North Wake Unlined Landfill Facility Permit No. 92-09 Semi-Annual Sampling Report

(October 2013 Sampling Event)

Wake County

Report

December 2013

WAKE COUNTY
NORTH CAROLINA

CDM Smith

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):

Consultant - CDM Smith Inc.

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

Name: Mathew F. Colone Phone: 919-787-5620

E-mail: colonemf@cdmsmith.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Wake County - North Wake Closed Unlined Landfill	9004 Deponie Drive Raleigh, NC 27615	92-09	.1600	October 15-17, 2013

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 Sampling Results
☐ 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.

Mathew F. Colone — Consultant — (919) 787-5620

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

Signature — 12/12/2013 Date — Affix NC Licensed/Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1851 GEOLOGIST MATHEW F. COLONE

12/12/2013

5400 Glenwood Ave, Suite 300, Raleigh, NC 27612

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F-0412

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

Revised 6/2009

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December 12, 2013

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

Subject: October 2013 Semi-Annual Groundwater Sampling Report
North Wake Closed Unlined Landfill
Facility Permit No. 92-09

Dear Ms. Drummond:

CDM Smith Inc., on behalf of Wake County (County), is submitting an electronic copy of the October 2013 semi-annual sampling event report. This letter report presents the results of the semi-annual sampling event that was recently completed at the North Wake Closed Unlined Landfill and constitutes the second semi-annual sampling event for 2013.

The groundwater monitoring network consists of the following wells: MW-11 (shallow background well), -11d (deep background well), -5R, -6, -6d, -7, -8, -8d, -9, -10, -10d, -22, -23, -23d, -24, -28, -28d, -29d, -30, -31, -31d, -32, -33, -34, -34d, -35, -36, -36d, TB-1a, TB-1a deep and surface water sampling locations: SW-2, -3, -7, and -8. Monitoring wells MW-28, -28d, -33, -34, -34d, and -35 are sampled annually during the spring event.

MW-5R has been sampled in place of MW-5 since April 2004 and is approximately 50 feet downgradient of MW-5. MW-27 was abandoned while MW-36 and -36d were being installed on November 24 and 25, 2008. MW-36 and - 36d are a nested pair of monitoring wells installed down-gradient of MW-9 and triangulated with MW-6 and -6d. These wells were installed in order to determine if contaminants had migrated beyond the facility boundary. SW-7 and SW-8 are surface water sampling locations on Abbot's Creek along the northern edge of the landfill that have been sampled since November 2008.

In a letter dated March 22, 2012, the North Carolina Department of Environment and Natural Resources – Solid Waste Section (SWS) approved the County's request to discontinue collecting

samples from select wells for herbicide and pesticide analyses during the semi-annual spring sampling event. However, the SWS requested that MW-29d continue to be sampled for bis(2-ethylhexyl) phthalate due to a detection from the March 2011 sampling event. MW-29d was not sampled for bis(2-ethylhexyl) phthalate during the October 2013 sampling event but samples will be collected and analyzed for bis(2-ethylhexyl) phthalate during the spring 2014 event. Field activities, sampling results for all wells and surface water locations, an evaluation of the groundwater corrective action effectiveness, and recommendations are discussed below.

Field Activities

Groundwater and surface water samples from the North Wake Closed Unlined Landfill were collected from October 15-17, 2013. Monitoring well and surface water sample locations are shown on **Figure 1**. Groundwater samples were collected by use of a peristaltic pump or disposable, laboratory decontaminated bailers. Groundwater elevations were measured at each well prior to sampling and are presented in **Table 1**. These groundwater elevations were used to construct potentiometric contours for this sampling event and are shown on **Figure 1**. The groundwater elevations and potentiometric contours were also used to estimate groundwater velocities at each well as presented in **Table 2**.

After depth to groundwater was measured, three well volumes of water were removed from each well prior to sampling to provide fresh formation water within the well water column. Each well volume and surface water sample was measured in the field for pH, conductivity, temperature, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) using a YSI-556 multi-parameter water quality meter and a HANNA HI 98703 turbidity meter. Wells that had elevated turbidity were allowed to stabilize prior to sample collection.The field parameters at the time of sampling are shown in **Table 1**.

Sampling Results

All groundwater samples were analyzed for Appendix I volatile organic compounds (VOCs) plus dichlorodifluoromethane and Appendix I metals plus mercury. Samples from monitoring wells MW-5R, -6, -8, -9, -10, -11, and -36 were analyzed for natural attenuation parameters per the Corrective Action Plan (CAP) that was approved by the SWS in March 2010. The groundwater and surface water samples were analyzed by ALS Environmental, Inc. located in Jacksonville, Florida.

In accordance with SWS guidelines the analytical results were reported to the laboratory specific method detection limit (MDL) and are quantifiable at or below SWS Limits (SWSLs). All monitoring wells and surface water locations for the closed Unlined Landfill had detections of analytes above the MDL with a majority of the detections below SWSLs. These detections were qualified as estimated or "J" flags. "B" flags, which indicate an analyte was detected in the method blank, were also reported.

The following list summarizes which analytes were detected above the SWSL at each sample location. Underlined analytes exceeded the North Carolina 2L Standard (NC 2L), Groundwater Protection Standard, or the North Carolina Surface Water Standards for Class C Waters. No "J" flag detections are listed. A complete summary of all detected and estimated concentrations for the October 2013 sampling event and previous events is presented in **Table 3**. Copies of the laboratory reports are provided in **Appendix A**.

MW-11 (Shallow Background)

Metals:	Barium
Volatile Organic Compounds:	None Detected

MW-11d (Deep Background)

Metals:	None Detected
Volatile Organic Compounds:	None Detected

MW-5R

Metals:	None Detected
Volatile Organic Compounds:	None Detected

MW-6

Metals:	<u>Cobalt</u>
Volatile Organic Compounds:	None Detected

MW-6d

Metals:	<u>Antimony</u>
Volatile Organic Compounds:	None Detected

MW-7

Metals:	<u>Cobalt</u>, Copper
Volatile Organic Compounds:	1,4-Dichlorobenzene

MW-8

Metals:	None Detected
Volatile Organic Compounds:	cis-1,2-Dichloroethene

MW-8d

Metals:	None Detected
Volatile Organic Compounds:	None Detected

MW-9
Metals: Barium, Cadmium
Volatile Organic Compounds: None Detected

MW-10
Metals: Mercury
Volatile Organic Compounds: Benzene, 1,4-Dichlorobenzene, cis-1,2-Dichloroethene, Tetrachloroethene, Trichloroethene

MW-10d
Metals: None Detected
Volatile Organic Compounds: None Detected

MW-22
Metals: Cadmium, Cobalt
Volatile Organic Compounds: None Detected

MW-23
Metals: None Detected
Volatile Organic Compounds: None Detected

MW-23d
Metals: None Detected
Volatile Organic Compounds: None Detected

MW-24
Metals: Zinc
Volatile Organic Compounds: Chloroform

MW-28
Metals: Not Sampled
Volatile Organic Compounds: Not Sampled

MW-28d
Metals: Not Sampled
Volatile Organic Compounds: Not Sampled

MW-29d
Metals: None Detected
Volatile Organic Compounds: None Detected

MW-30
Metals: Barium, Beryllium, Chromium, Copper, Vanadium, Zinc
Volatile Organic Compounds: None Detected

MW-31
Metals: Chromium
Volatile Organic Compounds: None Detected

MW-31d
Metals: None Detected
Volatile Organic Compounds: Chloroform

MW-32
Metals: Chromium, Copper, Vanadium, Zinc
Volatile Organic Compounds: None Detected

TB-1a
Metals: Cobalt, Copper
Volatile Organic Compounds: None Detected

TB-1a deep
Metals: None Detected
Volatile Organic Compounds: Chloroform

MW-33
Metals: Not Sampled
Volatile Organic Compounds: Not Sampled

MW-34
Metals: Not Sampled
Volatile Organic Compounds: Not Sampled

MW-34d
Metals: Not Sampled
Volatile Organic Compounds: Not Sampled

MW-35
Metals: Not Sampled
Volatile Organic Compounds: Not Sampled

MW-36
Metals: None Detected
Volatile Organic Compounds: None Detected

MW-36d
Metals: None Detected
Volatile Organic Compounds: 1,1-Dichloroethane, cis-1,2-Dichloroethene, Trichloroethene

SW-2
Metals: None Detected
Volatile Organic Compounds: None Detected

SW-3
Metals: Chromium
Volatile Organic Compounds: None Detected

SW-7
Metals: None Detected
Volatile Organic Compounds: None Detected

SW-8
Metals: None Detected
Volatile Organic Compounds: None Detected

Equipment Blank
Metals: None Detected
Volatile Organic Compounds: None Detected

Trip Blank
Metals: Not Tested
Volatile Organic Compounds: None Detected

It is likely that the recent and historic detections of chloroform in wells MW-24, -31, -31d, TB-1a, and TB-1a deep are attributed to a release from a municipal water line in the Falls River development and are not related to a release from the landfill.

"J" flags were not included in the previous list, but several locations had "J" flag detections that exceeded the standards. The "J" flag constituents above the standards along with their locations are listed below.

Antimony:	MW-23d, and TB-1a deep
Cobalt:	MW-6d, -8, -8d, -10, -11, -30, -31, -32, TB-1a deep, and -36
Thallium:	MW-6, -9, -24, and -30
Vanadium:	MW-6, -6d, -7, -8d, -9, -10, -11, -11d, -22, -23, -23d, -24, -31d, -36, -36d, TB-1a, and TB-1a deep
Vinyl Chloride:	MW-10

The equipment blank had "J" flag detections of copper and zinc below NC 2L Standards. No analytes were detected in the trip blank. The duplicate sample, identified as Dup, was collected from MW-6 and had similar analyte concentrations as those found in MW-6. **Table 4** presents a summary of all parameters detected during the October 2013 sampling event that exceeded the NC 2L or Groundwater Protection Standards.

Corrective Action Effectiveness Evaluation

The SWS expressed concern in May 2008 that VOCs may be migrating beyond the landfill property boundary and into Abbott's Creek based on detections above the NC 2L Standard in monitoring well MW-9. As a result, the SWS directed the County to install and sample groundwater monitoring wells, one shallow and one deep (i.e. MW-36 and -36d), downgradient of MW-9 to determine if VOCs may be migrating beyond the landfill property boundary, possibly discharging into Abbott's Creek. Additionally, surface water sample locations SW-7 and SW-8, located on Abbott's Creek, were added to the semi-annual monitoring program. Initial groundwater samples collected from MW-36 and -36d in December 2008 had detections of VOCs above NC 2L Standards. Samples collected from SW-7 and SW-8 since being added to the monitoring program in November 2008 have never had VOCs detected above the Surface Water Standards or SWSLs.

An Assessment of Corrective Measures Report was submitted to the SWS in accordance with the North Carolina Solid Waste Management Rule 15 NCAC 13B .1635 and approved in December 2009. The SWS approved the Selected Remedy of monitored natural attenuation paired with in situ remediation by air sparging to address groundwater contamination at the facility. A pilot test was conducted in July and August 2010 near MW-6 and -6d to evaluate the effectiveness of the air sparging remedy and to collect data for the full-scale system design in accordance with the CAP. The pilot test successfully reduced the concentrations of 1,1-dichloroethane and vinyl chloride to below their respective NC 2L Standard in MW-6d and vinyl chloride was not detected in samples collected from MW-6 during the October 2010 semi-annual sampling event.

The full-scale system was installed in October 2011 and was operational in August 2012. The air sparging system consists of 15 shallow wells screened across saturated saprolite and partially weathered rock and 14 wells screened in the shallow fractured bedrock. In addition to the air sparging

wells, the system also consists of an air compressor and control panel that are housed in a secured on-site control building. Routine inspections are performed on the system and a Field Inspection Log completed during each inspection is kept on file at the facility.

The County installed a vacuum extraction system around the perimeter of the landfill in January 2002 to prevent offsite migration of soil gas. The air sparging system was designed to work in tandem with the existing perimeter migration control system (PMCS) by recovering air and gas vapors produced by the air sparging system. Since previous work has indicated a relationship between the soil gas and the contaminated groundwater, the installation of the PMCS is likely to further reduce groundwater contaminant concentrations. As discussed in the approved CAP, the vacuum extraction system will be used in conjunction with the air sparging system to reduce VOCs in the bedrock and partially weathered rock between MW-9 and the MW-6 nested pair.

As part of the corrective action effectiveness evaluation, contaminant concentration trends for monitoring wells MW-6, -6d, -9, -36, and -36d were evaluated. Total VOC concentration trends for each well are presented on **Figures 2 through 6**. Trend results for each well are discussed below. The figures are provided following this letter.

Figure 2 presents a total VOC concentration trend analysis for samples collected from MW-6. VOCs in MW-6 significantly decreased after January 2002 when the PMCS was operational and were not detected from November 2004 to April 2007. The total VOC concentration in MW-6 slightly increased during the October 2012 sampling event compared to the April 2012 event when the air sparging system was not operational. The total VOC concentration has decreased since the October 2012 sampling event and benzene and vinyl chloride have been reported below laboratory detection limits since the April 2013 sampling event. Both analytes were detected above their respective NC 2L Standard in October 2012.

The trend analysis for total VOC concentrations in MW-6d is presented on **Figure 3**. VOCs were not detected at MW-6d from December 2001 through November 2007. The increase in total VOCs from samples collected during the May 2008 sampling event is a result of reporting “J” flag detections as required by the SWS. VOC concentrations in MW-6d have been reported as “J” flag detections below NC 2L Standards since the March 2011 sampling event.

Figure 4 presents a total VOC concentration trend analysis for samples collected from MW-9. Historically, MW-9 has had the highest concentration of VOCs compared to the other landfill monitoring wells. No VOCs were detected in samples collected from MW-9 during the October 2013 sampling event with the exception of “J” flag detections of 1,1-dichloroethane and cis-1,2-dichloroethene below their respective NC 2L Standard.

Trend analyses for total VOC concentrations in MW-36 and -36d are presented on **Figures 5 and 6** respectively. Both analyses indicate a decrease in contaminant concentrations over time. VOC concentrations in MW-36 have been below the NC 2L Standard since the April 2012 sampling event. Trichloroethene was reported below laboratory method detection limits for the first time since MW-36 was incorporated into the monitoring program. 1,1-Dichloroethane was detected at above the NC 2L Standard in MW-36d but shows a decrease in concentration over time. VOC concentrations in both monitoring wells are expected to continue to decrease while the air sparging system is operational.

Additional groundwater samples were collected from MW-5R, -6, -8, -9, -10, -11, and -36 for evaluation of monitored natural attenuation as part of the corrective action program as required by SWS guidelines. These parameters include biochemical oxygen demand, chemical oxygen demand, alkalinity, nitrate, chloride, sulfate, sulfide, total organic carbon, carbon dioxide, methane, ethane, ethene, ferrous iron, volatile fatty acids, dissolved hydrogen, and field measurements of pH, temperature, conductivity, ORP and DO. Geochemical results are presented in **Table 5**. The laboratory data for the additional parameters is included in **Appendix A**.

As discussed in the approved CAP, concentrations of some of the MNA data from select wells indicates that environments are present which favor reductive dechlorination; notably, the concentrations of nitrate, ferrous iron, sulfate, and carbon dioxide. The following evidence indicates that one or more mechanisms of natural attenuation and/or reductive dechlorination may be occurring at the site:

- VOC concentrations in contaminated wells continue to decline;
- The ratio of parent /daughter compounds continues to decrease over time;
- Nitrate, ferrous iron, sulfate, and carbon dioxide continue to be detected at concentrations favoring reductive dechlorination; and
- Concentrations of cis-1,2-dichloroethene continue to be greater than dichloroethene isomers trans 1,2-dichloroethene and 1,1-dichloroethene.

Recommendations

The County will continue with the semi-annual assessment monitoring program. In addition to sampling for Appendix I metals plus mercury, Appendix I VOCs plus dichlorodifluoromethane, and the Appendix II constituent, bis(2-ethylhexyl) phthalate (sampled at MW-29d only during the spring sampling event), samples collected from MW-5R, -6, -8, -9, -10, -11, and -36 will continue to be analyzed for natural attenuation parameters during the semi-annual events. The air sparging system will continue to operate and the effectiveness of the system will be re-evaluated after the next semi-annual sampling event in the spring of 2014.

If you have any questions or require further explanation, do not hesitate to call me at (919) 787-5620.

