile Fatty Acids by HPLC

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Acetic Acid [64-19-7]	0.16	U	mg/L	1	0.16	0.20	5L01014	Volatile Fatty Acids	12/01/15 12:56	jfi	
Butyric Acid [107-92-6]	0.089	U	mg/L	1	0.089	0.10	5L01014	Volatile Fatty Acids	12/01/15 12:56	jfi	
Lactic Acid [50-21-5]	0.095	U	mg/L	1	0.095	0.14	5L01014	Volatile Fatty Acids	12/01/15 12:56	jfi	
Propionic Acid [79-09-4]	0.065	U	mg/L	1	0.065	0.10	5L01014	Volatile Fatty Acids	12/01/15 12:56	jfi	
Pyruvic Acid [127-17-3]	0.012	U	mg/L	1	0.012	0.070	5L01014	Volatile Fatty Acids	12/01/15 12:56	jfi	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
Trimethylacetic acid	*18*	*1*	*20.0*	*90 %*	*50-150*	*5L01014*	*Volatile Fatty Acids*	*12/01/15 12:56*	*jfi*	

Description: 3404-MW3D **Lab Sample ID:** A507727-03 **Received:** 11/24/15 09:45
Matrix: Water **Sampled:** 11/19/15 10:45 **Work Order:** A507727
Project: TOWN OF KERNERSVILLE MNA **Sampled By:**

Volatile Fatty Acids by HPLC

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Acetic Acid [64-19-7]	0.16	U	mg/L	1	0.16	0.20	5L01014	Volatile Fatty Acids	12/01/15 13:44	jfi	
Butyric Acid [107-92-6]	0.089	U	mg/L	1	0.089	0.10	5L01014	Volatile Fatty Acids	12/01/15 13:44	jfi	
Lactic Acid [50-21-5]	0.095	U	mg/L	1	0.095	0.14	5L01014	Volatile Fatty Acids	12/01/15 13:44	jfi	
Propionic Acid [79-09-4]	0.065	U	mg/L	1	0.065	0.10	5L01014	Volatile Fatty Acids	12/01/15 13:44	jfi	
Pyruvic Acid [127-17-3]	0.012	U	mg/L	1	0.012	0.070	5L01014	Volatile Fatty Acids	12/01/15 13:44	jfi	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
Trimethylacetic acid	*18*	*1*	*20.0*	*90 %*	*50-150*	*5L01014*	*Volatile Fatty Acids*	*12/01/15 13:44*	*jfi*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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ANALYTICAL RESULTS

Description: 3404-MW4 **Lab Sample ID:** A507727-04 **Received:** 11/24/15 09:45

Matrix: Water **Sampled:** 11/19/15 11:34 **Work Order:** A507727

Project: TOWN OF KERNERSVILLE MNA **Sampled By:**

Volatile Fatty Acids by HPLC

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Acetic Acid [64-19-7]	0.16	U	mg/L	1	0.16	0.20	5L01014	Volatile Fatty Acids	12/01/15 14:33	jfi	
Butyric Acid [107-92-6]	0.089	U	mg/L	1	0.089	0.10	5L01014	Volatile Fatty Acids	12/01/15 14:33	jfi	
Lactic Acid [50-21-5]	0.095	U	mg/L	1	0.095	0.14	5L01014	Volatile Fatty Acids	12/01/15 14:33	jfi	
Propionic Acid [79-09-4]	0.065	U	mg/L	1	0.065	0.10	5L01014	Volatile Fatty Acids	12/01/15 14:33	jfi	
Pyruvic Acid [127-17-3]	0.012	U	mg/L	1	0.012	0.070	5L01014	Volatile Fatty Acids	12/01/15 14:33	jfi	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
Trimethylacetic acid	*18*	*1*	*20.0*	*90 %*	*50-150*	*5L01014*	*Volatile Fatty Acids*	*12/01/15 14:33*	*jfi*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Fatty Acids by HPLC - Quality Control

Batch 5L01014 - NA

Blank (5L01014-BLK1) Prepared: 12/01/2015 09:17 Analyzed: 12/01/2015 10:56

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetic Acid	0.16	U	0.20	mg/L							
Butyric Acid	0.089	U	0.10	mg/L							
Lactic Acid	0.095	U	0.14	mg/L							
Propionic Acid	0.065	U	0.10	mg/L							
Pyruvic Acid	0.012	U	0.070	mg/L							
Trimethylacetic acid	*18*			*mg/L*	*20.0*		*92*	*50-150*			

LCS (5L01014-BS1) Prepared: 12/01/2015 09:17 Analyzed: 12/01/2015 11:19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetic Acid	18		0.20	mg/L	20.0		89	70-130			
Butyric Acid	23		0.10	mg/L	20.0		114	70-130			
Propionic Acid	21		0.10	mg/L	20.0		104	70-130			
Pyruvic Acid	16		0.070	mg/L	20.0		81	70-130			
Trimethylacetic acid	*18*			*mg/L*	*20.0*		*90*	*50-150*			

LCS Dup (5L01014-BSD1) Prepared: 12/01/2015 09:17 Analyzed: 12/01/2015 11:43

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetic Acid	17		0.20	mg/L	20.0		87	70-130	2	25	
Butyric Acid	22		0.10	mg/L	20.0		112	70-130	1	25	
Propionic Acid	21		0.10	mg/L	20.0		104	70-130	0.3	25	
Pyruvic Acid	16		0.070	mg/L	20.0		80	70-130	2	25	
Trimethylacetic acid	*18*			*mg/L*	*20.0*		*89*	*50-150*			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence (85% or greater confidence) to make a "tentative identification".
P	Greater than 25% concentration difference was observed between the primary and secondary GC column. The lower concentration is reported.

Chain of Custody

A507727

Pace Analytical®
www.pacelabs.com

Workorder: 92277063 **Workorder Name:** TOWN OF KERNERSVILLE MNA **Results Requested** 12/8/2015

Report / Invoice To	Subcontract To
Kevin Godwin Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone'(704)875-9092 Email: kevin.godwin@pacelabs.com	P.O. KRG 14573 Enco Orlando 10775 Central Port Drive Orlando, Fl 32824

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HCL	Unpreserved					Requested Analysis: VFA											LAB USE ONLY
1	3404-MW2	11/19/2015 12:41	92277063001	Water	3						X											
2	3404-MW3S	11/19/2015 10:02	92277063002	Water	3						X											
3	3404-MW3D	11/19/2015 10:45	92277063003	Water	3						X											
4	3404-MW4	11/19/2015 11:34	92277063004	Water	3						X											
5																						

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	11/23/15 12:40	S. Casey	11/24/15 0945
2				
3				

Comments

Please only report: Acetic Acid, Propionic Acid, Butyric Acid, Pyruvic Acid, Lactic Acid

Cooler Temperature on Receipt °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.

Med-Blue @ 3.5°C

DATE: 11/19/15

JOYCE ENGINEERING

GROUND WATER SAMPLING LOG

Project Name: Town Of Kernersville **Project No./Task No.:** 838.1601.12.01

Well ID: MW-2 **Sampler(s):** H. Seaton/ G. Eller

Well Location: Back side of landfill along Creek

Well Diameter: 2 inches

Initial Depth to Water (DTW): 5.01 feet

Depth to Bottom (DTB): 13.18 feet

Water Column Thickness (WCT): 8.17 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: **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	1238	16.6	2.87	247.2	6.22	134.4	6.74	HS
1.3	1239	16.1	2.29	245.3	5.99	135.1	6.08	HS
2.6	1240	16.5	2.36	257.1	5.98	105.5	4.23	HS
3.9	1241	17.1	1.85	293.1	6.03	100.3	4.40	HS
Before Sampling	1241	17.1	1.85	293.1	6.03	100.3	4.40	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was partly cloudy with temperatures in the 60s on 11/19/2015.