Very truly yours,

Mathew F. Colone, P.G.
CDM Smith Inc.

cc: John Roberson, WCSWM
Elliott Cornell, WCSWM

Table 1
Water Quality Parameters
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Water Quality Parameters						Groundwater Elevations		
	pH	Conductivity	Temperature	Turbidity	DO	ORP	TOC Elevation	Depth to Groundwater	Groundwater Elevation
	(S.U.)	(uS/cm)	(degrees Celsius)	(NTUs)	(mg/L)	(mVs)	(feet AMSL)	(feet)	(feet AMSL)
MW-5R	6.08	371	17.3	4	1.88	132.5	225.28	16.88	208.40
MW-6	6.32	551	18.6	8	1.81	12.9	219.80	12.79	207.01
MW-6d	6.06	165	17.2	98	2.39	144.9	218.61	13.07	205.54
MW-7	6.28	738	17.8	31	3.24	-31.1	234.15	12.41	221.74
MW-8	5.79	209	18.4	6	1.74	146.8	226.38	11.06	215.32
MW-8d	6.18	169	16.7	35	3.58	154.6	226.16	12.25	213.91
MW-9	6.88	269	19.0	65	7.89	165.7	242.69	30.40	212.29
MW-10	5.65	212	17.5	42	4.05	84.8	274.76	43.46	231.30
MW-10d	6.20	164	18.2	9	5.64	136.7	274.54	47.53	227.01
MW-11	5.49	89	16.5	34	7.84	211.6	343.63	43.13	300.50
MW-11d	5.78	101	16.8	14	6.82	181.1	343.27	43.31	299.96
MW-22	5.94	165	16.3	43	5.24	14.8	254.62	35.15	219.47
MW-23	5.93	90	16.1	187	8.91	194.9	274.83	45.31	229.52
MW-23d	5.83	147	16.0	12	7.01	165.7	274.89	45.49	229.40
MW-24	5.83	77	16.6	322	8.15	199.1	266.64	45.54	221.10
MW-27	**Abandoned**						**Abandoned**		
MW-28	**Not Sampled**						237.89	18.24	219.65
MW-28d							238.44	18.31	220.13
MW-29d	5.83	121	15.9	17	7.17	179.1	275.06	41.91	233.15
MW-30	5.83	118	16.1	308	5.21	146.1	282.32	50.94	231.38
MW-31	5.93	128	16.6	419	6.81	219.3	261.67	33.06	228.61
MW-31d	6.13	151	17.0	37	3.72	168.1	260.92	32.51	228.41
MW-32	5.35	75	16.4	191	4.63	203.3	242.99	17.48	225.51
TB-1a	5.92	172	16.0	235	3.59	-20.3	255.05	28.94	226.11
TB-1a deep	5.92	193	16.3	44	2.64	111.3	256.01	31.02	224.99
MW-33	**Not Sampled**						222.01	13.28	208.73
MW-34							221.96	15.03	206.93
MW-34d							222.16	15.35	206.81
MW-35							223.48	18.01	205.47
MW-36	5.82	138	15.6	238	3.89	188.5	237.40	27.07	210.33
MW-36d	6.21	283	16.2	64	2.74	143.8	237.68	27.26	210.42
Surface Water Sample Location Code									
SW-2	6.77	127	18.6	19	8.44	146.5			
SW-3	7.04	138	17.0	8	7.49	121.2			
SW-7	6.96	108	16.9	26	9.01	121.6			
SW-8	6.99	100	16.8	31	9.02	112.4			

Notes:
1. AMSL - Above Mean Sea Level
2. TOC - Top of Casing
3. SW - Surface Water
4. MW-27 was abandoned on November 24, 2008 in accordance with 15A NCAC 2C .0113.
5. MW-36/36d were installed in November 2008.
6. Monitoring wells MW-28, -28d, -33, -34, -34d, and -35 are sampled yearly during the spring event.
7. Turbidity readings were recorded at the time samples were collected.
8. uS/cm - Microsiemens per centimeter
9. mg/L - Milligrams per liter
10. ORP - Oxidation-Reduction Potential
11. NTUs - Nephelometric Turbidity Units
12. mVs - Millivolts
13. S.U. - Standard Units
14. DO - Dissolved Oxygen

Table 2
Summary of Calculated Groundwater Flow Velocities
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

	Sampling Date:		11/11/2005		4/13/2006		11/9/2006		4/17/2007		11/9/2007	
Monitoring Well Code	Hydraulic Conductivity feet/day (cm/s)	Effective Porosity	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)
MW-5R	0.33 1.16E-04	0.18	0.0179	3.28E-02	0.0417	7.65E-02	0.0399	7.32E-02	0.0125	2.29E-02	0.0119	2.18E-02
MW-6	10.58 3.73E-03	0.13	0.0172	1.40E+00	0.0172	1.40E+00	0.0172	1.40E+00	0.0132	1.07E+00	0.0125	1.02E+00
MW-7	1.15 4.06E-04	0.18	0.0172	1.10E-01	0.0172	1.10E-01	0.0172	1.10E-01	0.0208	1.33E-01	0.0278	1.78E-01
MW-8	3.61 1.27E-03	0.18	0.0217	4.35E-01	0.0313	6.28E-01	0.0313	6.28E-01	0.0135	2.71E-01	0.0125	2.51E-01
MW-9	1.22 4.30E-04	0.30	0.0152	6.18E-02	0.0152	6.18E-02	0.0152	6.18E-02	0.0200	8.13E-02	0.0172	6.99E-02
MW-10	0.509 1.80E-04	0.05	0.0250	2.55E-01	0.0250	2.55E-01	0.0250	2.55E-01	0.0417	4.25E-01	0.0556	5.66E-01
MW-11	5.66 2.00E-03	0.13	0.0200	8.71E-01	0.0204	8.88E-01	0.0204	8.88E-01	0.0213	9.27E-01	0.0213	9.27E-01
MW-22	0.07 2.47E-05	0.18	0.0278	1.08E-02	0.0385	1.50E-02	0.0385	1.50E-02	0.0400	1.56E-02	0.0278	1.08E-02
MW-23	3.59 1.27E-03	0.30	0.0208	2.49E-01	0.0227	2.72E-01	0.0227	2.72E-01	0.0208	2.49E-01	0.0196	2.35E-01
MW-24	0.34 1.20E-04	0.30	0.0161	1.82E-02	0.0156	1.77E-02	0.0156	1.77E-02	0.0313	3.55E-02	0.0417	4.73E-02
MW-36	17.56 6.19E-03	0.30										
MW-36D	0.78 2.75E-04	0.10										

Notes:

1. MW-36/36D were installed in November 2008.
2. cm/s - centimeters per second
3. Hydraulic conductivity and effective porosity values are estimated from previously performed slug tests and grain size analyses.
4. The gradient and linear velocity values shown for MW-11 are based on the average of all the listed wells, with the exception of MW-36D.

Table 2
Summary of Calculated Groundwater Flow Velocities
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

	Sampling Date:		5/15-21/2008		11/5-08/2008		3/10-13/2009		12/02-04/2009		5/11-13/2010	
Monitoring Well Code	Hydraulic Conductivity feet/day (cm/s)	Effective Porosity	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)
MW-5R	0.33 1.16E-04	0.18	0.0230	4.21E-02	0.0232	4.26E-02	0.0229	4.20E-02	0.0230	4.22E-02	0.0234	4.29E-02
MW-6	10.58 3.73E-03	0.13	0.0202	1.65E+00	0.0203	1.65E+00	0.0203	1.65E+00	0.0200	1.63E+00	0.0207	1.68E+00
MW-7	1.15 4.06E-04	0.18	0.0250	1.60E-01	0.0251	1.61E-01	0.0251	1.60E-01	0.0251	1.61E-01	0.0256	1.64E-01
MW-8	3.61 1.27E-03	0.18	0.0243	4.87E-01	0.0242	4.85E-01	0.0241	4.84E-01	0.0242	4.86E-01	0.0246	4.93E-01
MW-9	1.22 4.30E-04	0.30	0.0197	8.00E-02	0.0198	8.05E-02	0.0197	8.02E-02	0.0198	8.04E-02	0.0201	8.18E-02
MW-10	0.509 1.80E-04	0.05	0.0168	1.71E-01	0.0171	1.74E-01	0.0170	1.73E-01	0.0171	1.74E-01	0.0170	1.73E-01
MW-11	5.66 2.00E-03	0.13	0.0212	9.23E-01	0.0213	9.29E-01	0.0211	9.17E-01	0.0211	9.19E-01	0.0214	9.31E-01
MW-22	0.07 2.47E-05	0.18	0.0181	7.03E-03	0.0181	7.04E-03	0.0181	7.04E-03	0.0182	7.06E-03	0.0183	7.11E-03
MW-23	3.59 1.27E-03	0.30	0.0194	2.33E-01	0.0196	2.34E-01	0.0196	2.34E-01	0.0196	2.34E-01	0.0196	2.34E-01
MW-24	0.34 1.20E-04	0.30	0.0244	2.76E-02	0.0246	2.78E-02	0.0245	2.78E-02	0.0247	2.80E-02	0.0248	2.81E-02
MW-36	17.56 6.19E-03	0.30					0.0194	1.14E+00	0.0194	1.14E+00	0.0198	1.16E+00
MW-36D	0.78 2.75E-04	0.10					0.0193	1.50E-01	0.0193	1.51E-01	0.0196	1.53E-01

Notes:

1. MW-36/36D were installed in November 2008.
2. cm/s - centimeters per second
3. Hydraulic conductivity and effective porosity values are estimated from previously performed slug tests and grain size analyses.
4. The gradient and linear velocity values shown for MW-11 are based on the average of all the listed wells, with the exception of MW-36D.

Table 2
Summary of Calculated Groundwater Flow Velocities
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

	Sampling Date:		10/25-27/2010		3/15-16/2011		10/31-11/2/2011		4/24-28/2012		10/22-24/2012	
Monitoring Well Code	Hydraulic Conductivity feet/day (cm/s)	Effective Porosity	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)
MW-5R	0.33 1.16E-04	0.18	0.0237	4.34E-02	0.0233	4.28E-02	0.0233	4.27E-02	0.0232	4.25E-02	0.0234	4.29E-02
MW-6	10.58 3.73E-03	0.13	0.0206	1.68E+00	0.0204	1.66E+00	0.0203	1.65E+00	0.0203	1.65E+00	0.0204	1.66E+00
MW-7	1.15 4.06E-04	0.18	0.0256	1.63E-01	0.0254	1.62E-01	0.0253	1.62E-01	0.0253	1.62E-01	0.0254	1.62E-01
MW-8	3.61 1.27E-03	0.18	0.0248	4.98E-01	0.0246	4.93E-01	0.0245	4.91E-01	0.0246	4.93E-01	0.0245	4.91E-01
MW-9	1.22 4.30E-04	0.30	0.0201	8.19E-02	0.0199	8.09E-02	0.0198	8.06E-02	0.0198	8.07E-02	0.0199	8.10E-02
MW-10	0.509 1.80E-04	0.05	0.0172	1.75E-01	0.0172	1.75E-01	0.0171	1.74E-01	0.0170	1.73E-01	0.0173	1.76E-01
MW-11	5.66 2.00E-03	0.13	0.0215	9.36E-01	0.0213	9.28E-01	0.0213	9.26E-01	0.0213	9.25E-01	0.0213	9.30E-01
MW-22	0.07 2.47E-05	0.18	0.0184	7.16E-03	0.0183	7.11E-03	0.0183	7.10E-03	0.0182	7.09E-03	0.0183	7.11E-03
MW-23	3.59 1.27E-03	0.30	0.0197	2.36E-01	0.0197	2.36E-01	0.0197	2.36E-01	0.0198	2.36E-01	0.0198	2.37E-01
MW-24	0.34 1.20E-04	0.30	0.0250	2.83E-02	0.0248	2.81E-02	0.0249	2.82E-02	0.0248	2.82E-02	0.0250	2.83E-02
MW-36	17.56 6.19E-03	0.30	0.0198	1.16E+00	0.0195	1.14E+00	0.0195	1.14E+00	0.0195	1.14E+00	0.0196	1.14E+00
MW-36D	0.78 2.75E-04	0.10	0.0196	1.53E-01	0.0194	1.51E-01	0.0193	1.51E-01	0.0194	1.51E-01	0.0194	1.51E-01

Notes:

1. MW-36/36D were installed in November 2008.
2. cm/s - centimeters per second
3. Hydraulic conductivity and effective porosity values are estimated from previously performed slug tests and grain size analyses.
4. The gradient and linear velocity values shown for MW-11 are based on the average of all the listed wells, with the exception of MW-36D.

Table 2
Summary of Calculated Groundwater Flow Velocities
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

	Sampling Date:		4/16-18/2013		10/15-17/2013	
Monitoring Well Code	Hydraulic Conductivity feet/day (cm/s)	Effective Porosity	Gradient	Average Linear Velocity (feet/day)	Gradient	Average Linear Velocity (feet/day)
MW-5R	0.33 1.16E-04	0.18	0.0232	4.25E-02	0.0237	4.34E-02
MW-6	10.58 3.73E-03	0.13	0.0203	1.65E+00	0.0206	1.68E+00
MW-7	1.15 4.06E-04	0.18	0.0254	1.62E-01	0.0257	1.64E-01
MW-8	3.61 1.27E-03	0.18	0.0244	4.90E-01	0.0248	4.97E-01
MW-9	1.22 4.30E-04	0.30	0.0198	8.06E-02	0.0201	8.17E-02
MW-10	0.509 1.80E-04	0.05	0.0170	1.73E-01	0.0171	1.74E-01
MW-11	5.66 2.00E-03	0.13	0.0212	9.25E-01	0.0215	9.36E-01
MW-22	0.07 2.47E-05	0.18	0.0182	7.08E-03	0.0184	7.16E-03
MW-23	3.59 1.27E-03	0.30	0.0198	2.37E-01	0.0198	2.37E-01
MW-24	0.34 1.20E-04	0.30	0.0249	2.82E-02	0.0251	2.84E-02
MW-36	17.56 6.19E-03	0.30	0.0195	1.14E+00	0.0198	1.16E+00
MW-36D	0.78 2.75E-04	0.10	0.0193	1.51E-01	0.0196	1.53E-01

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		**1***	**10**	**700**	**4***	**2**	**10**	**1***	**1,000**	**15**	**1**	**100**	**20**	**20**	**2,000***	**0.2***	**0.3***	**1,000**
Solid Waste Section Limit		**6**	**10**	**100**	**1**	**1**	**10**	**10**	**10**	**10**	**0.2**	**50**	**10**	**10**	**100**	**5.5**	**25**	**10**
MW-11	15-Apr-94			221				**23**	54	14							**50**	88
MW-11	11-May-94			146				**19**	55	14							**50**	83
MW-11	10-Jun-94			191				**27**	111	7.6		20					**90**	114
MW-11	3-Oct-94			143			**16**	**26**	74	8							**60**	85
MW-11	13-Jun-95																	
MW-11	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-11	31-Oct-95		**11**	842	**8**		**24**	**71**	331	**26**		87					**117**	314
MW-11	22-Mar-96							**15**			**1.8**						**51**	70
MW-11	29-Nov-96		**35**															
MW-11	22-Apr-97																	130
MW-11	31-Oct-97																	66
MW-11	11-May-98																	
MW-11	8-Dec-98					**2.1**												
MW-11	14-Apr-99																	
MW-11	30-Nov-99																	
MW-11	5-Apr-00					1.2												
MW-11	18-Dec-00																	
MW-11	18-Apr-01																	
MW-11	27-Nov-01			311					16.5									29.7
MW-11	5-Apr-02																	
MW-11	5-Nov-02																	
MW-11	15-Apr-03																	
MW-11	29-Oct-03																	
MW-11	18-Nov-04																	
MW-11	21-Apr-05																	
MW-11	11-Nov-05																	83
MW-11	14-Apr-06																	
MW-11	10-Nov-06																	82
MW-11	20-Apr-07																	21
MW-11	8-Nov-07			332	2.1				39	12							**58**	113
MW-11	15-May-08			77.8J			5.4J		10.5	3.92J				4.48J		**5.63**	**2.9J**	16.1
MW-11	10-Nov-08			53.1J	3.03	0.35JB	2.73JB		5.94JB	9.78JB				4.02JB			**1.14J**	8.18J
MW-11	11-Mar-09			99.1JB	**6.29**	0.24J	4.39JB	**6.51JB**	13.6B	5.84JB				6.34JB			**20.3JB**	20.7
MW-11	3-Dec-09			412	2.36	0.022J	**14.9**	**25.4**	102B	**19.2**		14.5J	10.7				**99B**	120B
MW-11	12-May-10			62.1J			1.45J		1.92J								**2.67J**	12.6
MW-11	26-Oct-10			143			3.50J	**5.47J**	25.8	5.69J							**23.0J**	42.7
MW-11	17-Mar-11			76.7J			1.6J		3.88J							0.265J	**3.51J**	24.3
MW-11	1-Nov-11			80.7J			1.9J		6.33JB			2.14JB					**3.61J**	19.6
MW-11	25-Apr-12			65.3J					2.37J								**3.23J**	12.1
MW-11	23-Oct-12			80.6J				**1.42J**	3.66J								**5.32J**	19.7
MW-11	17-Apr-13			90J	0.2J		2J	**2J**	8J	1J		1J					**9J**	20B
MW-11	16-Oct-13			100	0.1J	0.2J	2J	**1J**	4J	0.5J		0.9J					**5J**	15JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-11d	31-Oct-95					**2**												
MW-11d	22-Mar-96					1												
MW-11d	29-Nov-96			26														
MW-11d	22-Apr-97																	54
MW-11d	31-Oct-97																	26
MW-11d	11-May-98																	69
MW-11d	8-Dec-98					1.9												
MW-11d	14-Apr-99																	
MW-11d	30-Nov-99																	
MW-11d	5-Apr-00																	
MW-11d	18-Dec-00																	
MW-11d	18-Apr-01																	
MW-11d	27-Nov-01																	
MW-11d	5-Apr-02										0.3							
MW-11d	5-Nov-02																	
MW-11d	15-Apr-03																	
MW-11d	29-Oct-03																	
MW-11d	18-Nov-04																	
MW-11d	21-Apr-05																	
MW-11d	11-Nov-05																	
MW-11d	14-Apr-06																	
MW-11d	10-Nov-06																	
MW-11d	20-Apr-07																	
MW-11d	8-Nov-07																	16
MW-11d	15-May-08			59.7J	3.07		6.41J		8.21J	4.59J				3.98J		**6.91**	**0.97J**	9.82J
MW-11d	10-Nov-08			37.6J		0.36JB	1.94JB		5.8JB	8.5JB				4.37JB			**4.09J**	4.14J
MW-11d	16-Mar-09		4.11J	87.7JB	**6.11B**	0.41J	7.14JB		15.3B	6.94JB				1.22JB			**20.1J**	21.9
MW-11d	4-Dec-09			61.4JB			5.41JB		8.2JB					3.16JB			**7.28JB**	8.85JB
MW-11d	13-May-10	**1.01J**		47.8J			5.10J		3.10J								**5.50J**	12.3
MW-11d	27-Oct-10	**1.73J**		41.3J			3.56J		2.79J								**3.82J**	9.73J
MW-11d	18-Mar-11	0.852J		51.2J			3.43J		4.41J								**3.73J**	8.04J
MW-11d	2-Nov-11			45.5J			2.18J		4.14JB								**2.45J**	5.86J
MW-11d	26-Apr-12	0.247J		44.2J			3.04J		9.68JB	3.31J							**2.05J**	4.62J
MW-11d	24-Oct-12			43.7J		0.375J	2.40J										**2.53J**	5.10J
MW-11d	18-Apr-13	0.4J		50J		0.1J	2JB	0.2J	1J			0.6J						4JB
MW-11d	17-Oct-13	0.6J	0.6J	50J		0.3J	1J	0.2J	1J		0.02J	0.6J					**2J**	2JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		**1***	**10**	**700**	**4***	**2**	**10**	**1***	**1,000**	**15**	**1**	**100**	**20**	**20**	**2,000***	**0.2***	**0.3***	**1,000**
Solid Waste Section Limit		**6**	**10**	**100**	**1**	**1**	**10**	**10**	**10**	**10**	**0.2**	**50**	**10**	**10**	**100**	**5.5**	**25**	**10**
MW-5	6-Mar-94			76														110
MW-5	15-Apr-94			60		0.9								**62**				47
MW-5	11-May-94			58		0.5			11									28
MW-5	31-May-94			66				11				17						63
MW-5	10-Jun-94			54						2.5								20
MW-5	30-Sep-94			48										7.3				10
MW-5	13-Jun-95																	
MW-5	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	31-Oct-95					1												
MW-5 (dup)	31-Oct-95					1												
MW-5	30-Jan-96																	237
MW-5	29-Nov-96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	22-Apr-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	1-Nov-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	6-May-98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	6-Aug-98				2.2	**4.9**	32	24									68	190
MW-5	8-Dec-98					1.5												
MW-5	16-Apr-99					1.5		28.3										
MW-5	2-Dec-99					1		49.8										
MW-5	11-Apr-00							34.8										
MW-5	20-Dec-00							26.9										
MW-5	16-Apr-01							32.1										
MW-5	3-Dec-01							19.3										
MW-5	12-Apr-02							34.9										70.5
MW-5	5-Nov-02							37.7										
MW-5	17-Apr-03							55.1										
MW-5	4-Nov-03			533		**3.06**		**113**										
MW-5 (dup)	4-Nov-03			590		**3.48**		**123**										
MW-5	14-Apr-04					1.52		55.3										
MW-5	18-Nov-04							**166**										57
MW-5	21-Apr-05							18										
MW-5	11-Nov-05							**139**										57
MW-5	14-Apr-06							**90**										
MW-5	9-Nov-06							23										
MW-5	19-Apr-07			125				16										
MW-5	9-Nov-07			164														
MW-5R	21-Apr-04		**12.4**															
MW-5R	21-May-08			94J	1.42J		2.36J		4.54J									44.1
MW-5R	10-Nov-08			106		0.53JB	2.74JB	**5.65J**	4.61JB	6.76JB		9.87J		4.41JB			**2.76J**	8.23J
MW-5R	11-Mar-09			116B	0.63J		4.97JB	**10.5B**	5.48JB	4.30JB		5.44J		7.03JB			**4.16JB**	9.72J
MW-5R	3-Dec-09			106				**3.6J**	3.2JB			2.36					**1.45JB**	38.3B
MW-5R	12-May-10			96.9J			2.85J	**1.17J**				3.11J						6.29J
MW-5R	25-Oct-10			77.0J		1.66	3.45J		6.88J	14.4		2.43J		11.8				25
MW-5R	16-Mar-11			95J			4.62J					3.39J				**0.267J**		6.9J
MW-5R	31-Oct-11			123			3.28J	**2.17J**				5.83JB	1.13J			0.152J		8.33J
MW-5R	24-Apr-12	0.411J		97.3J			2.79J					2.47J				0.170J		4.28J
MW-5R	22-Oct-12			99.3J			1.82J					3.61J				0.114J		23.9
MW-5R	17-Apr-13			80J	0.08J		2J	0.3J				3J				0.1J		5JB
MW-5R	16-Oct-13			90J	0.05J		1J	0.5J	0.4J			3J				0.1J		5JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		**1***	**10**	**700**	**4***	**2**	**10**	**1***	**1,000**	**15**	**1**	**100**	**20**	**20**	**2,000***	**0.2***	**0.3***	**1,000**
Solid Waste Section Limit		**6**	**10**	**100**	**1**	**1**	**10**	**10**	**10**	**10**	**0.2**	**50**	**10**	**10**	**100**	**5.5**	**25**	**10**
MW-6	6-Mar-94			190			**32**	**10**	33	**18**		33					**63**	51
MW-6	15-Apr-94			144			**20**	**12**	20	11				7.3			**50**	27
MW-6	11-May-94			175			**30**	**13**	33	9.3				7.3			**70**	35
MW-6	1-Jun-94			260	**5.4**		**49**	**16**	28	14		13					**100**	72
MW-6	25-Aug-94			68										7.3				
MW-6	29-Sep-94			110			**19**		19	6.9				7.3			**40**	16
MW-6	13-Jun-95				2		**22**				**2.6**						**41**	
MW-6	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.5	NS	NS	NS	NS	NS	NS	NS
MW-6	31-Oct-95										**2.5**							
MW-6	30-Jan-96				**7**		**44**	**12**		13	**1.8**						**65**	61
MW-6	29-Nov-96			150	2		**20**	**6**	21	6	0.83						**52**	40
MW-6	22-Apr-97						**12**				**1.1**							67
MW-6	2-Nov-98						**14**				0.54							28
MW-6	6-May-98										0.65							
MW-6 (dup)	6-May-98																	
MW-6	8-Dec-98					1.4					0.81							
MW-6	16-Apr-99										0.7							
MW-6	2-Dec-99										0.9							
MW-6	11-Apr-00										**1.1**							
MW-6	19-Dec-00										**1.8**							
MW-6	16-Apr-01										**1.9**							
MW-6	3-Dec-01										0.6							
MW-6	12-Apr-02																	
MW-6	5-Nov-02										0.9							
MW-6	17-Apr-03							**14.4**			0.7							
MW-6	4-Nov-03							**30.1**			0.464							
MW-6	14-Apr-04		**20.6**					**48.1**			0.283							
MW-6	18-Nov-04					**2**	**47**	**88**			0.53						**41**	
MW-6	21-Apr-05							**33**										
MW-6	11-Nov-05					1	**19**	**50**										
MW-6	14-Apr-06					**2**	**10**	**69**										
MW-6	9-Nov-06						**10**	**65**										
MW-6	19-Apr-07			461				**89**										13
MW-6	9-Nov-07			701				**61**										
MW-6	20-May-08			547	3.34	0.57J	4.84J	**92.3**	14.5	5.31J	0.167J	16.3J		1.6J		**14.8**		32.9
MW-6	11-Nov-08			759B	3.61B	0.25J	7.98JB	**74.4**	20.2B	5.74J		19.1J		10.0B		**15.0**	**7.56JB**	6.90JB
MW-6	11-Mar-09			477B		0.58J	5.14JB	**72.1B**	10.4B	7.43JB	0.143J	14J		8.39JB		**7.8**	**3.78JB**	4.50J
MW-6	3-Dec-09			449	0.61J	0.31J	2.47J	**62.4**	7.16JB			11.4J	3.7J					3.41JB
MW-6	12-May-10	0.286J		575		**2.03**		**80**	3.44J	2.10J		15.8J	4.88J	3.26J		0.259J		5.33J
MW-6	26-Oct-10	0.338JB		416		1.02		**37.4**	8.73J	9.55J		10.5J	3.32J	9.23J				17.5
MW-6	16-Mar-11			365			7.08J	**57.7**	4.66J			11.5J	2.68J	3.18J		**0.741J**		51.3
MW-6	1-Nov-11	0.229J	3.98J	454			6.35J	**65.7**	4.04JB			18.2JB	2.55J	4.11J				5.36J
MW-6	24-Apr-12	0.244J		182			3.49J	**54.9**				8.45J		2.18J		0.134J		117
MW-6	22-Oct-12			258	0.148J		1.59J	**80.4**				15.1J						
MW-6	17-Apr-13			100J	0.05J	1.6		**35**	4J		0.17J	6J				**0.3J**		9JB
MW-6	16-Oct-13			90J	0.04J	0.3J		**34**	2J		0.02J	5J		2J		**0.2J**	**3J**	5JB
MW-6 (dup)	16-Oct-13			90J		0.2J	0.6J	**35**	2J		0.04J	6J		2J		**0.2J**	**3J**	