Fe2+: 0.5 mg/L

Dissolved CO2: 125 mg/L

Signature: [signature] **Date:** 11/19/15

QA/QC Sign Off: [signature] **Date:** 12/3/15

DATE: 11/19/15

JOYCE ENGINEERING

GROUND WATER SAMPLING LOG

Project Name: Town Of Kernersville **Project No./Task No.:** 838.1601.12.01

Well ID: MW-3D **Sampler(s):** H. Seaton/ G. Eller

Well Location: Back side of landfill along Creek

Well Diameter: 2 inches

Initial Depth to Water (DTW): 14.03 feet

Depth to Bottom (DTB): 56.96 feet

Water Column Thickness (WCT): 42.93 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 6.9 gallons

For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = 20.7 gallons

Actual Amount Purged/Bailed: 20.7 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	1019	16.8	0.57	296.4	6.36	-21.5	7.89	HS
6.9	1026	15.9	1.87	290.4	6.31	-12.6	9.07	HS
13.8	1031	15.8	3.40	290.0	6.14	28.3	6.59	HS
20.7	1045	15.8	0.81	294.7	6.06	29.4	7.00	HS
Before Sampling	1045	15.8	0.81	294.7	6.06	29.4	7.00	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was partly cloudy with temperatures in the 60s on 11/19/2015

Fe2+: 0 mg/L

Dissolved CO2: 90 mg/L

Signature: [signature] **Date:** 11/19/15

QA/QC Sign Off: [signature] **Date:** 12/3/15

DATE: 11/19/15

JOYCE ENGINEERING

GROUND WATER SAMPLING LOG

Project Name: Town Of Kernersville **Project No./Task No.:** 838.1601.12.01

Well ID: MW-3S **Sampler(s):** H. Seaton/ G. Eller

Well Location: Back side of landfill along Creek

Well Diameter: 2 inches

Initial Depth to Water (DTW): 16.97 feet

Depth to Bottom (DTB): 24.00 feet

Water Column Thickness (WCT): 7.11 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)	DO	Cond. (µS)	pH	ORP	Turb.(ntu)	Initials
0	0958	15.8	1.01	266.4	5.76	62.1	16.4	HS
1.2	0959	16.4	3.01	289.3	6.00	51.4	21.2	HS
2.4	1000	16.1	2.34	298.1	6.08	36.1	19.9	HS
3.6	1002	16.0	2.49	301.5	6.15	57.6	20.7	HS
Before Sampling	1002	16.0	2.49	301.5	6.15	57.6	20.7	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was partly cloudy with temperatures in the 60s on 11/19/2015

Fe2+: 0.0 mg/L

Dissolved CO2: 115 mg/L

Signature: Haley Seaton **Date:** 11/19/15

QA/QC Sign Off: [illegible] **Date:** 12/3/15

DATE: 11/19/15

JOYCE ENGINEERING

GROUND WATER SAMPLING LOG

Project Name: Town Of Kernersville **Project No./Task No.:** 838.1601.12.01

Well ID: MW-4 **Sampler(s):** H. Seaton/ G. Eller

Well Location: Back side of landfill along Creek

Well Diameter: 2 inches

Initial Depth to Water (DTW): 9.60 feet

Depth to Bottom (DTB): 14.40 feet

Water Column Thickness (WCT): 4.80 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 0.8 gallons

For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = 2.4 gallons

Actual Amount Purged/Bailed: 2.4 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	1129	16.3	7.09	322.1	6.50	53.5	10.1	HS
0.8	1130	15.7	6.13	319.1	6.50	57.4	6.47	HS
1.6	1132	15.9	4.13	320.6	6.41	12.4	7.08	HS
2.4	1134	16.0	3.92	320.4	6.45	34.5	7.72	HS
Before Sampling	1134	16.0	3.92	320.4	6.45	34.5	7.72	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was partly cloudy with temperatures in the 60s on 11/19/2015. Field blank taken @ 1320