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-6d	8-Jun-01																	
MW-6d	4-Dec-01																	
MW-6d	9-Apr-02																	
MW-6d	7-Nov-02																	
MW-6d	16-Apr-03																	
MW-6d	5-Nov-03																	
MW-6d	21-Apr-04						**17.3**											
MW-6d	18-Nov-04					1												
MW-6d	21-Apr-05					1												
MW-6d	11-Nov-05					1												
MW-6d	11-Apr-06					1												
MW-6d	9-Nov-06																	
MW-6d	20-Apr-07																	11
MW-6d	8-Nov-07																	
MW-6d	20-May-08			34.2J	0.98J		5.56J		6.79J								**0.61J**	
MW-6d	6-Nov-08			80.3JB	1.96B		**16.3B**	**4.52J**	15.9B	9.04JB		6.77J		8.74JB		**6.3**	**17.8JB**	13.2
MW-6d (dup)	6-Nov-08		2.57J	77.0JB	**11.6B**		**13.5B**	**4.63J**	14.0B	9.24JB		5.22J		8.35JB			**17.9JB**	12
MW-6d	12-Mar-09			69.7J			2.30J		5.24JB							**5.51**	**7.89JB**	6.82J
MW-6d	3-Dec-09			119			2.39J		6.14JB			5.84J					**6.45JB**	9.62JB
MW-6d	12-May-10	0.619J		77.7J			3.06J	**2.35J**	3.50J			2.40J					**4.15J**	10.3
MW-6d	27-Oct-10	**3.99J**		52.3J			2.17J		3.76J								**4.41J**	12.5
MW-6d	16-Mar-11	0.961J		68.2J			3.05J		3.91J							**0.428J**	**3.28J**	6.94J
MW-6d	2-Nov-11	**2.63J**		100			5.42J	**1.26J**	6.46JB			4.68J					**3.98J**	13.1
MW-6d	26-Apr-12	**1.59J**		72J			5.68J		7.24JB	2.37J		2.61J					**4J**	6.97J
MW-6d (dup)	26-Apr-12	**1.22J**		66J			5.53J		6.45JB	2.10J		2.20J					**3.78J**	5.88J
MW-6d	23-Oct-12	**1.21J**	2.84J	71.1J		0.407J	4.83J		2.83J			2.11J					**3.59J**	6.02J
MW-6d	18-Apr-13	**3.1J**		80J	0.1J	0.5J	4J	0.9J	3J	0.4J		2J						8JB
MW-6d (dup)	18-Apr-13	**2.8J**		70J	0.09J	0.4J	4J	0.8J	3J	0.4J		2J						6JB
MW-6d	17-Oct-13	**6.9**		80J	0.1J	0.5J	4J	**1J**	4J	0.6J	0.03J	3J					**3J**	7JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-7	6-Mar-94			190			**48**	**17**	110	**22**		21					**67**	82
MW-7	15-Apr-94			136			**30**	**11**	53	**25**		20					**40**	56
MW-7	11-May-94			51			**30**	**11**	24	6.8							**40**	29
MW-7	31-May-94			350	**5.4**		**89**	**30**	180	**34**		40					**140**	150
MW-7	25-Aug-94			44					25	2.7								19
MW-7	29-Sep-94			49			**15**		26	4.7							**20**	20
MW-7	13-Jun-95																	
MW-7	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	31-Oct-95																	
MW-7	30-Jan-96				2		**35**			10								
MW-7	29-Nov-96			17														
MW-7	21-Apr-97										0.38							
MW-7 (dup)	21-Apr-97										0.22							
MW-7	1-Nov-97										0.58							48
MW-7	6-May-98										0.24							
MW-7	8-Dec-98					**2.6**	**15**				0.25							
MW-7	16-Apr-99																	
MW-7	2-Dec-99										0.2							
MW-7	11-Apr-00										0.2							
MW-7 (dup)	11-Apr-00										0.2							
MW-7	19-Dec-00										0.3							
MW-7 (dup)	19-Dec-00										0.3							
MW-7	16-Apr-01																	
MW-7	4-Dec-01																	
MW-7	9-Apr-02							**10.1**										
MW-7	6-Nov-02																	
MW-7	16-Apr-03							**20.3**										
MW-7	5-Nov-03							**19.2**										
MW-7	21-Apr-04							**29.5**										
MW-7 (dup)	21-Apr-04		**12.1**					**24**										
MW-7	18-Nov-04							**44**										
MW-7	21-Apr-05							**44**										
MW-7	11-Nov-05							**15**										
MW-7	11-Apr-06							**26**										
MW-7	9-Nov-06					**2**	**36**	**29**			0.63							56
MW-7	20-Apr-07							**16**										18
MW-7	8-Nov-07					1	**11**	**14**	13									20
MW-7	15-May-08		2.16J	43.4J			**10.8**	**19.3**	12.6	4.28J		9.94J	10.4	5.99J		**21.1**		9.72J
MW-7	5-Nov-08		2.68J	38.3JB	**6.84B**		3.42JB		6.81JB	9.68JB				8.61JB	38JB		**3.03JB**	6.38J
MW-7	10-Mar-09			10.7J			8.23J	**19.3**	8.17J	4.72J		6.35J		3.42JB			**9.49J**	
MW-7	2-Dec-09			52.8J	0.74J	0.66J	**18.5**	**17.5**	27.5B			10J					**15.3JB**	13.8B
MW-7 (dup)	2-Dec-09			38.4J	0.56J	0.52J	9.86J	**14.5**	20.7B			7.69J					**9.07JB**	8.36JB
MW-7	13-May-10			49.7J		0.90J	1.64J	**32.7**	16.2	4.14J		10.7J	0.889J				**4.95J**	15.6
MW-7	27-Oct-10			66.5J		1.32	6.18J	**33.8**	10.1	3.50J		15.1J	0.999J	2.68J			**8.20J**	27.7
MW-7	16-Mar-11			51.7J		1.2	6.76J	**30.5**	4.81J			11.8J	1.42J	3.14J		**0.36J**	**1.73J**	11.8
MW-7	2-Nov-11			67.1J		0.38J	**14.9**	**31.6**	21.2B			13.4J	1.17J	3.27J			**9.74J**	44.8
MW-7	26-Apr-12			50.3J		0.805J	**13.3**	**27.1**	10.7B	4.04J		10.9J		3.63J			**7.24J**	13.9
MW-7	22-Oct-12			80.7J			**29.6**	**30.8**	37.4	6.69J		11.5J		2.02J		0.152J	**24.2J**	24.1
MW-7	16-Apr-13			80J	0.5J	0.6J	**35**	**27**	61	9J	0.18J	13J		2J		**0.2J**	**24J**	25B
MW-7	16-Oct-13			60J	0.1J	0.6J	5J	**37**	11	1J	0.04J	12J		3J			**12J**	11JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		**1***	**10**	**700**	**4***	**2**	**10**	**1***	**1,000**	**15**	**1**	**100**	**20**	**20**	**2,000***	**0.2***	**0.3***	**1,000**
Solid Waste Section Limit		**6**	**10**	**100**	**1**	**1**	**10**	**10**	**10**	**10**	**0.2**	**50**	**10**	**10**	**100**	**5.5**	**25**	**10**
MW-8	6-Mar-94			120			**17**		26			13					**35**	49
MW-8	15-Apr-94			97					22	4.2		20					**30**	35
MW-8	11-May-94			89					20	4.3							**20**	26
MW-8	31-May-94			330	**5.4**		**81**	**34**	90	**16**		39					**150**	150
MW-8	25-Aug-94			76					13	2.7								21
MW-8	30-Sep-94			82			**20**		14	5.4							**20**	19
MW-8	13-Jun-95						**38**	**11**									**87**	
MW-8	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	31-Oct-95																	
MW-8	30-Jan-96				3		**35**	**12**									**64**	63
MW-8 (dup)	30-Jan-96				3		**36**	**12**									**63**	76
MW-8	29-Nov-96			120			**14**	**5**	21								**31**	54
MW-8 (dup)	29-Nov-96			82														19
MW-8	21-Apr-97						**19**											
MW-8	2-Nov-97																	
MW-8	6-May-98																	
MW-8	8-Dec-98					1.2												
MW-8	16-Apr-99																	
MW-8 (dup)	16-Apr-99																	
MW-8	2-Dec-99	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	11-Apr-00					**2.1**												
MW-8	20-Dec-00					1.5		**17.1**										
MW-8	16-Apr-01																	
MW-8	3-Dec-01																	
MW-8	12-Apr-02																	
MW-8	5-Nov-02					1.2	**15.3**											
MW-8	17-Apr-03																	
MW-8	4-Nov-03																	
MW-8	14-Apr-04						**19.8**											
MW-8	18-Nov-04						**198**	**72**		13		**114**					**281**	161
MW-8	21-Apr-05																	
MW-8	11-Nov-05				3		**31**			14								116
MW-8	14-Apr-06				3	**2**	**30**			14							**50**	111
MW-8	9-Nov-06				2		**34**			11								99
MW-8	20-Apr-07																	
MW-8	9-Nov-07																	15
MW-8	20-May-08			26.4J			4.72J		3.99J		0.091J							6.16J
MW-8	10-Nov-08			25.6J	2.49	0.33JB	3.27JB		4.37JB	9.17JB				4.03JB				
MW-8	11-Mar-09			37.1JB	2.75		4.38JB	**4.48JB**	5.02JB		0.045J	4.91J		7.06JB			**3.71JB**	
MW-8	3-Dec-09			34.1J	0.5J		6.17J		6.8JB			3.15J					**9.97JB**	59.1B
MW-8	12-May-10			32.5J			1.24J										**1.42J**	4.80J
MW-8	25-Oct-10			37.0J	0.106J	0.804J	1.69J		7.78J	5.34J				4.12J			**1.61J**	22.9
MW-8	16-Mar-11			41.1J			2.83J		1.63J			2.22J	0.873J			0.279J	**1.65J**	6.42J
MW-8	31-Oct-11			56.5J			7.42J		4.53JB			4.95JB					**5.18J**	7.32J
MW-8	24-Apr-12	0.937J		41.3J			1.21J					3.19J					**1.83J**	515
MW-8	22-Oct-12			41.8J	0.146J	0.404J	1.20J					2.76J					**1.97J**	
MW-8	17-Apr-13		0.8J	50J	0.08J		2J	**1J**			0.03J	4J						9JB
MW-8	16-Oct-13			50J	0.1J	0.2J	2J	**2J**				4J						
MW-8d	8-Jun-01												12.7					
MW-8d	4-Dec-01																	
MW-8d	9-Apr-02																	
MW-8d (dup)	9-Apr-02																	
MW-8d	7-Nov-02																	
MW-8d	16-Apr-03																	
MW-8d	4-Nov-03																	
MW-8d	21-Apr-04																	
MW-8d	18-Nov-04																	
MW-8d	21-Apr-05																	
MW-8d	11-Nov-05																	
MW-8d	14-Apr-06																	
MW-8d	10-Nov-06																	
MW-8d	20-Apr-07																	
MW-8d	8-Nov-07																	11
MW-8d	15-May-08			19.1J			6.86J		3.98J	4.10J				4.16J		**8.59**		4.53J
MW-8d	6-Nov-08		2.49J	25.2JB	3.61B		7.57JB		6.96JB	5.20JB				8.71JB			**6.56JB**	4.8J
MW-8d	16-Mar-09			44.5JB	**9.80B**		6.95JB		6.72JB	6.18JB				2.01JB			**9.36JB**	9.52J
MW-8d	4-Dec-09			32.8JB			8.01JB		8.86JB	9.36JB			4.49J	2.65JB			**4.48JB**	6.64JB
MW-8d	13-May-10	0.884J		24.2J		0.602J	4.79J										**4.39J**	11.9
MW-8d	27-Oct-10	**3.52J**		68.8J			7.58J		4.55J	3.62J		2.06J					**7.95J**	16.6
MW-8d	18-Mar-11	0.512J		28.7J			5.85J		4.41J	2.19J							**5.18J**	4.47J
MW-8d	2-Nov-11	0.724J		25.0J		1.05	5.02J		5.02JB			2.00J					**4.22J**	7.28J
MW-8d	26-Apr-12	**1.63J**		34.5J					11B	2.82J							**4.15J**	7.52J
MW-8d	24-Oct-12	**1.59J**		30.6J		0.483J	5.46J		3.21J								**4.79J**	9.99J
MW-8d	18-Apr-13	0.6J		20J			4J	0.3J	1J	0.2J		1J				0.06J		2JB
MW-8d	17-Oct-13			40J	0.2J	0.3J	6J	**1J**	6J	1J	0.03J	2J					**7J**	

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-9	6-Mar-94			210														
MW-9	15-Apr-94			199				**11**										
MW-9	11-May-94			193				**10**		2.7								14
MW-9	31-May-94			270			**24**	**14**	25	21							**23**	120
MW-9	25-Aug-94			135														14
MW-9	29-Sep-94			123						4.2								12
MW-9	13-Jun-95							**14**										
MW-9	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	31-Oct-95																	
MW-9	30-Jan-96				**4**	1	**20**	**16**		**17**								65
MW-9	29-Nov-96			140														21
MW-9	22-Apr-97																	
MW-9	2-Nov-97							**11**										37
MW-9	6-May-98																	
MW-9	8-Dec-98					1.5												
MW-9	16-Apr-99																	
MW-9	2-Dec-99																	
MW-9	11-Apr-00																	
MW-9	20-Dec-00																	
MW-9	16-Apr-01																	
MW-9	3-Dec-01		11	166														
MW-9 (dup)	3-Dec-01		12.2	160														
MW-9	12-Apr-02															**10.8**		
MW-9	5-Nov-02							**10.1**										
MW-9	17-Apr-03							**10.6**										
MW-9	4-Nov-03							**11.3**										
MW-9	14-Apr-04		20.6					**11.8**										
MW-9	18-Nov-04					**7**		**10**										
MW-9	21-Apr-05																	
MW-9	11-Nov-05																	
MW-9	14-Apr-06					**3**												
MW-9	9-Nov-06																	
MW-9	19-Apr-07			289	2	1	**17**		12	**21**								122
MW-9	9-Nov-07			186														16
MW-9	20-May-08			190	2.9		**27**		5.8J	10.6		11.3J	8.29J	2.84J		**10.4**		5.58J
MW-9 (dup)	20-May-08			190			**22.7**	**5.15J**	5.87J	8.38J				3.16J		**11.1**		6.10J
MW-9	11-Nov-08			218B	0.3JB		**12.4B**	**6.99J**	9.59JB	13.5			8.93J	11.1B		**16.9**	**8.49JB**	14.4B
MW-9	11-Mar-09			178B			7.63JB	**9.53JB**	3.17JB	10.3B				8.89JB			**4.57JB**	
MW-9 (dup)	11-Mar-09			179B			9.27JB	**9.33JB**	3.39JB	6.28JB		6.45J		8.78JB		**7.3**	**10.8JB**	9.56J
MW-9	3-Dec-09			190	0.64J		7.84J	**2.86J**	5.25JB				4.37J				**1.49JB**	4.02JB
MW-9	12-May-10			227	0.276J			**6.27J**		4.59J			0.936J	2.42J				17.6
MW-9	26-Oct-10		3.47J	157	0.207J	0.695J		**3.92J**	8.84J	7.02J		2.80J		5.70J				20.9
MW-9	17-Mar-11			176	0.241J		7.36J	**4.82J**	2.1J	3.79J			0.841J	3.51J		**0.405J**		13.2
MW-9	1-Nov-11			209	0.425J		**14.9**	**6.79J**	8.83JB	6.37J		4.11JB	0.982J	4.52J		0.164J	**6.88J**	69.2
MW-9 (dup)	1-Nov-11			191	0.256J		**10.4**	**5.81J**	5.32JB	3.99J		3.08JB	0.874J	3.66J		0.127J	**3.26J**	50.1
MW-9	25-Apr-12			176	0.220J		5.68J	**4.81J**						2.72J				13.5
MW-9	23-Oct-12		5.17J	210	0.711J	**4.13**	**19.7**	**6.96J**	17.1	**27.2**		3.41J	7.49J			**0.521J**	**30.2**	141
MW-9	17-Apr-13			160	0.3JB	**2**	3J	**4J**	4J	4J		4J				**0.3J**	**8J**	27B
MW-9	16-Oct-13			120	0.2J	1.1	2J	0.4J	2J	1J		2J				**0.2J**	**6J**	16JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-10	31-Oct-95																	
MW-10	30-Jan-96																	
MW-10	28-Nov-96			71				**14**										
MW-10	22-Apr-97						**31**	**23**									**43**	98
MW-10	1-Nov-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	5-May-98					1.3				13	0.34							720
MW-10	18-Aug-98					**4.9**												150
MW-10	10-Sep-98																	
MW-10	6-Oct-98					1.2												
MW-10	8-Dec-98					**2**												
MW-10	11-Jan-99																	
MW-10	8-Feb-99																	
MW-10 (dup)	8-Feb-99																	
MW-10	16-Apr-99																	
MW-10	2-Dec-99										0.3							
MW-10	12-Apr-00																	
MW-10	20-Dec-00																	
MW-10	17-Apr-01																	
MW-10	3-Dec-01																	
MW-10	12-Apr-02																	
MW-10	5-Nov-02										0.5							
MW-10 (dup)	5-Nov-02										0.4							
MW-10	17-Apr-03										0.4							
MW-10	4-Nov-03																	
MW-10	14-Apr-04																	
MW-10	18-Nov-04					**2**												
MW-10	21-Apr-05																	
MW-10	11-Nov-05										**1.1**							
MW-10	14-Apr-06																	
MW-10	9-Nov-06																	
MW-10	19-Apr-07										0.38							
MW-10	9-Nov-07			399														
MW-10	20-May-08			24.1J		0.21J	2.08J		6.28J		0.374					**6.74**		8.03J
MW-10	11-Nov-08		5.71JB	174B	**12.2B**	0.84J	9.86JB	**4.73J**	32.9B	**25.2**	**7.53**	8.21J		9.75JB			**24.9JB**	59.3B
MW-10	11-Mar-09			29.3JB		0.20J	2.27JB	**5.65JB**	3.07JB	7.77JB	0.247J	5.41J		7.13JB			**4.32JB**	7.14J
MW-10	3-Dec-09			16.3J	0.64J				3.96JB								**2.56JB**	8.35JB
MW-10	12-May-10			23.5J	0.147J			**4.51J**				4.31J						12.9
MW-10	25-Oct-10	**1.33JB**		18.4J	0.30J	0.627J		**1.53J**	8.36J	5.19J	0.241	1.89J		3.17J				22.5
MW-10	17-Mar-11			34J	0.285J		2.22J	**1.93J**	4.17J	2.25J	0.388	2.48J				**0.352J**		14.1
MW-10	31-Oct-11			28.1J			1.72J	**1.61J**	3.56JB			3.00J		1.94J				12.8
MW-10	25-Apr-12			34.7J	0.320J	0.438J	1.79J	**2.04J**	4.81J	2.64J	0.538	2.25J						21.7
MW-10	23-Oct-12			31.1J	0.302J	0.965J		**2.07J**	2.51J	2.57J	0.910						**2.07J**	16.5
MW-10	17-Apr-13			30J	0.3JB	0.4J	0.4J	**2J**	2JB	1J	0.43	3J				0.06J		14JB
MW-10	16-Oct-13			30J	0.3J	0.2J	0.4J	**2J**	2J	1J	0.29	3J				0.05J	**4J**	9JB
MW-10d	8-Jun-01								30		0.3							
MW-10d	4-Dec-01																	
MW-10d	9-Apr-02																	
MW-10d	5-Nov-02																	
MW-10d	17-Apr-03		**10.9**			1.1	**10.1**											
MW-10d	4-Nov-03																	
MW-10d	26-Apr-04																	
MW-10d	18-Nov-04																	
MW-10d	21-Apr-05					**5**												
MW-10d	11-Nov-05					**5**												
MW-10d	14-Apr-06					**4**												
MW-10d	10-Nov-06																	
MW-10d	20-Apr-07																	
MW-10d	8-Nov-07					1												
MW-10d	20-May-08		9.06J	57.9J	0.5J		**33**		31.8	**21.9**	0.123J	18.7J		3.92J		**5.93**	**18.9J**	28.6
MW-10d	6-Nov-08		5.94J	40.7JB	**5.27B**		**149B**	**5.12J**	22.9B	**15.1B**		80.3		8.15JB			**16.7JB**	22
MW-10d	12-Mar-09				0.75J		4.38J		3.46JB	4.98J							**9.69JB**	8.62J
MW-10d	4-Dec-09			19.6JB			3.78JB		8.17JB					2.67JB			**2.08JB**	5.77JB
MW-10d	13-May-10			8.37J		0.466J	**27.6**		2.93J	2.54J		13.5J					**2.61J**	9.28J
MW-10d	27-Oct-10			3.34J			4.50J		1.61J								**1.55J**	
MW-10d	18-Mar-11			3.88J					2.16J									4.02J
MW-10d	2-Nov-11			3.81J			2.10J		3.18JB									4.14J
MW-10d	26-Apr-12	0.232J		4.36J			3.50J		3.47JB	4.57J								
MW-10d	24-Oct-12			3.11J														
MW-10d	18-Apr-13			4JB			1JB	0.07J	0.7J			1J						
MW-10d	16-Oct-13	0.3J		3JB		0.2J	1J	0.05J	0.7J			0.6J						

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-22	9-Jun-97					2.9		130				66						
MW-22	18-Aug-97		11.9			4.4		229		14.3		164						68.6
MW-22	2-Nov-97					1.5		210		12		130						230
MW-22	6-May-98							110				51						80
MW-22	18-Aug-98					9.6		110										210
MW-22	10-Sep-98							100										
MW-22	6-Oct-98							99										
MW-22	8-Dec-98					1.9		130										
MW-22	11-Jan-99					1.5		202				55						
MW-22	8-Feb-99					2		168										
MW-22	16-Apr-99					4.1	10.1	261		21		70.9						
MW-22	2-Dec-99					7.4		160										
MW-22	12-Apr-00					6.1		98.1										
MW-22	20-Dec-00					2.4		60.7										
MW-22	17-Apr-01					1.2		31.4										
MW-22	5-Dec-01							26.9										
MW-22	9-Apr-02					2.1		63.5										
MW-22	6-Nov-02					1.2		26.5										
MW-22	17-Apr-03																	
MW-22	5-Nov-03					1.19	11.1	30.1		12.9								
MW-22	26-Apr-04																	
MW-22	18-Nov-04					3		15										
MW-22	22-Apr-05				3	3	17	48		62								196
MW-22	11-Nov-05					2		13										
MW-22	14-Apr-06					2		12										
MW-22	10-Nov-06					2		15										
MW-22	20-Apr-07					2												20
MW-22	8-Nov-07					2.8		24		13								32
MW-22	15-May-08			45J		4.66	8.9J	25.1	7.09J	10.3		16.2J	7.95J	5.69J		7.37	1.3J	16.3
MW-22	6-Nov-08		4.58J	75.5JB	2.45B	6.68	9.28JB	44.9	9.38JB	15.4B		27.5J	10.5	10.6B			20.7JB	32.6
MW-22	12-Mar-09			21.5J		10.3	2.39J	26.9	1.92JB	4.02J		11.6J		1.79J		6.65	35.1B	10.3
MW-22	4-Dec-09			44.9JB		4.05	4.97JB	22.1	8.74JB			10.4J	3.05J	3.24JB			5.22JB	9.59JB
MW-22	12-May-10			30.5J		2.23		19.2				5.88J						21.5
MW-22	26-Oct-10			29.5J		2.06	2.66J	13.0	7.94J			5.73J					2.94J	21.6
MW-22	18-Mar-11			40.7J	0.105J	2.21	4.1J	14.8	2.71J	3.69J		7.49J					4.89J	16.1
MW-22	1-Nov-11			41.2J		7.96	4.25J	46.7	5.24JB			17.2JB		2.87J			3.22J	43.9
MW-22	25-Apr-12			61.5J	0.224J	4.78	4.77J	63.8				14J		2.56J		0.162J	33.1	18.4
MW-22	23-Oct-12			34.7J		8.27	2.28J	44.7				16.8J					4.02J	19.2
MW-22	17-Apr-13			70J	0.1J	4	0.9J	76	1JB	0.7J		15J				0.06J		12JB
MW-22	16-Oct-13			50J	0.1J	3.5	1J	25	1J	1J		10J					3J	8JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-23	9-Jun-97																	
MW-23	18-Aug-97		**10.3**			**2.3**		**14.2**		**18.8**		59.1						
MW-23	2-Nov-97			600	**4.7**	**2.6**	**54**	**35**		**56**		**110**					**170**	260
MW-23	5-May-98																	
MW-23	18-Aug-98					**5.4**	**24**	**10**		**17**							**50**	150
MW-23	10-Sep-98																	
MW-23	6-Oct-98					1.6					0.26							
MW-23	8-Dec-98					1.7												
MW-23 (dup)	8-Dec-98					**2.3**												
MW-23	11-Jan-99										0.20							
MW-23	8-Feb-99										0.20							
MW-23	16-Apr-99						**11.2**			**23.8**	0.7							
MW-23	2-Dec-99										0.2							
MW-23 (dup)	2-Dec-99																	
MW-23	12-Apr-00										**1.1**							
MW-23	20-Dec-00																	
MW-23	17-Apr-01																	
MW-23	4-Dec-01																	
MW-23	11-Apr-02																	
MW-23	6-Nov-02																	
MW-23	17-Apr-03																	
MW-23 (dup)	17-Apr-03																	
MW-23	5-Nov-03																	
MW-23	26-Apr-04																	
MW-23	18-Nov-04																	
MW-23	21-Apr-05																	
MW-23	11-Nov-05																	
MW-23	14-Apr-06																	
MW-23	9-Nov-06						**13**		39									133
MW-23	20-Apr-07			133	2		**10**	**23**	29								**28**	102
MW-23	8-Nov-07			123	1			**21**	21								**27**	92
MW-23	15-May-08		3.35J	90.7J	6.57		**18.8**	**4.50J**	32.7	11.7		10.3J		4.56J			**30**	49.2
MW-23	6-Nov-08		4.07J	65.4JB	1.96B		**10.6B**		18.3B	13.2B		8.28J		8.41JB			**17.5JB**	15.9
MW-23	12-Mar-09			62.1J	2.99		**11.9**	**3.31J**	22.1B	13		7.02J					**36.7B**	35
MW-23	4-Dec-09			48.6JB			4.33JB		12.2B					3.02JB			**3.57JB**	6.88JB
MW-23	13-May-10			124			**23.8**	**9.69J**	45.6	**23.6**		12.8J				**0.348J**	**52**	81.7
MW-23	27-Oct-10			50.9J		0.562J	8.39J	**1.18J**	14.2	7.54J		2.91J					**14.0J**	20.3
MW-23 (dup)	27-Oct-10			54.3J			9.05J		15.7	7.75J		3.58J					**14.5J**	19.4
MW-23	18-Mar-11			43.3J			5.52J		9.92J	6.42J		3.64J					**11.4J**	23.7
MW-23	2-Nov-11			43.5J			5.93J		11.0B	2.79J		4.01J					**9.10J**	14.8
MW-23	26-Apr-12			42.7J			6.68J	**1.63J**	10.4B	7.07J		4.20J					**12.5J**	17.5
MW-23	24-Oct-12			38.9J			5.76J	**1.83J**	8.02J	4.12J		3.92J					**13.3J**	18.5
MW-23	18-Apr-13	0.2J		240	1.8	0.1J	**30**	**15**	56	**30**	0.06J	28J				**1J**	**106**	147
MW-23	16-Oct-13			30J	0.2J	0.1J	3J	0.7J	4J	2J	0.02J	2J					**5J**	6JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		**1***	**10**	**700**	**4***	**2**	**10**	**1***	**1,000**	**15**	**1**	**100**	**20**	**20**	**2,000***	**0.2***	**0.3***	**1,000**
Solid Waste Section Limit		**6**	**10**	**100**	**1**	**1**	**10**	**10**	**10**	**10**	**0.2**	**50**	**10**	**10**	**100**	**5.5**	**25**	**10**
MW-23d	5-May-98																	80
MW-23d	18-Aug-98					**4**												63
MW-23d	10-Sep-98					1.6				11								
MW-23d	6-Oct-98					**2.0**					0.22							60
MW-23d	8-Dec-98					1.8												83
MW-23d	11-Jan-99																	
MW-23d	8-Feb-99																	
MW-23d	16-Apr-99																	
MW-23d	2-Dec-99																	
MW-23d	12-Apr-00																	
MW-23d	20-Dec-00										0.8							
MW-23d	17-Apr-01																	
MW-23d	4-Dec-01																	
MW-23d	11-Apr-02																	
MW-23d	6-Nov-02																	
MW-23d	17-Apr-03																	
MW-23d	5-Nov-03																	
MW-23d	26-Apr-04																	
MW-23d	18-Nov-04																	
MW-23d	21-Apr-05					**2**				12								55
MW-23d	11-Nov-05					1												
MW-23d	14-Apr-06																	
MW-23d	9-Nov-06																	
MW-23d	20-Apr-07																	
MW-23d	8-Nov-07																	10
MW-23d	15-May-08			36.5J			5.10J		3.39J					3.39J				
MW-23d	6-Nov-08			48.8JB	**7.34B**		6.57JB		5.63JB	6.76JB				8.81JB			**8.38JB**	4.77J
MW-23d	12-Mar-09			24.4J			1.71J		3.23JB								**9.35JB**	12.6
MW-23d	4-Dec-09			50.1JB		0.17J	4.98JB		8.53JB	10.7B				2.77JB			**7.17JB**	11.2B
MW-23d	13-May-10	**2.10J**		41.6J		0.593J	5.43J		3.27J	2.06J							**7.12J**	39.3
MW-23d	26-Oct-10	**1.08J**		25.2J		0.385J	3.62J		1.78J								**4.05J**	7.70J
MW-23d	17-Mar-11	0.561J		41.7J			4.14J		4.38J				1.04J				**5.04J**	5.36J
MW-23d	1-Nov-11	0.798J		35.8J			3.92J		4.12JB								**3.75J**	10.9
MW-23d	25-Apr-12	0.754J		35J		0.746J	4.03J		16.8B	3.32J							**4.05J**	6.65J
MW-23d	23-Oct-12	0.552J		33.2J		0.644J	4.73J		4.38J								**4.48J**	8.66J
MW-23d	18-Apr-13	**2.6J**		40J		1.5	3JB	0.3J	4J	0.4J		1J						12JB
MW-23d	17-Oct-13	**1.7J**		40J	0.05J	0.7J	2J	0.3J	3J	0.3J	0.02J	1J					**3J**	3JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		**1***	**10**	**700**	**4***	**2**	**10**	**1***	**1,000**	**15**	**1**	**100**	**20**	**20**	**2,000***	**0.2***	**0.3***	**1,000**
Solid Waste Section Limit		**6**	**10**	**100**	**1**	**1**	**10**	**10**	**10**	**10**	**0.2**	**50**	**10**	**10**	**100**	**5.5**	**25**	**10**
MW-24	9-Jun-97																	
MW-24	18-Aug-97					1.7		**11.2**										52.8
MW-24	1-Nov-97																	66
MW-24 (dup)	1-Nov-97									12	0.25							91
MW-24	5-May-98																	
MW-24	18-Aug-98					**4.7**				**16**								180
MW-24 (dup)	18-Aug-98		**11**		2.1	**8.9**	**12**	**11**		**22**								290
MW-24	10-Sep-98										0.44							
MW-24	6-Oct-98										0.98							
MW-24	8-Dec-98										0.62							
MW-24	8-Dec-98										0.62							
MW-24	11-Jan-99										0.50							
MW-24	16-Apr-99									13.7	0.4							53.1
MW-24	2-Dec-99																	
MW-24	12-Apr-00										0.3							
MW-24	20-Dec-00																	
MW-24	16-Apr-01										0.3							
MW-24 (dup)	16-Apr-01																	
MW-24	3-Dec-01																	
MW-24	12-Apr-02																	
MW-24	5-Nov-02																	
MW-24	17-Apr-03										0.4							
MW-24	4-Nov-03																	
MW-24	14-Apr-04																	
MW-24	18-Nov-04										**1.2**							68
MW-24	21-Apr-05										0.65							
MW-24	11-Nov-05				**5**		**11**			**52**	**2**							539
MW-24	14-Apr-06				3	**2**				**41**	**1.2**							492
MW-24	9-Nov-06				**4**		**10**			**48**	**1.7**							464
MW-24	19-Apr-07				1					14	0.68							112
MW-24	9-Nov-07				3.3		**10**		15	**31**	0.98							305
MW-24	20-May-08			42.4J	3.85		3.47J		7.58J	7.16J	0.046J						**4.83J**	27.4
MW-24	11-Nov-08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-24	12-Mar-09			52.3J			4.48J		8.35JB	9.33J	0.168J						**18JB**	57.1
MW-24	4-Dec-09			39.7JB			4.11JB		14.9B	11.1B				3.52JB			**4.63JB**	10.2B
MW-24	13-May-10		2.98J	82.9J			6.43J	**3.42J**	9.23J	13.2	0.197J					0.241J	**13.9J**	87.7
MW-24	27-Oct-10		3.63J	50.2J			3.49J		5.21J	6.78J							**8.13J**	50.4
MW-24	18-Mar-11		3.98J	33J			2.17J		2.92J	3.62J			1.13J				**4.25J**	27.1
MW-24	2-Nov-11			48.8J			3.81J		6.75JB	4.69J		2.13J					**6.26J**	43.6
MW-24	26-Apr-12			57.6J	0.281J		7.54J		7.09JB	9.80J		3.35J	1.82J			0.190J	**8.38J**	58.7
MW-24	23-Oct-12			35.9J			2.10J		2.50J	4.01J						0.120J	**5.34J**	28.3
MW-24	17-Apr-13			120	1.4J	0.1J	9J	**2J**	11	**17**	0.24	5J				**0.5J**	**17J**	128
MW-24	16-Oct-13			60J	0.6J	0.1J	4J	0.9J	5J	7J	0.09J	2J				**0.2J**	**8J**	46