Fe2+: 0.5 mg/L

Dissolved CO2: 70 mg/L

Signature: [signature] **Date:** 11/19/15

QA/QC Sign Off: [signature] **Date:** 12/3/15

DATE: 11/19/15

JOYCE ENGINEERING

GROUND WATER SAMPLING LOG

Project Name: Town Of Kernersville **Project No./Task No.:** 838.1601.12.01

Well ID: MW-5 **Sampler(s):** H. Seaton/ G. Eller

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

Well Diameter: 2 inches

Initial Depth to Water (DTW): 4.63 feet

Depth to Bottom (DTB): 11.36 feet

Water Column Thickness (WCT): 6.73 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.0 gallons

For 4" Well: WCT X 0.653 = - gallons

For THREE Well Volumes: WV X 3 = 3.0 gallons

Actual Amount Purged/Bailed: 3.0 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	0936	14.3	7.88	92	9.78	HS
1.0	0938	13.3	7.10	39	10.6	HS
2.0	0939	13.1	6.08	36	10.9	HS
3.0	0941	13.2	5.45	36	11.2	HS
Before Sampling	0941	13.2	5.45	36	11.2	HS

Comments (weather conditions, odor, color, silt, etc.): The weather was partly cloudy with temperatures in the 60s on 11/19/2015

Signature: Haley Seaton **Date:** 11/19/15

QA/QC Sign Off: [illegible] **Date:** 12/3/15

DATE: 11/19/15

JOYCE ENGINEERING

GROUND WATER SAMPLING LOG

Project Name: Town Of Kernersville **Project No./Task No.:** 838.1601.12.01

Well ID: MW-6 **Sampler(s):** H. Seaton/ G. Eller

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

Well Diameter: 2 inches

Initial Depth to Water (DTW): -- feet

Depth to Bottom (DTB): 20.46 feet

Water Column Thickness (WCT): 0.21 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 partly cloudy with temperatures in the 60s on 11/19/2015. The well was dry and not sampled.