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-27	4-May-98																	
MW-27	7-Dec-98					1	21											
MW-27	29-Apr-99					**2.3**		19										
MW-27	3-Dec-99							13.2										
MW-27	12-Apr-00					1.7		14.5			0.5							75.6
MW-27	18-Apr-01																	
MW-27	12-Apr-02					1.7		10.5										51.8
MW-27	17-Apr-03																	
MW-27	26-Apr-04																	
MW-27	22-Apr-05				3	1	11										**57**	216
MW-27	11-Nov-05																	
MW-27	14-Apr-06																	
MW-28	1-May-98																	
MW-28	17-Aug-98					**5.6**												
MW-28	9-Sep-98																	
MW-28	7-Oct-98					**8.8**	**43**	**24**									**80**	150
MW-28	9-Dec-98					**8.9**	**39**	**19**									**68**	140
MW-28	12-Jan-99																	
MW-28	9-Feb-99																	
MW-28	19-Apr-99																	
MW-28	3-Dec-99																	
MW-28	12-Apr-00																	
MW-28	18-Apr-01																	
MW-28	12-Apr-02																	
MW-28	17-Apr-03																	
MW-28	26-Apr-04																	
MW-28	22-Apr-05				2		**33**	**13**		**17**							**67**	331
MW-28	13-Apr-06						**12**											66
MW-28	20-Apr-07						**11**											88
MW-28	19-May-08			75.8J	**4.29**		**16.9**	**3.18J**	6.12J	4.16J							**25.1**	39.9
MW-28	12-Mar-09			22.8J			4.87J							0.89J			**10.1JB**	13
MW-28	13-May-10			35.6J			6.55J	**1.35J**									**7.87J**	17.6
MW-28	18-Mar-11			51.5J			9.81J	**1.82J**	2.29J	5.21J		2.92J	1.45J			0.179J	**14J**	40.5
MW-28	26-Apr-12			67.7J			**14.2**	**3.90J**	2.81JB	5.18J		5.84J				**0.229J**	**20.7J**	69.8
MW-28	18-Apr-13			60J	0.3J		**10**	**3J**	1J	1J		4J				**0.2J**	**10J**	34B
MW-28d	1-May-98																	
MW-28d	17-Aug-98					1.3												
MW-28d	9-Sep-98																	
MW-28d	7-Oct-98																	
MW-28d	9-Dec-98										0.25							
MW-28d	12-Jan-99																	
MW-28d (dup)	12-Jan-99																	
MW-28d	9-Feb-99																	
MW-28d	19-Apr-99																	
MW-28d	3-Dec-99																	
MW-28d	12-Apr-00																	
MW-28d	18-Apr-01																	
MW-28d	12-Apr-02																	
MW-28d	17-Apr-03																	
MW-28d	26-Apr-04																	
MW-28d	22-Apr-05																	
MW-28d	13-Apr-06																	
MW-28d	20-Apr-07																	35
MW-28d	19-May-08				**7.76**		1.53J		5J	3.8J							**1.52J**	
MW-28d	12-Mar-09						2.99J		2.04JB	6.28J							**12.7JB**	8.95J
MW-28d	13-May-10			7.52J			2.21J										**3.05J**	8.79J
MW-28d	18-Mar-11			14.3J			4.17J		2.91J	2.31J		2.08J	1.59J				**4.96J**	16.8
MW-28d	26-Apr-12	**1.46J**		28.7J			**10.1**	**1.34J**	13.3B	4.99J		9.42J					**4.73J**	106
MW-28d	18-Apr-13	0.3J		9JB			2JB	0.1J	0.9J			0.9J						4JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-29d	4-May-98						13											
MW-29d	17-Aug-98																	
MW-29d	9-Sep-98					1	17											
MW-29d (dup)	9-Sep-98						11											
MW-29d	7-Oct-98					2.7	18											53
MW-29d	9-Dec-98										0.24							
MW-29d	12-Jan-99																	
MW-29d	9-Feb-99																	
MW-29d	19-Apr-99																	
MW-29d	3-Dec-99																	
MW-29d	12-Apr-00																	
MW-29d	19-Dec-00																	
MW-29d	18-Apr-01																	
MW-29d	4-Dec-01																	
MW-29d	11-Apr-02																	
MW-29d	6-Nov-02																	
MW-29d	18-Apr-03																	
MW-29d	5-Nov-03																	
MW-29d	26-Apr-04																	
MW-29d	18-Nov-04					2												
MW-29d	22-Apr-05																	
MW-29d	11-Nov-05																	
MW-29d	14-Apr-06																	
MW-29d	10-Nov-06																	
MW-29d	20-Apr-07								16									56
MW-29d	9-Nov-07																	24
MW-29d	19-May-08			33.8J	6.72		4.31J		5.61J									4.02J
MW-29d	7-Nov-08			49.8JB	10.7B		8.58JB	3.47J	12.1B	5.59JB				8.05JB			12.1JB	10.5
MW-29d	10-Mar-09						11.8		5.96J	6.80J				1.97JB		6.41	7.77J	8.23J
MW-29d	2-Dec-09			37.1J			4.39J		12.6B			2.68J					5.01JB	4.93JB
MW-29d	13-May-10			38.5J			4.33J		2.61J								3.10J	23
MW-29d	27-Oct-10	0.542J		30.7J			5.46J		2.91J								2.09J	15.7
MW-29d	18-Mar-11	0.391J	3.08J	54.8J			9.57J		16.2	4.09J		4.15J					7.4J	15.5
MW-29d	1-Nov-11			42.7J			6.46J	1.21J	12.4B			2.70J					4.25J	17.2
MW-29d	26-Apr-12	0.317J		41.5J			6.48J		8.73JB	3.94J		1.97J					3.72J	23.2
MW-29d	24-Oct-12			38.0J			4.87J		6.36J			2.48J					4.36J	7.64J
MW-29d	18-Apr-13			40J	0.08J		4J	0.4J	5J	0.3J		1J				0.05J		3JB
MW-29d	17-Oct-13			40J	0.1J		4J	0.2J	3J			1J						
MW-30	4-May-98						60	19									56	60
MW-30	17-Aug-98					34	50	19				50					50	190
MW-30	9-Sep-98						16					50						140
MW-30	7-Oct-98					1.1												
MW-30	7-Dec-98					2.6	20											
MW-30	12-Jan-99						20											
MW-30	9-Feb-99						20											
MW-30	19-Apr-99																	
MW-30	3-Dec-99																	
MW-30	12-Apr-00																	
MW-30	19-Dec-00																	
MW-30	18-Apr-01																	
MW-30	4-Dec-01																	
MW-30	11-Apr-02																	
MW-30	6-Nov-02																	
MW-30	17-Apr-03																	
MW-30	5-Nov-03																	
MW-30	28-Apr-04																	
MW-30	18-Nov-04						108	41		12		71					107	89
MW-30	21-Apr-05																	
MW-30	11-Nov-05						13											
MW-30	14-Apr-06						15											
MW-30	10-Nov-06						32											83
MW-30	20-Apr-07			416	3		43		60	18							44	150
MW-30	9-Nov-07			419	3.2		117		160	21		52					118	147
MW-30	19-May-08			106	10.1		31.9	5.84J	58.4	4.9J		13.9J					30.7	25.9
MW-30	7-Nov-08			149B	0.59JB		32.0B	5.75J	58.4B	8.97JB		16.6J		8.54JB			53.4B	38.4
MW-30	11-Mar-09			206B	3.46		61.6B	20.3B	116B	14.4B		34.4J		6.51JB			85.9B	57.8
MW-30	4-Dec-09			42.1JB			7.58JB		14.2B	10.7B			3.08J	2.47JB			6.6JB	23.6B
MW-30	12-May-10		4.72J	774		1.25	239	64.5	373	34.2		114				1.08J	253	254
MW-30	26-Oct-10		4.15J	155			38	9.46J	68.7	7.91J		18.3J					40.6	52.5
MW-30	18-Mar-11			91.1J	0.202J		29	4.25J	37.1	8.69J		11.2J	1.12J				27	37.1
MW-30	1-Nov-11			147	0.302J		47.5	8.80J	69.8B	3.90J		22.2JB		3.51J		0.196J	44	60.8
MW-30	25-Apr-12			169	0.773J		58	9.94J	73.9	9.17J		22.7J		2.15J		0.360J	51.7	54.7
MW-30	23-Oct-12			197			57.5	11.3	80.2	9.44J		26.3				0.359J	54.4	62.6
MW-30	17-Apr-13			450	2.8	0.1J	124	24	155	17	0.04J	56				1J	146	141
MW-30	16-Oct-13			220	1.4		49	9J	63	6J	0.03J	21J				0.3J	50	40

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-31	1-May-98																	
MW-31	17-Aug-98					14	88			38		82					81	220
MW-31	9-Sep-98					3.3	42			15								530
MW-31	7-Oct-98					1.8	10											
MW-31	8-Dec-98					2.6	24											
MW-31	11-Jan-99																	
MW-31	8-Feb-99																	
MW-31	19-Apr-99																	
MW-31	3-Dec-99																	
MW-31	13-Apr-00																	
MW-31	19-Dec-00																	
MW-31	17-Apr-01						16.5											
MW-31	6-Dec-01						55											
MW-31	11-Apr-02																	
MW-31	6-Nov-02																	
MW-31	18-Apr-03																	
MW-31	5-Nov-03																	
MW-31	28-Apr-04																	
MW-31	18-Nov-04						64	32		14							120	64
MW-31	21-Apr-05																	
MW-31	11-Nov-05						17											
MW-31	14-Apr-06																	
MW-31	9-Nov-06						15											
MW-31	20-Apr-07																	
MW-31	9-Nov-07				1		38		19	22	0.22						47	32
MW-31	19-May-08			50.7J			18.1		13.6	8.81J		6.67J		4.33J		7.52	16.9J	13
MW-31	7-Nov-08			66.6JB			30.0B		23.3B	15.3B		7.34J		8.57JB			40.3B	12.1
MW-31	11-Mar-09			85.6JB	1.34		30.2B	6.48JB	21.7B	19.2B		11J		6.54JB			36.4B	11.1
MW-31	4-Dec-09			38.4JB			13.4B		14.5B	11.3B		5.52J	4.62J	2.91JB			11.8JB	10.2B
MW-31	12-May-10		3.31J	70.9J	0.182J		32.4	2.22J	17.1	9.41J		4.63J					33.5	27.1
MW-31	26-Oct-10			21.5J	0.102J		7.8J		4.32J	1.99J							5.48J	31
MW-31	17-Mar-11			42.6J			14		7.79J	4.47J		3.2J				0.255J	9.69J	26.3
MW-31	1-Nov-11			84.2J	0.151J		33.3	2.57J	23.9B	7.27J		13.7JB		2.66J		0.129J	26.2	57.9
MW-31	25-Apr-12			33.4J	0.122J		13.1		6.71J	3.56J	5.40J		0.904J				9.25J	33.1
MW-31	23-Oct-12			35.7J			14		6.52J	3.76J		5.09J					9.26J	53.6
MW-31	17-Apr-13			70J	0.4J		24	1J	14	7J	0.03J	8J				0.05J	18J	29B
MW-31	16-Oct-13			30J	0.1J		11	0.4J	5J	2J		5J					5J	13JB
MW-31d	1-May-98				3		110	13		19		68					280	210
MW-31d	17-Aug-98					8.6	10											94
MW-31d	9-Sep-98					2.8	25										60	260
MW-31d	7-Oct-98					2.2												
MW-31d	8-Dec-98																	
MW-31d	11-Jan-99						19.1											
MW-31d	8-Feb-99																	
MW-31d	19-Apr-99																	
MW-31d	3-Dec-99																	
MW-31d	13-Apr-00																	
MW-31d	19-Dec-00																	
MW-31d	18-Apr-01																	
MW-31d	6-Dec-01																	
MW-31d	11-Apr-02																	
MW-31d	6-Nov-02																	
MW-31d	18-Apr-03						10.1											
MW-31d	5-Nov-03																	
MW-31d	28-Apr-04																	
MW-31d	18-Nov-04						24										50	
MW-31d	21-Apr-05																	
MW-31d	11-Nov-05																	
MW-31d	14-Apr-06																	
MW-31d	9-Nov-06																	
MW-31d	20-Apr-07																	10
MW-31d	9-Nov-07																	
MW-31d	19-May-08			23.2J			8.61J		4.27J	3.63J				4.16J	7.6J		6.26J	4.39J
MW-31d	6-Nov-08		2.66J	31.2JB	6.26B		11.7B		8.19JB	10.2B		5.34J		8.47JB			25.1B	6.85J
MW-31d	10-Mar-09						5.52J			5.19J				1.44JB			19.9J	
MW-31d	2-Dec-09			15.8J			5.23J		9.19JB							0.42J	7.27JB	35.5B
MW-31d	11-May-10	0.468J	3.16J	17.6J		0.371J	8.36J		1.74J								7.97J	17.7
MW-31d	25-Oct-10	0.582JB		14.8J	0.111J		6.56J										7.10J	10.6
MW-31d	16-Mar-11	1.19J		20.3J			9.86J		4.08J	2.56J			1.24J			0.327J	9.46J	30.5
MW-31d	31-Oct-11	1.21J		21.2J			13.4		34.2B			4.99JB					10.2J	69.6
MW-31d	24-Apr-12	1.68J		17.1J			6.79J		26.5			0.944J					7.62J	12.6
MW-31d	22-Oct-12		7.20J	19.3J			8.24J		1.82J								7.99J	43.5
MW-31d	16-Apr-13	0.5J		20J			6J	0.08J	0.8JB			1J					6J	21B
MW-31d	15-Oct-13	0.8J		20J			6J	0.06J	1J			0.8J					5J	16JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-32	1-May-98						23	44									41	59
MW-32	17-Aug-98					5.5	10	31										130
MW-32	9-Sep-98					5.4	34	45				54					60	240
MW-32	6-Oct-98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32	7-Dec-98					8	40	42				77					74	85
MW-32	11-Jan-99							26.5										
MW-32	8-Feb-99							24										
MW-32	19-Apr-99							28.1										
MW-32	3-Dec-99							25.1										
MW-32	13-Apr-00					1.2		40.9										
MW-32	19-Dec-00					1.0		25.8										
MW-32	17-Apr-01							22.8										
MW-32	4-Dec-01							14.7										
MW-32	11-Apr-02							12.1										
MW-32	6-Nov-02							12.2										
MW-32	18-Apr-03					1.4		24										
MW-32	4-Nov-03							10.3										
MW-32	28-Apr-04							10.5										
MW-32	18-Nov-04							11										
MW-32	21-Apr-05																	
MW-32	11-Nov-05																	
MW-32	14-Apr-06																	
MW-32	9-Nov-06																	
MW-32	20-Apr-07								18									21
MW-32	9-Nov-07																	29
MW-32	19-May-08			16.7J			4.81J		10.7	4.53J				4.35J			0.72J	5.83J
MW-32	6-Nov-08			18.4JB	8.50B		4.14JB	4.41J	6.41JB	6.36JB				9.0JB			8.39JB	4.39J
MW-32	11-Mar-09			23.5JB			4JB	7.94JB	13.4B	5.74JB		5.61J		6.91JB			10.9JB	
MW-32	4-Dec-09			21.6JB			4JB	8.41JB					3.28J	3.21JB			0.78JB	3.89JB
MW-32	12-May-10			11.7J			1.34J	4.70J	6.82J								3.52J	19.1
MW-32	26-Oct-10			20.7J			3.54J	3.28J	16			2.48J					10.7J	21.1
MW-32	17-Mar-11			21.8J	0.145J		4.58J	2.91J	18.2	2.11J		3.91J				0.276J	7.49J	29.5
MW-32	1-Nov-11		5.75J	14.2J			3.41J	1.47J	10.0B			3.39J					2.96J	27.7
MW-32	25-Apr-12	0.393J	3.37J	15.4J	0.261J		1.92J	2.34J	8.49J			1.96J					5.71J	6.22J
MW-32	23-Oct-12			30J			6.71J	3.30J	27.2			5.04J					11.8J	13.1
MW-32	17-Apr-13			30J	0.3J		5J	3J	22	0.5J		5J					9J	8JB
MW-32	16-Oct-13			70J	0.6J	0.3J	11	6J	50	0.9J		10J				0.1J	32	25
TB-1a	1-May-98					1.1								14				50
TB-1a	17-Aug-98					9.3	21	20										130
TB-1a	9-Sep-98					2.6	14	16										160
TB-1a	7-Oct-98					4.0	17	14										
TB-1a (dup)	7-Oct-98					2.1		14										
TB-1a	9-Dec-98					3.0					0.22							
TB-1a	11-Jan-99																	
TB-1a	8-Feb-99																	
TB-1a	19-Apr-99																	
TB-1a	3-Dec-99																	
TB-1a	13-Apr-00																	
TB-1a	20-Dec-00																	
TB-1a	17-Apr-01																	
TB-1a	3-Dec-01								17.3									
TB-1a	12-Apr-02																	
TB-1a	5-Nov-02					2.2	12.7											
TB-1a	17-Apr-03																	
TB-1a	4-Nov-03																	
TB-1a	14-Apr-04																	
TB-1a	18-Nov-04					2	20											
TB-1a	21-Apr-05					2												
TB-1a	11-Nov-05					2	12				0.95							67
TB-1a	14-Apr-06					3					0.88							
TB-1a	9-Nov-06					5	17				2.5							87
TB-1a	19-Apr-07					39	14		88	14	1.9						30	262
TB-1a	8-Nov-07					8			29									51
TB-1a	20-May-08			22J	1.94	0.87J	3.47J		16.8	3.79J	0.143J							10.1
TB-1a	11-Nov-08		12.9	502		5.92	95.8B	44.9	511B	19.4	0.76	75.5	27.8	7.84JB			200B	198
TB-1a	11-Mar-09			64.8JB	3.46	3.25	9.58JB	9.49JB	39B	9.25JB	0.253J	12.2J		6.57JB			23.9JB	17.3
TB-1a	3-Dec-09			68.5J	0.45J	3.33	9.13J	3.89J	56.4B	6.92J		12.2J	3.97J				23JB	26.5B
TB-1a	12-May-10			76J		1.49	9.71J	7.78J	55.4		0.339	7.66J					25.8	27.7
TB-1a	26-Oct-10			43.4J		0.544J	4.92J	4.77J	27.2			5.70J					12.5J	28.2
TB-1a	17-Mar-11			32.7J			2.46J	2.23J	11.6	2.68J		3.14J	0.849J			0.332J	7.45J	16.3
TB-1a	1-Nov-11			126		5.39	19.1	11.5	99.3B			19.0J					40.5	91.8
TB-1a	25-Apr-12	0.269J		190		1.5	29	22	158	7.33J	0.348	27.9J				0.186J	61.3	89.4
TB-1a	23-Oct-12			85.4J		0.584J	11.3	14.8	59.6	2.35J		13.3J					25	48.2
TB-1a	17-Apr-13			40J	0.06J	0.3J	5J	9J	24	0.9J	0.1J	6J					9J	11JB
TB-1a	16-Oct-13			60J	0.08J	0.3J	6J	10	35	1J	0.12J	9J					14J	14JB