Signature: [signature] **Date:** 11/19/15

QA/QC Sign Off: [signature] **Date:** 12/3/15

DATE: 11/19/15

JOYCE ENGINEERING

SURFACE WATER MONITORING LOG

Project Name: Town Of Kernersville **Project/Task No.:** 838.1601.12.01

Surface Point ID: SW-1 **Sampler(s):** H. Seaton/ G. Eller

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

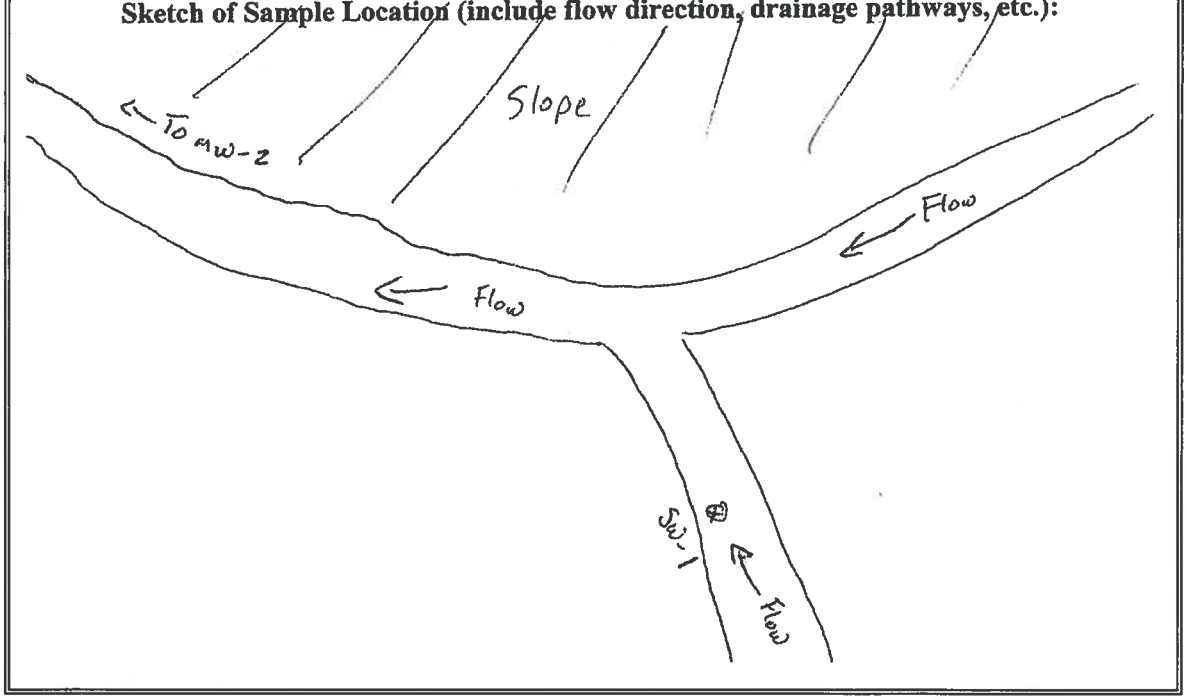
Field Parameters:

Time of Sampling:	1305	
pH:	6.92	
Temperature:	17.0	**(°C)**
Conductivity:	48.4	**(µS)**
Turbidity:	17.7	**(ntu)**

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

The weather was partly cloudy with temperatures in the 60s on 11/19/2015.

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



Signature: Hesley Seaton **Date:** 11/19/15

QA/QC Sign Off: [illegible] **Date:** 12/3/15

DATE: 11/19/15

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/ G. Eller

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

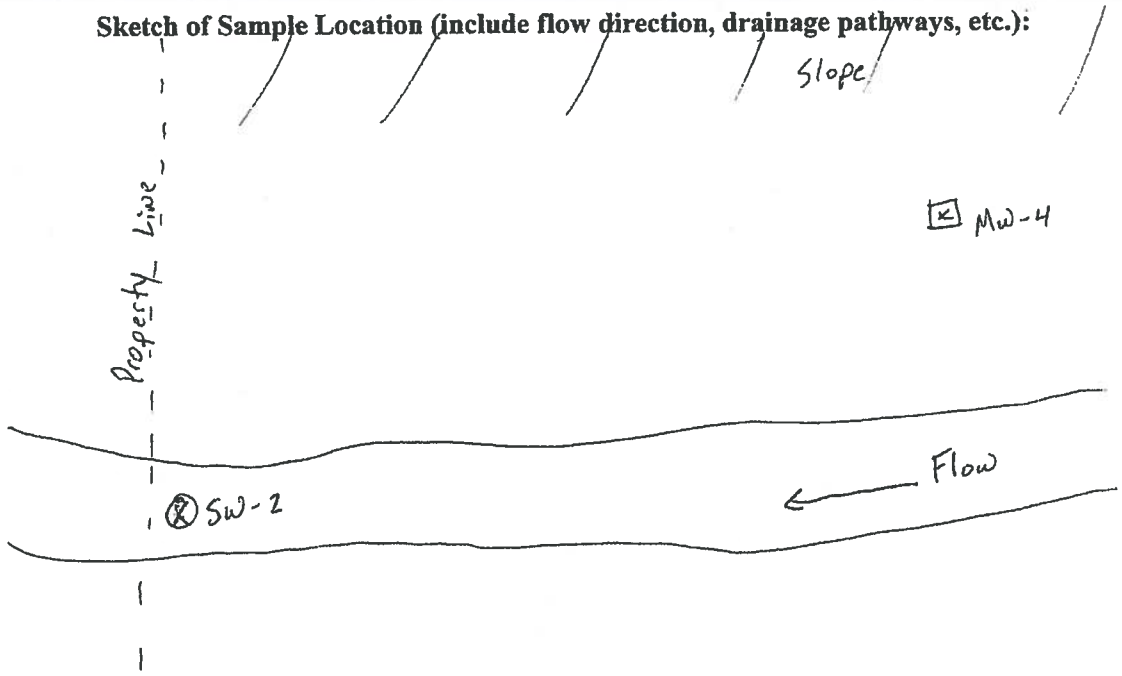
Field Parameters:

Time of Sampling:	1255	
pH:	7.01	
Temperature:	16.8	(°C)
Conductivity:	57.8	(µS)
Turbidity:	18.1	(ntu)

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

The weather was partly cloudy with temperatures in the 60s on 11/19/2015.

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



Signature: [signature] **Date:** 11/19/15

QA/QC Sign Off: [signature] **Date:** 12/3/15

DATE: 11/19/15

JOYCE ENGINEERING

SURFACE WATER MONITORING LOG

Project Name: Town Of Kernersville **Project/Task No.:** 838.1601.12.01

Surface Point ID: SW-3 **Sampler(s):** H. Seaton, G. Eller

Location: In the stream directly across from MW-2

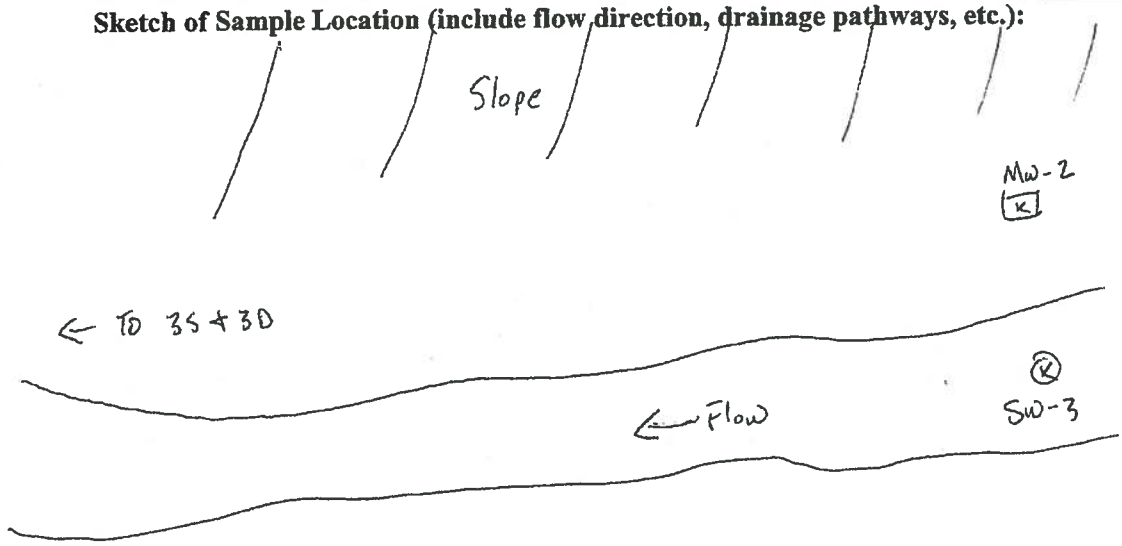
Field Parameters:

Time of Sampling:	1155	
pH:	7.28	
Temperature:	15.9	(°C)
Conductivity:	55.8	(µS)
Turbidity:	15.25	(ntu)

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

The weather was partly cloudy with temperatures in the 60s on 11/19/2015.

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



Signature: Harley Seaton **Date:** 11/19/15

QA/QC Sign Off: [illegible] **Date:** 12/3/15

Appendix II

Summary of Detections

Summary of Detections

WELL ID	PARAMETER	RESULT	UNITS	SWSL	COLLECT DATE
3404-MW2	1,1-Dichloroethane	20.7	µg/L	5	11/19/2015
3404-MW2	1,2-Dichloropropane	4.3	µg/L	1	11/19/2015
3404-MW2	1,4-Dichlorobenzene	4.8	µg/L	1	11/19/2015
3404-MW2	Barium	294	µg/L	100	11/19/2015
3404-MW2	Benzene	6	µg/L	1	11/19/2015
3404-MW2	cis-1,2-Dichloroethene	44.4	µg/L	5	11/19/2015
3404-MW2	Trichloroethene	4.7	µg/L	1	11/19/2015
3404-MW2	Vinyl chloride	7.7	µg/L	1	11/19/2015
3404-MW3D	1,2-Dichloroethane	1.1	µg/L	1	11/19/2015
3404-MW3D	1,2-Dichloropropane	1.1	µg/L	1	11/19/2015
3404-MW3D	1,4-Dichlorobenzene	3.5	µg/L	1	11/19/2015
3404-MW3D	cis-1,2-Dichloroethene	51.2	µg/L	5	11/19/2015
3404-MW3D	Thallium	8.8	µg/L	5.5	11/19/2015
3404-MW3D	Vinyl chloride	6.7	µg/L	1	11/19/2015
3404-MW3S	1,4-Dichlorobenzene	1.4	µg/L	1	11/19/2015
3404-MW3S	Barium	108	µg/L	100	11/19/2015
3404-MW3S	cis-1,2-Dichloroethene	5.6	µg/L	5	11/19/2015
3404-MW3S	Vinyl chloride	2	µg/L	1	11/19/2015
3404-MW3S	Zinc	23.1	µg/L	10	11/19/2015
3404-MW4	1,4-Dichlorobenzene	2.5	µg/L	1	11/19/2015
3404-MW4	Barium	101	µg/L	100	11/19/2015
3404-MW4	cis-1,2-Dichloroethene	18.8	µg/L	5	11/19/2015
3404-MW4	Thallium	8.8	µg/L	5.5	11/19/2015
3404-MW4	Vinyl chloride	17.3	µg/L	1	11/19/2015
3404-MW4	Zinc	10.7	µg/L	10	11/19/2015
3404-MW5	Zinc	16.3	µg/L	10	11/19/2015
3404-SW3	Zinc	10.1	µg/L	10	11/19/2015

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	1,1-Dichloroethane	20.7	µg/L	6	6	5	11/19/2015
3404-MW2	1,2-Dichloropropane	4.3	µg/L	0.6	0.6	1	11/19/2015
3404-MW2	Benzene	6	µg/L	1	1	1	11/19/2015
3404-MW2	Trichloroethene	4.7	µg/L	3	3	1	11/19/2015
3404-MW2	Vinyl chloride	7.7	µg/L	0.03	0.03	1	11/19/2015
3404-MW3D	1,2-Dichloroethane	1.1	µg/L	0.4	0.4	1	11/19/2015
3404-MW3D	1,2-Dichloropropane	1.1	µg/L	0.6	0.6	1	11/19/2015
3404-MW3D	Thallium	8.8	µg/L	0.28	0.28	5.5	11/19/2015
3404-MW3D	Vinyl chloride	6.7	µg/L	0.03	0.03	1	11/19/2015
3404-MW3S	Vinyl chloride	2	µg/L	0.03	0.03	1	11/19/2015
3404-MW4	Vinyl chloride	17.3	µg/L	0.03	0.03	1	11/19/2015
3404-MW4	Thallium	8.8	µg/L	0.28	0.28	5.5	11/19/2015