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
TB-1a deep	8-Jun-01																	
TB-1a deep	6-Dec-01																	
TB-1a deep	11-Apr-02																	
TB-1a deep	6-Nov-02																	
TB-1a deep	18-Apr-03																	
TB-1a deep	4-Nov-03																	
TB-1a deep	28-Apr-04																	
TB-1a deep	18-Nov-04																	
TB-1a deep	21-Apr-05																	
TB-1a deep	11-Nov-05																	
TB-1a deep	14-Apr-06																	
TB-1a deep	10-Nov-06																	
TB-1a deep	20-Apr-07																	
TB-1a deep	8-Nov-07																	
TB-1a deep	19-May-08			15.6J			22.6		5.37J	5.36J		6.9J		4.69J		5.54	6.86J	7.06J
TB-1a deep	7-Nov-08			15.2JB	1.05B		16.8B		8.18JB	5.33JB				8.69JB			18.9JB	
TB-1a deep	12-Mar-09				4.48	0.23J	12.6		3.46JB	6.73J							9.29JB	18.5
TB-1a deep	4-Dec-09			30.1JB			12.6B		9.35JB			7.1J		3.05JB			4.21JB	77.9B
TB-1a deep	11-May-10	0.553J		13J			19.5		3.25J			3.51J	1.07J				8.23J	22.4
TB-1a deep	25-Oct-10	0.785J		7.98J			11.4		1.83J			1.92J					6.13J	7.70J
TB-1a deep	16-Mar-11	1.19J		14.9J			16.7		3.97J	2.03J		4.68J	0.946J			0.338J	7.43J	12.4
TB-1a deep	31-Oct-11	0.865J		14.2J			22.9		4.52JB			6.60JB	1.13J				7.66J	13.2
TB-1a deep	24-Apr-12	0.928J		15.5J			15		11.5			3.87J	1.23J				6.58J	8.41J
TB-1a deep	23-Oct-12			18.0J			14.9		6.85J			8.29J					6.51J	10.4
TB-1a deep	16-Apr-13	2.3J		20J		0.2J	12	0.9J	8J	0.5J		5J					2J	16JB
TB-1a deep	15-Oct-13	2.2J		20J		0.1J	6J	1J	6J	5J		4J					3J	9JB
MW-33	6-Aug-98					5.8	46	18									73	110
MW-33	7-Dec-98					2.7	18											
MW-33	26-Apr-99						15.5											58.5
MW-33	2-Dec-99						18.1											61
MW-33	13-Apr-00																	
MW-33	18-Apr-01																	
MW-33	9-Apr-02																	
MW-33	16-Apr-03					1.2	26.9	11.8									47.1	71.5
MW-33	21-Apr-04						10.5											
MW-33	22-Apr-05			660	3		54	18		32							92	885
MW-33	14-Apr-06				3		47	15		27							80	669
MW-33	20-Apr-07						19		14								30	1,165
MW-33	15-May-08			54.9J			20.2		14.6	5.11J		6.9J		4.47J		10.7	19.2J	31.1
MW-33	12-Mar-09			21.9J			4.58J		1.88JB	4.65J							7.79JB	5.35J
MW-33	12-May-10			100			44.7	14.4	30	3.13J		16.5J					68.1	90.9
MW-33	16-Mar-11			66.9J			21.1	5.46J	14.9	4.04J		7.61J				0.298J	29	45.9
MW-33	25-Apr-12			112	0.208J		44.4	15.1	37	6.44J		20.2J	0.917J				72.1	102
MW-33	17-Apr-13			70J	0.3J		17	5J	13	2J		7J					34	33
MW-34	6-Aug-98				4.9	8.4	43	20				64					110	180
MW-34	7-Dec-98					2.2	14											59
MW-34	26-Apr-99																	73.2
MW-34	2-Dec-99																	
MW-34	13-Apr-00																	
MW-34	18-Apr-01																	
MW-34	9-Apr-02																	
MW-34	16-Apr-03																	
MW-34	21-Apr-04															10.3		
MW-34	22-Apr-05			1,108	10	1.0	29			33							74	439
MW-34	13-Apr-06																	
MW-34	20-Apr-07																	16
MW-34	19-May-08			121			11.7		12.3		0.191J	5.43J		4.19J			8.81J	23
MW-34	12-Mar-09			73J			3.78J		3.8JB		0.121J						12.7JB	12.2
MW-34	12-May-10		4.96J	393	1.63	0.50J	47.5	14.5	63.2	13	0.246	31.3J				0.127J	99.6	129
MW-34	17-Mar-11			238	2.19		37.2	8.32J	46.3	13.7		24.9J		2.47J		0.254J	72	94.5
MW-34	26-Apr-12	0.261J		184	1.27		25.4	4.77J	23.8B	8.3J	0.255	13.2J					37.4	53.7
MW-34	17-Apr-13			560	5	0.3J	75	17	90	21	0.45	49J				0.3J	239	282

Table 3a
Detected Groundwater Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Tin	Thallium	Vanadium	Zinc
North Carolina 2L or Groundwater Protection Standard		1*	10	700	4*	2	10	1*	1,000	15	1	100	20	20	2,000*	0.2*	0.3*	1,000
Solid Waste Section Limit		6	10	100	1	1	10	10	10	10	0.2	50	10	10	100	5.5	25	10
MW-34d	6-Aug-98																	
MW-34d (dup)	6-Aug-98																	
MW-34d	7-Dec-98																	
MW-34d	26-Apr-99																	
MW-34d	2-Dec-99																	
MW-34d	13-Apr-00																	
MW-34d	18-Apr-01																	
MW-34d	9-Apr-02						**12.5**											
MW-34d	16-Apr-03																	
MW-34d	21-Apr-04																	
MW-34d	22-Apr-05																	
MW-34d	13-Apr-06					**4.0**												
MW-34d	20-Apr-07																	
MW-34d	19-May-08			27.4J			**10.1**		3.95J	5.49J				4.46J				
MW-34d	12-Mar-09			21.5J			4.48J		2.29JB							**5.78**	**8.27JB**	18
MW-34d	11-May-10			23.1J		0.396J	8.78J		13.5								**1.52J**	20.3
MW-34d	16-Mar-11	0.351J		33.2J			9.87J		8.59J	2.06J			0.946J			0.209J	**1.83J**	11.2
MW-34d	25-Apr-12	0.575J		32.5J			8.02J		5.86JB	2.66J							**1.57J**	7.83J
MW-34d	16-Apr-13	0.6J		20J	0.1J	0.3J	4J	0.1J	1JB	0.6J		0.7J						2JB
MW-35	6-Aug-98				**4.3**	**9.8**	**47**	**30**				52					**120**	130
MW-35	7-Dec-98					**4.6**	**22**	**15**				79					**43**	74
MW-35	26-Apr-99							**13**										
MW-35	2-Dec-99																	
MW-35	13-Apr-00																	
MW-35	18-Apr-01																	
MW-35	9-Apr-02																	
MW-35	16-Apr-03																	
MW-35	21-Apr-04																	
MW-35	22-Apr-05				**5**		**19**			**18**							**52**	134
MW-35	13-Apr-06				2		**10**											
MW-35	20-Apr-07			316	**6**	1.0	**39**	**10**	55	**19**							**109**	149
MW-35	19-May-08			49.5J			5.40J		6.03J					4.43J		**11.7**		8.04J
MW-35	10-Mar-09			34J										1.42JB		**8.59J**		
MW-35	12-May-10			109	0.648J		**16.2**	**9.60J**	22.7	3.21J		8.98J					**42.9**	44.9
MW-35	17-Mar-11			52.9J	0.536J		5.36J	**2.04J**	7.03J	2.33J		3.08J				0.192J	**10.2J**	23.2
MW-35	25-Apr-12			51.3J	0.616J		3.96J	**2.36J**	5.67J			3.10J					**11.3J**	17.8
MW-35	17-Apr-13			60J	0.8J	0.1J	5J	**2J**	7J	2J		4J					**16J**	12JB
MW-36	4-Dec-08			159B			**52.3B**	**21.9**	57.5B	13.6	0.13JB	24.2J	9.10J				**81.6**	47.1
MW-36	10-Mar-09			107			**13**	**5.23J**	19.1			5.71J		1.56JB			**27.2**	11.5
MW-36	4-Dec-09			71.1JB			4.21JB		8.25JB	9.4JB				2.78JB			**3.72JB**	4.9JB
MW-36	12-May-10			96.9J			**18.3**	**7.48J**	18.9			7.38J					**24.0J**	23.3
MW-36	26-Oct-10			46.0J			5.94J	**1.58J**	6.28J			2.01J					**7.32J**	12.2
MW-36	17-Mar-11			69.7J			**10.4**	**2.66J**	9.6J	2.28J		4.16J	0.962J			**0.282J**	**10.7JB**	13.8
MW-36	1-Nov-11			74.6J			**12.1**	**3.63J**	14.7B			7.15JB					**14.8J**	31.8
MW-36	25-Apr-12			64.7J			7.90J	**2.61J**	9.44J			4.33J					**12.5J**	12.1
MW-36	23-Oct-12			216			**68.8**	**18.8**	84	8.62J		29.3J				**0.420J**	**91.7**	72
MW-36 (dup)	23-Oct-12			73.7J			**11.6**	**3.49J**		13.4		6.09J				0.121J	**16.8J**	18.4
MW-36	17-Apr-13			50J	0.1J		6J	**2J**	6J	0.5J		4J					**8J**	12JB
MW-36	16-Oct-13		0.6J	60J	0.2J		7J	**2J**	8J	0.6J		4J				0.05J	**10J**	4JB
MW-36d	4-Dec-08			102B			**70.4B**	**6.46J**	32.8B	4.12J	0.13JB	20.0J				**7.59**	**37**	55.6
MW-36d	10-Mar-09			39.8J			**18.1**		11.6	3.94J		9.35J		1.87JB			**16.6J**	
MW-36d	2-Dec-09			54J			**26**		11.6B			15.9J					**10.7JB**	4.16JB
MW-36d	13-May-10			105			**30.6**	**5.53J**	32.4	2.42J		13.6J					**32.2**	25
MW-36d (dup)	13-May-10			126		0.374J	**44.2**	**7.51J**	43	2.67J		18.7J				0.167J	**41.3**	34.4
MW-36d	27-Oct-10	0.269J		79.9J			**69.2**	**2.30J**	20.3	2.50J		32.6J					**20.7J**	12.3
MW-36d	18-Mar-11			98.4J			**32.3**	**2J**	32.5	4.8J		15.5J	1.73J				**29.3**	17.8
MW-36d (dup)	18-Mar-11			88.4J			**27.1**	**1.35J**	27.3	2.51J		12.7	0.845J				**24.5J**	14.2
MW-36d	2-Nov-11			60.3J			**10.2**		12.0B			6.22J					**11.1J**	5.45J
MW-36d	26-Apr-12			53.7J			2.26J		10.5B	2.44J		2.23J		2.20J			**4.59J**	
MW-36d	24-Oct-12			77.7J			**18.4**	**1.59J**	31.1			8.03J					**19.8J**	12.7
MW-36d	18-Apr-13	0.3J		80J	0.1J		**12**	**2J**	33	1J	0.02J	6J				0.08J	**13J**	7JB
MW-36d	17-Oct-13			60J	0.04J		3J	0.5J	10J		0.03J	3J					**3J**	

Notes:

1. All units are in micrograms per liter (parts per billion).
2. * - Groundwater Protection Standard
3. NS - Not Sampled; NE - Standard Not Established; dup - Duplicate Sample
4. J - Indicates the analytical result is an estimated concentration between the method detection limit and the Solid Waste Section Reporting Limit.
5. B - The analyte concentration detected in the method blank was greater than the method detection limit.
6. MW-27 was abandoned on November 24, 2008 in accordance with 15A NCAC 2C .0113.
7. MW-36 and 36d were installed in November 2008.
8. Monitoring wells MW-28, -28d, -33, -34, -34d, and -35 are sampled yearly during the spring event.

- Concentration exceeds the North Carolina 2L or Groundwater Protection Standard
- Indicates the result is below the detection limits

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-11	15-Apr-94																																							
MW-11	11-May-94																																							
MW-11	25-Aug-94																																							
MW-11	29-Sep-94																																							
MW-11	13-Jun-95																																							
MW-11	28-Sep-95																																							
MW-11	31-Oct-95																																							
MW-11	22-Mar-96																																							
MW-11	27-Nov-96																																							
MW-11	22-Apr-97																																							
MW-11	31-Oct-97																																							
MW-11	11-May-98																																							
MW-11	8-Dec-98																																			24				
MW-11	14-Apr-99																																							
MW-11	30-Nov-99																																							
MW-11	5-Apr-00																																							
MW-11	18-Dec-00																																							
MW-11	18-Apr-01																																							
MW-11	27-Nov-01																																							
MW-11	5-Apr-02																																							
MW-11	5-Nov-02																																							
MW-11	15-Apr-03																																							
MW-11	30-Oct-03																																							
MW-11	21-Apr-04																																							
MW-11	18-Nov-04																																							
MW-11	21-Apr-05																																							
MW-11	11-Nov-05																																							
MW-11	14-Apr-06																																							
MW-11	10-Nov-06																																							
MW-11	20-Apr-07																																							
MW-11	8-Nov-07																																							
MW-11	15-May-08																																							
MW-11	10-Nov-08									0.12J																														
MW-11	11-Mar-09									0.14J																			0.11J											
MW-11	3-Dec-09									0.14J																														
MW-11	12-May-10																																							
MW-11	26-Oct-10																																							
MW-11	17-Mar-11																																							
MW-11	1-Nov-11																																							
MW-11	25-Apr-12																																							
MW-11	23-Oct-12																																							
MW-11	17-Apr-13																																							
MW-11	16-Oct-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-11d	31-Oct-95																																							
MW-11d	22-Mar-96																																							
MW-11d	27-Nov-96																																							
MW-11d	22-Apr-97																																							
MW-11d	31-Oct-97																																							
MW-11d	11-May-98																																							
MW-11d	8-Dec-98																																							
MW-11d	14-Apr-99																																							
MW-11d	30-Nov-99																																			20				
MW-11d	5-Apr-00																																							
MW-11d	18-Dec-00																																							
MW-11d	18-Apr-01																																							
MW-11d	27-Nov-01																																							
MW-11d	5-Apr-02																																							
MW-11d	5-Nov-02																																							
MW-11d	15-Apr-03																																							
MW-11d	30-Oct-03																																							
MW-11d	21-Apr-04																																							
MW-11d	18-Nov-04																																							
MW-11d	21-Apr-05																																							
MW-11d	11-Nov-05																																							
MW-11d	14-Apr-06																																							
MW-11d	10-Nov-06																																							
MW-11d	20-Apr-07																																			24.5				
MW-11d	8-Nov-07																																							
MW-11d	15-May-08									0.31J																														
MW-11d	10-Nov-08									0.22J																														
MW-11d	16-Mar-09									0.28J																										0.999J				
MW-11d	4-Dec-09									0.29J																														
MW-11d	13-May-10																																							
MW-11d	27-Oct-10																																							
MW-11d	18-Mar-11																																							
MW-11d	2-Nov-11																																							
MW-11d	26-Apr-12																																							
MW-11d	24-Oct-12																																							
MW-11d	18-Apr-13																																							
MW-11d	17-Oct-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-5	6-Mar-94		4.9													150		0.84	2.1					17				6.3		5.3	14	9.2		2	3.23					
MW-5	15-Apr-94		4.2						35.7		5.7					99.6	1.1	1.2	1.5					11.7				6.3			11.8	17.9								
MW-5	11-May-94		2.4						24		5.7					74		1.1						11				4.9	2		8.2	26								
MW-5	31-May-94		3.1							0.6						47		1.2	1.2									5.4		7.2	8.1				2.72					
MW-5	10-Jun-94		2.8						24.5							71.8		1.4	1.2									3.6		7.6	7.1									
MW-5	30-Sep-94		1.9						18.7							41.6												4.6		8.9										
MW-5	13-Jun-95		10						48						22				8	196								10			19									
MW-5	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	31-Oct-95		9						61							230			14					18							11									
MW-5 (dup)	31-Oct-95		9						53							210			14					15				9			16									
MW-5	30-Jan-96		10						50						16	198			23									7			17									
MW-5	28-Nov-96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	22-Apr-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	1-Nov-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	6-May-98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	8-Dec-98		7.9						20			6.0			10	74			15					79				11			17				6.5					
MW-5	16-Apr-99		8						22							87			42					100				6			14									26
MW-5	2-Dec-99		6													60			72									6			16									
MW-5	11-Apr-00		6						14			11.0				70			34									10			22		140							
MW-5	20-Dec-00															39			17												14									
MW-5	16-Apr-01											7.0				44			29												17									
MW-5	3-Dec-01															31			20												12									
MW-5	12-Apr-02											7.0				32			33												16									
MW-5	5-Nov-02								10			6.0				26			31												15									
MW-5	17-Apr-03											14.0				24			44												11									
MW-5	4-Nov-03	540										8													360															
MW-5	4-Nov-03	490										8													360															
MW-5	14-Apr-04																												1000											
MW-5	18-Nov-04																		``																					
MW-5	21-Apr-05																																							
MW-5	11-Nov-05								6	9.2																														
MW-5	14-Apr-06																																							
MW-5	9-Nov-06								8.6	5.8																														
MW-5	19-Apr-07								6.7	6.8																														
MW-5	8-Nov-07		4.9					5.9	20.5	8.8																					2.6			13						
MW-5R	21-Apr-04											16.5				13.1			56.2																					
MW-5R	21-May-08		0.34J					1.00J	0.67J			6.17				0.8J			4.22J					0.24J							0.26J									
MW-5R	10-Nov-08		0.23J					0.63J				5.49				0.61J			1.95J					0.23J							0.13J									
MW-5R	11-Mar-09											0.91J																												
MW-5R	3-Dec-09											0.51J							0.09J																					
MW-5R	12-May-10											2.1				0.57J			0.53J																					
MW-5R	25-Oct-10										0.51J	2.5																												
MW-5R	16-Mar-11											2.1																												
MW-5R	31-Oct-11																																							
MW-5R	24-Apr-12																																							
MW-5R	22-Oct-12											0.67J																												
MW-5R	17-Apr-13											0.22J																												
MW-5R	16-Oct-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-6	6-Mar-94		1.7							0.83						34								37				3.4		5.9	4.6	3.9			2.42					
MW-6	15-Apr-94								8.5		1.2					12.5								21				1.9			2.1	2.6								
MW-6	11-May-94								18.4		1.2					28.7								64.2				2.3			4.9	2.6								
MW-6 (dup)	1-Jun-94		3.7							4.3						50								130				7		14	7.5	11			16.6					
MW-6	25-Aug-94								22							36								79.8																
MW-6	29-Sep-94		2						18		66					34								6.1				3		1.4										
MW-6	13-Jun-95								19							28								61							6									
MW-6	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	31-Oct-95								22							32								56							6									
MW-6	30-Jan-96		6						37							61															11									
MW-6	29-Nov-96								34							41								91							16									
MW-6	22-Apr-97		5.4						37							29			6.7					88							15									
MW-6	2-Nov-97		6.1						28							28			7.8					90				5.2			16									
MW-6	6-May-98								29							34			13					140							17									
MW-6 (dup)	6-May-98								30							35			14					140							19									
MW-6	8-Dec-98								26							40			14					180							19									
MW-6	16-Apr-99		5						16							26								110							11									
MW-6	2-Dec-99															12			7					67							6									
MW-6	11-Apr-00															12			7					63							6									
MW-6	19-Dec-00															6								20																
MW-6	16-Apr-01															8			6					46																
MW-6	3-Dec-01																		6																					
MW-6	12-Apr-02															7			5					26																
MW-6	5-Nov-02																		5					10																
MW-6	17-Apr-03																																			13				
MW-6	4-Nov-03																		6																					
MW-6	14-Apr-04																		5.7																					
MW-6	18-Nov-04																																							
MW-6	21-Apr-05																																							
MW-6	11-Nov-05																																							
MW-6	14-Apr-06																																							
MW-6	9-Nov-06																																							
MW-6	19-Apr-07																																							
MW-6	8-Nov-07		3.3									7.4																						3.4						
MW-6	20-May-08		3.85					1J	3.85J			2.07				1.22J			2.3J					0.62J					0.14J		0.9J			3.29		2.17J	1.86J		1.06J	
MW-6	11-Nov-08		4.12					1.29J	3.90J			2.72			0.33J	1.27J			2.22J					1.08					0.20J		0.98J			4.01						
MW-6	11-Mar-09		3.3					1.22J	2.43J			2.02				0.75J			2.21J										0.11J		0.71J			3.61						
MW-6	3-Dec-09		2.56					1.7J	1.79J			1.78				0.79J			1.49J					0.28J					0.14J		0.6J			2.24						
MW-6	12-May-10	6.5J	1.3					2.8J				2.80				0.95J			1.7J															3.0						
MW-6	7-Jul-10		3.9					2.3J	2.3J			2.70				0.85J			1.5J															2.6						
MW-6	29-Jul-10		3.7					2.6J	2.0J			3.20				0.86J			1.1J															2.5						
MW-6	13-Aug-10		4.3					2.5J	2.1J			3.00				0.97J			1.3J															2.5						
MW-6	26-Oct-10		4.5					2.3J				3.00				1.0J			1.3J																					
MW-6	16-Mar-11		3.4					1.3J				1.6				0.42J			1.3J															1.8						
MW-6	1-Nov-11		3.6					1.1J				1.7				1.0J			0.95J																					
MW-6	24-Apr-12		0.7J					0.5J				0.5J							0.42J															0.56J						
MW-6	22-Oct-12	4.6J	2.3						1.7J			1.3				2.5J			0.58J															1.4						
MW-6	17-Apr-13											0.79J				1.7J			0.43J																					
MW-6	16-Oct-13											0.48J				3.0J			0.60J												0.57J									
MW-6 (dup)	16-Oct-13	8.2J										0.54J				3.0J			0.55J												0.54J									