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	1.85	mg/L	11/19/2015
MW-2	Oxidation Reduction Potential	100.3	mV	11/19/2015
MW-2	pH	6.03	S.U.	11/19/2015
MW-2	Temperature	17.1	ºC	11/19/2015
MW-2	Ferrous Iron	0.5	mg/L	11/19/2015
MW-2	Dissolved Carbon Dioxide	90	mg/L	11/19/2015
MW-2	Conductivity	293.1	µS	11/19/2015
MW-2	Turbididty	4.4	NTU	11/19/2015
MW-2	Static Water Level	5.01	ft	11/19/2015
MW-2	Well Depth	13.18	ft	11/19/2015
MW-3S	pH	6.15	S.U.	11/19/2015
MW-3S	Temperature	16	ºC	11/19/2015
MW-3S	Conductivity	301.5	µS	11/19/2015
MW-3S	Ferrous Iron	0.0	mg/L	11/19/2015
MW-3S	Dissolved Carbon Dioxide	115	mg/L	11/19/2015
MW-3S	Static Water Level	16.97	ft	11/19/2015
MW-3S	Well Depth	24	ft	11/19/2015
MW-3S	Dissolved Oxygen	2.49	mg/L	11/19/2015
MW-3S	Oxidation Reduction Potential	57.6	mV	11/19/2015
MW-3D	Dissolved Oxygen	0.81	mg/L	11/19/2015
MW-3D	Oxidation Reduction Potential	29.4	mV	11/19/2015
MW-3D	pH	6.06	S.U.	11/19/2015
MW-3D	Temperature	15.8	ºC	11/19/2015
MW-3D	Ferrous Iron	0.0	mg/L	11/19/2015
MW-3D	Conductivity	294.7	µS	11/19/2015
MW-3D	Dissolved Carbon Dioxide	90	mg/L	11/19/2015
MW-3D	Turbididty	7.00	NTU	11/19/2015
MW-3D	Static Water Level	14.03	ft	11/19/2015
MW-3D	Well Depth	56.96	ft	11/19/2015
MW-4	pH	6.45	S.U.	11/19/2015
MW-4	Temperature	16	ºC	11/19/2015
MW-4	Conductivity	320.4	µS	11/19/2015
MW-4	Turbididty	7.72	NTU	11/19/2015
MW-4	Ferrous Iron	0.5	mg/L	11/19/2015
MW-4	Dissolved Carbon Dioxide	70	mg/L	11/19/2015
MW-4	Static Water Level	9.6	ft	11/19/2015
MW-4	Well Depth	14.4	ft	11/19/2015
MW-4	Dissolved Oxygen	3.92	mg/L	11/19/2015
MW-4	Oxidation Reduction Potential	34.5	mV	11/19/2015
MW-5	pH	5.45	S.U.	11/19/2015
MW-5	Temperature	13.2	ºC	11/19/2015
MW-5	Conductivity	36	µS	11/19/2015
MW-5	Turbididty	11.2	NTU	11/19/2015
MW-5	Static Water Level	4.63	ft	11/19/2015
MW-5	Well Depth	11.36	ft	11/19/2015

Summary of Field Parameters

WELL ID	PARAMETER	RESULT	UNITS	COLLECT DATE
SW-1	pH	6.92	S.U.	11/19/2015
SW-1	Temperature	17	ºC	11/19/2015
SW-1	Conductivity	48.4	µS	11/19/2015
SW-1	Turbididty	17.7	NTU	11/19/2015
SW-2	pH	7.01	S.U.	11/19/2015
SW-2	Temperature	16.8	ºC	11/19/2015
SW-2	Conductivity	57.8	µS	11/19/2015
SW-2	Turbididty	18.1	NTU	11/19/2015
SW-3	pH	7.28	S.U.	11/19/2015
SW-3	Temperature	15.9	ºC	11/19/2015
SW-3	Conductivity	55.8	µS	11/19/2015
SW-3	Turbididty	15.25	NTU	11/19/2015

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