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-6d	8-Jun-01															8			6																					
MW-6d	4-Dec-01																																							
MW-6d	9-Apr-02																																							
MW-6d	7-Nov-02																																							
MW-6d	16-Apr-03																																							
MW-6d	4-Nov-03																																							
MW-6d	21-Apr-04																																							
MW-6d	18-Nov-04																																							
MW-6d	21-Apr-05																																							
MW-6d	11-Nov-05																																							
MW-6d	11-Apr-06																																							
MW-6d	9-Nov-06																																							
MW-6d	20-Apr-07																																							
MW-6d	8-Nov-07																																							
MW-6d	20-May-08									0.49J					3.04J	5.7			0.85J					0.34J				**0.71J**			0.91J	0.91J								
MW-6d	6-Nov-08		0.23J							0.57J		0.44J			2.76J	**6.12**			1.10J					0.77J				**1.06**			1.13	1.10								
MW-6d (dup)	6-Nov-08		0.25J							0.61J		0.45J			2.69J	**6.16**			1.00J					0.68J				**1.08**			1.13	0.99J								
MW-6d	12-Mar-09									0.43J					1.47J	3.24J			0.54J					0.33J				**0.77J**			0.49J	0.55J								
MW-6d	3-Dec-09									0.58J		0.28J			1.86J	5.51			0.9J					0.42J				0.69J			0.86J	0.75J								
MW-6d	12-May-10									0.92J					1.9J	**6.2**			1.1J					0.81J				**0.70J**			0.77J	0.79J								
MW-6d	7-Jul-10		0.42J							0.91J		0.55J			2.9J	**8**			1.9J					0.78J				**0.97J**			1.2	1.1								
MW-6d	29-Jul-10									1.0J		0.68J				**7.6**			1.5J									**1.2**			1.3	1.4								
MW-6d	13-Aug-10									1.1J		0.61J				**7.8**			1.7J					1.1				**1.2**			1.3	1.1								
MW-6d	27-Oct-10									1.2J		0.67J			3.0J	5.2			1.2J									**0.81J**			1.1	1.0								
MW-6d	16-Mar-11														0.91J	3.2J								0.49J																
MW-6d	2-Nov-11									0.72J					1.5J	3.4J								0.43J																
MW-6d	26-Apr-12									0.61J					0.53J	2.3J												0.40J			0.42J									
MW-6d (dup)	26-Apr-12									0.58J						2.3J															0.43J									
MW-6d	23-Oct-12									0.77J					1.1J	3.0J			0.54J					0.48J				0.53J			0.52J									
MW-6d	18-Apr-13									0.52J						2.3J			0.48J					0.3J				0.39J												
MW-6d (dup)	18-Apr-13									0.58J						2.4J			0.47J					0.39J				0.44J			0.36J									
MW-6d	17-Oct-13									0.75J					1.8J	3.3J			0.65J												0.53J									

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-7	6-Mar-94																																							
MW-7	15-Apr-94																																							
MW-7	11-May-94																																							
MW-7	31-May-94																																							
MW-7	25-Aug-94																																							
MW-7	29-Sep-94																																							
MW-7	13-Jun-95																																							
MW-7	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	31-Oct-95								11							5																								
MW-7	30-Jan-96																																							
MW-7	29-Nov-96								22							**9**			2									4			**5**									
MW-7	21-Apr-97								19							**11**			5.9																					
MW-7	1-Nov-97								26							**10**			6.2																					
MW-7	6-May-98								24							**17**			21																					
MW-7	8-Dec-98		**7.2**						32							**20**			36					**12**							**5.2**									
MW-7	16-Apr-99								21							**14**			24																					
MW-7	2-Dec-99															**9**			16																					
MW-7	11-Apr-00															**8**			17																					
MW-7 (dup)	11-Apr-00															**8**			17																	**16**				
MW-7	19-Dec-00															5			10																					
MW-7 (dup)	19-Dec-00															**6**			12																					
MW-7	16-Apr-01															**6**			13																	**16**				
MW-7	4-Dec-01																																							
MW-7	9-Apr-02																		7																					
MW-7	6-Nov-02																		12																					
MW-7	16-Apr-03																		24																					
MW-7	5-Nov-03																		15																					
MW-7	21-Apr-04																		18.3																					
MW-7 (dup)	21-Apr-04																		19.9																					
MW-7	18-Nov-04																		16.4																					
MW-7	21-Apr-05																		26																					
MW-7	11-Nov-05																		12.2																					
MW-7	14-Apr-06																		19.3																					
MW-7	9-Nov-06																		27.2																					
MW-7	20-Apr-07																		24.3															**5.4**						
MW-7	8-Nov-07		**3.5**									2.7							22.3															**7.7**						
MW-7	15-May-08		**1.61**					0.24J				0.77J		0.15J		0.44J			7.68															**2.74**		0.907J				
MW-7	5-Nov-08		**1.04**					0.14J				0.83J		0.16J	1.10J	0.25J			3.14J										0.15J					**2.09**						
MW-7	10-Mar-09		**1.56**					0.20J				1.17			1.34J				3.40J										0.68J					**2.73**	0.96J	2.36J				
MW-7	2-Dec-09		**1.37**					0.2J	0.62J			1.13		0.23J	0.69J	0.32J			2.24J										0.3J					**1.82**	0.48J					
MW-7 (dup)	2-Dec-09		**1.38**					0.22J	0.59J			1.11		0.23J	0.76J	0.29J			2.34J										0.32J					**1.93**	0.45J					
MW-7	13-May-10		**2.1**									2				0.46J			1.8J															**3.1**	0.50J					
MW-7	27-Oct-10		**2.3**					0.42J				2.5		0.72J		0.61J			1.6J										0.49J					**2.9**	1.2J					
MW-7	16-Mar-11		**1.8**									1.6							0.74J															**1.5**						
MW-7	2-Nov-11	7.6J	**1.3**									1.6																						**1.4**						
MW-7	26-Apr-12	120	0.66J									0.79J																						**0.49J**						
MW-7	22-Oct-12	15	0.75J									1.4																						**0.93**						
MW-7	16-Apr-13		0.66J					0.25J				1.2	1.2J																											
MW-7	16-Oct-13		0.81J					0.40J				1.5																												

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-8	6-Mar-94		6.8							2.2		3.2				13	1	1.3	7.6			0.56		450				7.5	4	18	16	7.3		0.76	35.6					
MW-8	15-Apr-94		7.9						39.8	1.3	8.8	4.9				88.6	1.8	1.5	8.9		3	1.4		310				8.1	5		17.5	5.1			39.7					
MW-8	11-May-94		5.6						34							83			278					278				7			15				27.1					
MW-8	31-May-94		12							1.1		13				110	2.6	1.6	23					310			3.1	16	11	16	29	4.4			89					
MW-8	25-Aug-94								51.3							109								400											32					
MW-8	30-Sep-94		5.8						35		12.2	5.2				86			5.6					300						8.9	13				22.8					
MW-8	13-Jun-95								15							36								47							6				19					
MW-8	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	31-Oct-95		8						40	8					8	72			23			32		137				9			14									
MW-8	30-Jan-96		10						37						10	71			34					123				18			23				58	20				
MW-8	29-Nov-96		4			8			15			3			5	18			24					23				13		1	12				13					
MW-8	21-Apr-97															10			20					16				8.3			8.1					8				
MW-8	2-Nov-97															6.3			22												5.2									
MW-8	6-May-98		5.7													15			56					13				7.8			8.7				6.1					
MW-8	8-Dec-98															7.9			37												5.2									
MW-8	16-Apr-99											6				13			55												6									
MW-8 (dup)	16-Apr-99															10			41																					
MW-8	2-Dec-99	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	11-Apr-00																		12																					
MW-8	20-Dec-00																																							
MW-8	16-Apr-01																																							
MW-8	3-Dec-01																																							
MW-8	12-Apr-02																																							
MW-8	5-Nov-02																																							
MW-8	17-Apr-03																																			10				
MW-8	4-Nov-03																		12																					
MW-8	14-Apr-04																		7.9																					
MW-8	18-Nov-04																		7.9																					
MW-8	21-Apr-05																																							
MW-8	11-Nov-05																																							
MW-8	14-Apr-06																																							
MW-8	9-Nov-06																																							
MW-8	20-Apr-07																		18.9																					
MW-8	8-Nov-07																		6.6																					
MW-8	20-May-08		0.19J					0.16J		0.38J		0.16J				0.96J			14.2					0.76J				0.28J			0.39J									
MW-8	10-Nov-08		0.14J							0.39J						0.58J								1.17				0.17J	0.11J		0.23J									
MW-8	11-Mar-09		0.20J					0.19J		0.32J						0.61J			6.84					0.30J																
MW-8	3-Dec-09		0.22J							0.35J						0.62J			8.04					0.45J				0.13J			0.25J			0.44J						
MW-8	12-May-10											0.40J				1.0J			19					0.78J										0.84J						
MW-8	25-Oct-10		0.41J													1.0J			56					0.69J							0.58J									
MW-8	16-Mar-11															0.61J			17																					
MW-8	31-Oct-11															0.66J			14																					
MW-8	24-Apr-12															0.75J			23																					
MW-8	22-Oct-12		0.47J									0.40J				1.1J			25					0.65J							0.41J									
MW-8	17-Apr-13		0.51J					0.23J				0.53J				0.77J			35					0.32J							0.47J									
MW-8	16-Oct-13		0.48J					0.17J				0.47J				0.62J			37																					

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-8d	8-Jun-01																																							
MW-8d	4-Dec-01																																							
MW-8d	9-Apr-02																																							
MW-8d (dup)	9-Apr-02																																							
MW-8d	7-Nov-02																																							
MW-8d	16-Apr-03																																							
MW-8d	4-Nov-03																																							
MW-8d	21-Apr-04																																							
MW-8d	18-Nov-04																																							
MW-8d	21-Apr-05																																							
MW-8d	11-Nov-05																																							
MW-8d	14-Apr-06																																							
MW-8d	10-Nov-06																																							
MW-8d	20-Apr-07																																							
MW-8d	8-Nov-07																																							
MW-8d	15-May-08									0.28J						0.17J			0.07J																					
MW-8d	6-Nov-08									0.31J														0.62J																
MW-8d	16-Mar-09									0.39J						0.14J			0.07J									0.44J												
MW-8d	4-Dec-09									0.36J						0.14J			0.08J																					
MW-8d	13-May-10									0.45J																														
MW-8d	27-Oct-10									0.61J																														
MW-8d	18-Mar-11																																							
MW-8d	2-Nov-11																																							
MW-8d	26-Apr-12									0.42J																														
MW-8d	24-Oct-12									0.51J																														
MW-8d	18-Apr-13									0.36J																														
MW-8d	17-Oct-13									0.43J																														

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-9	6-Mar-94		5.3							5.8		1.6				100		1.3				0.73		680				6.6	6	7	8.7	4.2		0.96	15.2					
MW-9	15-Apr-94		5.6						14.1	4.9	7.3	2.4				96.8		1.8	0.7					357				8.2	1.6		12.4	3.6			17.3					
MW-9	11-May-94		6.8							5	20.1					134								357				7.6			13				20.5					
MW-9	31-May-94		8.2							6.6		3.4				170		1.7						460				8.8	1.7	8.7	14	3.6			23.3					
MW-9	25-Aug-94															165								558																
MW-9	29-Sep-94		7							5.1						131								400				8.2		6.5					16					
MW-9	13-Jun-95		11						20						28	203								258				11		7	23				8					
MW-9	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	31-Oct-95		15						29						44	310								278				14			27				14					
MW-9	30-Jan-96		14						22		11				33	270												8			23				6					
MW-9	29-Nov-96		22													280															31									
MW-9	22-Apr-97		24												16	220															28				14.2					
MW-9	2-Nov-97														32	200																								
MW-9	6-May-98		17												31	210												13			32									
MW-9	8-Dec-98		14												53	200												13			31					20				
MW-9	16-Apr-99		7												49	140												7			20					12				
MW-9	2-Dec-99															120															20									
MW-9	11-Apr-00															110															20									
MW-9	20-Dec-00														25	100															18									
MW-9	16-Apr-01														20	93			6									6			15					21				
MW-9	3-Dec-01														25	100			20												5									
MW-9 (dup)	3-Dec-01														20	89			19																	22				
MW-9	12-Apr-02															97			21																					
MW-9	5-Nov-02														19	84			20																					
MW-9	17-Apr-03		5												19	100			29										6							59				
MW-9	4-Nov-03		5													83			28										13						8					
MW-9	14-Apr-04		5.86									5.5			11.8	96			27			2.5							15					6.2	7.4	28				
MW-9	18-Nov-04											5.2			13.2	73.7			6.4										6.6					26.5						
MW-9	21-Apr-05											5.2			9.5	69.6																		29.6						
MW-9	11-Nov-05											6.7			8.3	63.1																		28.8						
MW-9	14-Apr-06											6.9				47.6																		29.5						
MW-9	9-Nov-06											5.8				39.9																		23						
MW-9	19-Apr-07		4.4									8.4				44.4																		32.9						
MW-9	8-Nov-07		1.6									7.4				28.9	1														1.1			26.4						
MW-9	20-May-08		2.17					0.28J	3.53J			7.73			0.42J	28.9	0.86J		3.83J		0.9J	1.51		0.24J					1.01		0.45J	0.24J		25.6	1.69J		1.11J			
MW-9 (dup)	20-May-08		2.27					0.27J				7.42				30.3			3.62J	0.23J		1.32		0.26J					1.03		0.42J			27.7	1.10J		1.01J			
MW-9	11-Nov-08		1.74					0.20J	2.24J			6.26				21.6			3.28J			1.06		0.72J					0.60J		0.28J			19.1	0.48J					
MW-9	11-Mar-09		1.96					0.24J	2.50J			6.99				22.9			4.16J	0.15J	0.86J	1.06							0.54J		0.20J			22.1	0.77J	0.834J				
MW-9 (dup)	11-Mar-09		1.85					0.24J	2.36J			6.93				22.5			4.14J	0.13J	0.83J	1.06							0.54J		0.24J			21.5	0.89J	2.07J				
MW-9	3-Dec-09		1.58					0.22J	2.37J			6.06				18.9	0.67J		5.99	0.21J	0.8J	1.15							0.37J		0.28J			21.5	0.79J					
MW-9	12-May-10											9.5				23	0.91J		6.7		1.1	2.4				1.0J			0.62J					41	2.0J					
MW-9	26-Oct-10		1.6									8.4				17	1.2		16		1.0	0.74J												25	0.57J					
MW-9	17-Mar-11		1.1									6				12	0.92J		13		0.61J													14						
MW-9	1-Nov-11		1.3									5.9				11			11															12						
MW-9 (dup)	1-Nov-11	6.1J	1.0						1.3J			5.9				10			12															10						
MW-9	25-Apr-12		1.8									8.1				9.8			15		0.68J	0.54J									0.47J			19						
MW-9	23-Oct-12															2.0J			3.3J																					
MW-9	17-Apr-13															1.3J			2.1J																					
MW-9	16-Oct-13															2.0J			4.2J																					

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-10	6-Mar-94		2.4							2.5						37		2.4						72				4.6		16	9.8	12			26.7					
MW-10	15-Apr-94		1.8						18.1	1.6	5.5					24.2	2.6	2.6						67.3				4.8			8				16.9					
MW-10	11-May-94		1.4						15.8	1.7	4					23	2.6	1.8						54.8				4			6.8	16.3			6.7					
MW-10	31-May-94		3.7							3.9						57		2.7						120				8.7		17	15	15			19.1					
MW-10	25-Aug-94								47.7		18.7					72						8		194				9.2		18.4		18			15					
MW-10	29-Sep-94		4.2						37.7	3.4	7.2					56.3		3.5						148						3.5	19	17.1			13.1					
MW-10	13-Jun-95		7						53		13				18	84								223				13		13	20				14					
MW-10	28-Sep-95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	31-Oct-95								33						46	44			10					47				7		14	8	14								
MW-10	30-Jan-96		8						48		10				29	101			12									9		8	18				8					
MW-10	28-Nov-96								3							12			1					15				2			2									
MW-10	22-Apr-97		12						31						8.5	160			20					120				25			33				19.6	7.3				
MW-10	1-Nov-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	8-Dec-98															140			48					270				16			19				12					
MW-10	11-Jan-99		7						19							140			36					320				14			18					NS				
MW-10	8-Feb-99		9						24							140			41									17			21				20	NS				
MW-10 (dup)	8-Feb-99		8						20							130			38									13			17					NS				
MW-10	16-Apr-99															160			26					410												16				
MW-10	2-Dec-99															40								77				6								14				
MW-10	12-Apr-00															46			7					88				7			6									
MW-10	20-Dec-00															35								40																
MW-10	17-Apr-01															34								34																
MW-10	3-Dec-01															26								18																
MW-10	12-Apr-02															22								18																
MW-10	5-Nov-02														6	20								16				8												
MW-10 (dup)	5-Nov-02														6	21								16				9												
MW-10	17-Apr-03														5	26								22				7												
MW-10	4-Nov-03														5	26																								
MW-10	14-Apr-04														5																					189				
MW-10	18-Nov-04																		6.4																	37				
MW-10	21-Apr-05																		9.9																					
MW-10	11-Nov-05															5.7			17.6																					
MW-10	14-Apr-06																		11.9																					
MW-10	9-Nov-06															7.8			27.7																					
MW-10	19-Apr-07															6.3			7.4																	24				
MW-10	8-Nov-07																							1				1.3								21				
MW-10	20-May-08		1.16						1.03J			0.46J			0.55J	6.07		0.14J	7.13					3.69				2.34			1.81	0.17J		0.49J	0.52J	3.12J				
MW-10	11-Nov-08		2.26						1.46J			0.66J			0.83J	9.44			11.3					1.89				4.2			2.99			1.67	0.41J					
MW-10	11-Mar-09		3.53						1.50J			0.50J				8.52			22.3									4.06			4			1.70	0.65J	0.616J				
MW-10	3-Dec-09		4.32					0.09J	1.06J			0.68J			0.38J	7.58			28.8					0.42J				2.65			2.99			0.95J	0.15J					
MW-10	12-May-10		0.66J													1.7J			26									0.74J			0.71J			1.20						
MW-10	25-Oct-10	4.2J	4.0						1.7J		0.45J	0.67J			0.52J	4.4J			48									2.8			1.9			1.70						
MW-10	17-Mar-11		3.3									1.1				4.2J			48									2.5			2.6			1.6						
MW-10	31-Oct-11		3.2						1.4J			0.90J				4.9J			42									2.9			2.6			1.3						
MW-10	25-Apr-12	10J	2.3									1				3.2J			44									2.9			2.5			1.4						
MW-10	23-Oct-12		3.3						1.8J			1.3				5.3			52					0.41J				2.3			2.6			3.1						
MW-10	17-Apr-13		3.2					0.23J				2.3				6.3	0.23J		39	0.21J				0.26J				4.7			6.1				0.18J					
MW-10	16-Oct-13		1.1					0.17J				2.4				4.0J			23									2.1			3.0			0.76J						

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-10d	8-Jun-01															**12**								**16**																
MW-10d	4-Dec-01															**17**																								
MW-10d	11-Apr-02															**16**																								
MW-10d	5-Nov-02															**13**																								
MW-10d	17-Apr-03															**11**																								
MW-10d	4-Nov-03															**8**																				**13**				
MW-10d	26-Apr-04															5.9																				**32.4**				
MW-10d	18-Nov-04																																			**43**				
MW-10d	21-Apr-05																																							
MW-10d	11-Nov-05																																							
MW-10d	14-Apr-06																																							
MW-10d	10-Nov-06																																							
MW-10d	20-Apr-07																																			**19.9**				
MW-10d	8-Nov-07																																			**20**				
MW-10d	20-May-08									0.3J					0.36J	2.01J			0.2J					0.71J				0.29J			0.36J									
MW-10d	6-Nov-08		0.22J				6.01J			0.21J						2.16J			0.15J					1.47				0.32J			0.37J	0.39J								
MW-10d	12-Mar-09									0.26J					0.67J	2.30J			0.18J					1.17				0.33J			0.37J					1.12J				
MW-10d	4-Dec-09									0.25J					0.56J	2.44J			0.27J					1.06				0.47J			0.48J	0.29J								
MW-10d	13-May-10														0.78J	2.5J												0.64J			0.59J									
MW-10d	27-Oct-10														1.1J	2.5J			0.69J									**1.2**			0.79J	0.50J								
MW-10d	18-Mar-11															2J								1																
MW-10d	2-Nov-11															2.2J								0.92J																
MW-10d	26-Apr-12														0.70J	2.2J			0.6J									0.52J			0.50J									
MW-10d	24-Oct-12														0.55J	2.3J			0.47J					0.64J				0.67J			0.45J									
MW-10d	18-Apr-13															2J			0.62J					0.57J				0.64J			0.36J									
MW-10d	16-Oct-13															1.8J			0.56J					0.57J																

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-22	9-Jun-97																																							
MW-22	18-Aug-97																																							
MW-22	2-Nov-97														5.2	**6.9**																								
MW-22	6-May-98																																							
MW-22	8-Dec-98															**8.6**																								
MW-22	16-Apr-99															**6**																								
MW-22	2-Dec-99																																							
MW-22	12-Apr-00																																							
MW-22	20-Dec-00															**9**																								
MW-22	17-Apr-01															**9**																								
MW-22	4-Dec-01															**6**																								
MW-22	9-Apr-02															5																								
MW-22	6-Nov-02															5																								
MW-22	17-Apr-03																																							
MW-22	5-Nov-03																																							
MW-22	26-Apr-04																																							
MW-22	19-Nov-04																																							
MW-22	22-Apr-06																																							
MW-22	11-Nov-05																																							
MW-22	14-Apr-07																																							
MW-22	9-Nov-06																																							
MW-22	20-Apr-07																																							
MW-22	8-Nov-07																																							
MW-22	15-May-08															0.25J												0.31J								1.47J				
MW-22	6-Nov-08																							0.74J				0.32J												
MW-22	12-Mar-09															0.09J												0.66J								0.71J				
MW-22	4-Dec-09		0.15J							1.2J														0.4J				0.31J												
MW-22	12-May-10									0.83J																														
MW-22	26-Oct-10									0.94J																		0.65J												
MW-22	18-Mar-11									0.79J																														
MW-22	1-Nov-11																																							
MW-22	25-Apr-12																																							
MW-22	23-Oct-12																																							
MW-22	17-Apr-13																																							
MW-22	16-Oct-13																																							

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Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-23	9-Jun-97								40							86			7.6					100				9.3	16	6.4	9.1				13					
MW-23	18-Aug-97								33							93			11					85																
MW-23	2-Nov-97								26							68			11					40				5.6			6.3									
MW-23	5-May-98															6.9								10																
MW-23	8-Dec-98															7.4																				8.3				
MW-23 (dup)	8-Dec-98															9.2																								
MW-23	16-Apr-99																																							
MW-23	2-Dec-99																																							
MW-23 (dup)	2-Dec-99																																							
MW-23	12-Apr-00																																							
MW-23	20-Dec-00																																							
MW-23	17-Apr-01																																							
MW-23	4-Dec-01																																							
MW-23	11-Apr-02																																							
MW-23	6-Nov-02																																							
MW-23	17-Apr-03																																							
MW-23 (dup)	17-Apr-03																																							
MW-23	5-Nov-03																																							
MW-23	26-Apr-04																																							
MW-23	19-Nov-04																																							
MW-23	21-Apr-05																																							
MW-23	11-Nov-05																																							
MW-23	14-Apr-06																																							
MW-23	9-Nov-06																																							
MW-23	20 ap 07																																							
MW-23	8-Nov-07																																							
MW-23	15-May-08									0.17J						0.67J												0.19J								0.86J				
MW-23	6-Nov-08															0.35J								0.37J				0.13J												
MW-23	12-Mar-09															0.35J												0.48J												
MW-23	4-Dec-09															0.23J																								
MW-23	13-May-10																																							
MW-23	27-Oct-10																																							
MW-23 (dup)	27-Oct-10																																							
MW-23	18-Mar-11																																							
MW-23	2-Nov-11																																							
MW-23	23-Apr-12																																							
MW-23	24-Oct-12																																							
MW-23	18-Apr-13																																							
MW-23	16-Oct-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-23d	5-May-98																																							
MW-23d	8-Dec-98																																			7.8				
MW-23d	16-Apr-98																																							
MW-23d	2-Dec-99																																			10				
MW-23d	12-Apr-00																																			10				
MW-23d	20-Dec-00																																							
MW-23d	17-Apr-01																																							
MW-23d	4-Dec-01																																							
MW-23d	11-Apr-02																																							
MW-23d	6-Nov-02																																							
MW-23d	17-Apr-03																																							
MW-23d	5-Nov-03																																							
MW-23d	26-Apr-04																																							
MW-23d	19-Nov-04									6.4																														
MW-23d	21-Apr-05									6.9																														
MW-23d	11-Nov-05																																							
MW-23d	14-Apr-06																																							
MW-23d	9-Nov-06																																							
MW-23d	20-Apr-07																																							
MW-23d	8-Nov-07																																							
MW-23d	15-May-08									0.3J																														
MW-23d	6-Nov-08									0.15J																														
MW-23d	12-Mar-09									0.24J																										1.21J				
MW-23d	4-Dec-09									0.2J																														
MW-23d	13-May-10																																							
MW-23d	26-Oct-10																																							
MW-23d	17-Mar-11																																							
MW-23d	1-Nov-11																																							
MW-23d	25-Apr-12																																							
MW-23d	23-Oct-12																																							
MW-23d	18-Apr-13																																							
MW-23d	17-Oct-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-24	9-Jun-97								12							37			5.1			14		200					160		8.5				57					
MW-24	18-Aug-97															68								380					400											
MW-24	1-Nov-97															56						25		340					260						98					
MW-24 (dup)	1-Nov-97															68						33		370					340						131					
MW-24	5-May-98															42						28		240					230						112					
MW-24	8-Dec-98		12						30							85			26			23		280					140		15				93	7.7				
MW-24	16-Apr-99								19							55						13		170					46						60					
MW-24	2-Dec-99															25								43											21	11				
MW-24	12-Apr-00															42			5					39				7			7				33					
MW-24	20-Dec-00															44			5					29				8			7				21					
MW-24	16-Apr-01															34			5					18				6							12					
MW-24 (dup)	16-Apr-01															34			5					20				6							12					
MW-24	3-Dec-01															33			5					12				8							10					
MW-24	12-Apr-02															27												6							8					
MW-24	5-Nov-02															21																								
MW-24	17-Apr-03															19																				30				
MW-24	4-Nov-03															9																								
MW-24	14-Apr-04															6.5																								
MW-24	18-Nov-04																																							
MW-24	21-Apr-05																																							
MW-24	11-Nov-05									7																														
MW-24	14-Apr-06									8.5																														
MW-24	9-Nov-06									9.8																														
MW-24	19-Apr-07									11.4																														
MW-24	8-Nov-07									7.2																														
MW-24	20-May-08									14.8						0.29J								0.19J				0.38J								1.52J				
MW-24	11-Nov-08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-24	12-Mar-09									10.1						0.26J												0.62J								1.69J				
MW-24	4-Dec-09				*1.48J					9.11	*422					0.2J							*2.93J					0.2J												
MW-24	13-May-10									13																														
MW-24	17-Oct-10									11																														
MW-24	18-Mar-11									13																														
MW-24	2-Nov-11									8.9																														
MW-24	26-Apr-12									7.3																														
MW-24	23-Oct-12									8																														
MW-24	17-Apr-13									8.7																														
MW-24	16-Oct-13									7.9																														
MW-27	4-May-98																																			7.5				
MW-27	7-Dec-98																																			6.4				
MW-27	26-Apr-99																																			20				
MW-27	3-Dec-99																																							
MW-27	12-Apr-00																																							
MW-27	18-Apr-01																																							
MW-27	12-Apr-02																																							
MW-27	17-Apr-03																																							
MW-27	26-Apr-04																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-28	1-May-98																																							
MW-28	17-Aug-98																																							
MW-28	9-Sep-98																																							
MW-28	7-Oct-98																																							
MW-28	9-Dec-98																																			12				
MW-28	12-Jan-99																																							
MW-28	9-Feb-99																																							
MW-28	19-Apr-99																																							
MW-28	3-Dec-99																																							
MW-28	12-Apr-00																																							
MW-28	18-Apr-01																																							
MW-28	12-Apr-02																																							
MW-28	17-Apr-03																																							
MW-28	26-Apr-04																																							
MW-28	22-Apr-05																																							
MW-28	14-Apr-06																																							
MW-28	20-Apr-07																																							
MW-28	19-May-08									0.39J																														
MW-28	12-Mar-09									0.39J																														
MW-28	13-May-10																																							
MW-28	18-Mar-11																																							
MW-28	26-Apr-12									0.53J																														
MW-28	18-Apr-13									0.58J																														
MW-28d	1-May-98																																							
MW-28d	17-Aug-98																																							
MW-28d	9-Sep-98																																							
MW-28d	7-Oct-98																																							
MW-28d	9-Dec-98																																			20				
MW-28d	12-Jan-99																																							
MW-28d (dup)	12-Jan-99																																							
MW-28d	9-Feb-99																																							
MW-28d	19-Apr-99																																							
MW-28d	3-Dec-99																																			94				
MW-28d	12-Apr-00																																			46				
MW-28d	18-Apr-01																																							
MW-28d	12-Apr-02																																			36				
MW-28d	17-Apr-03																																							
MW-28d	26-Apr-04																																			28.3				
MW-28d	22-Apr-05																																							
MW-28d	14-Apr-06																																							
MW-28d	20-Apr-07																																							
MW-28d	19-May-08									0.45J																														
MW-28d	12-Mar-09									0.33J																		0.42J												
MW-28d	13-May-10																																							
MW-28d	18-Mar-11																																							
MW-28d	26-Apr-12	19J																																						
MW-28d	18-Apr-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-29d	4-May-98																																							
MW-29d	17-Aug-98																																							
MW-29d	4-May-98																																							
MW-29d	17-Aug-98																																							
MW-29d	9-Sep-98																																							
MW-29d (dup)	9-Sep-98																																							
MW-29d	7-Oct-98																																							
MW-29d	9-Dec-98																																			37				
MW-29d	12-Jan-99																																							
MW-29d	9-Feb-99																																							
MW-29d	19-Apr-99																																							
MW-29d	3-Dec-99																																							
MW-29d	12-Apr-00																																							
MW-29d	19-Dec-00																																							
MW-29d	18-Apr-01																																							
MW-29d	4-Dec-01																																							
MW-29d	11-Apr-02																																							
MW-29d	6-Nov-02																																							
MW-29d	18-Apr-03																																							
MW-29d	5-Nov-03																																							
MW-29d	26-Apr-04																																							
MW-29d	19-Nov-04																																							
MW-29d	21-Apr-05																																							
MW-29d	11-Nov-05																																							
MW-29d	14-Apr-06																																							
MW-29d	10-Nov-06																																							
MW-29d	20-Apr-07																																			23				
MW-29d	9-Nov-07																																							
MW-29d	19-May-08									0.13J																										1.44J				
MW-29d	7-Nov-08																							0.37J																
MW-29d	10-Mar-09									0.12J																										0.857J				
MW-29d	2-Dec-09									0.15J																		0.21J												
MW-29d	13-May-10																																							
MW-29d	27-Oct-10																																							
MW-29d	18-Mar-11																																			1.8J				
MW-29d	1-Nov-11																																							
MW-29d	26-Apr-12																																							
MW-29d	24-Oct-12																																							
MW-29d	18-Apr-13																																							
MW-29d	17-Oct-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-30	4-May-98																																							
MW-30	17-Aug-98																																							
MW-30	9-Sep-98																																							
MW-30	7-Oct-98																																							
MW-30	7-Dec-98																																							
MW-30	12-Jan-99																																							
MW-30	9-Feb-99																																							
MW-30	19-Apr-99																																							
MW-30	3-Dec-99																																							
MW-30	12-Apr-00																																							
MW-30	19-Dec-00																																							
MW-30	18-Apr-01																																							
MW-30	4-Dec-01																																							
MW-30	11-Apr-02																																							
MW-30	6-Nov-02																																							
MW-30	17-Apr-03																																							
MW-30	5-Nov-03																																							
MW-30	28-Apr-04																																							
MW-30	19-Nov-04																																			27.7				
MW-30	21-Apr-05																																							
MW-30	11-Nov-05																																							
MW-30	14-Apr-06																																							
MW-30	10-Nov-06																																							
MW-30	20-Apr-07																																							
MW-30	9-Nov-07																																							
MW-30	19-May-08									0.55J																														
MW-30	7-Nov-08									0.45J														0.21J																
MW-30	11-Mar-09									0.39J																														
MW-30	4-Dec-09	3.01J																																						
MW-30	12-May-10																																							
MW-30	26-Oct-10									0.52J																														
MW-30	18-Mar-11																																							
MW-30	1-Nov-11																																							
MW-30	25-Apr-12																																							
MW-30	23-Oct-12																																							
MW-30	17-Apr-13																																							
MW-30	16-Oct-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-31	1-May-98																																							
MW-31	17-Aug-98																																							
MW-31	9-Sep-98																																							
MW-31	7-Oct-98																																							
MW-31	8-Dec-98																																							
MW-31	11-Jan-99																																							
MW-31	8-Feb-99																																							
MW-31	19-Apr-99																																							
MW-31	3-Dec-99																																							
MW-31	13-Apr-00									13																														
MW-31	19-Dec-00									25																														
MW-31	17-Apr-01									21																														
MW-31	6-Dec-01									54																														
MW-31	11-Apr-02									37																														
MW-31	6-Nov-02									43																														
MW-31	18-Apr-03									32																														
MW-31	5-Nov-03									48																														
MW-31	28-Apr-04									32.5																														
MW-31	18-Nov-04									26.5																														
MW-31	21-Apr-05									27.2																														
MW-31	11-Nov-05									38.2																														
MW-31	14-Apr-06									36.6																														
MW-31	9-Nov-06									26.2																														
MW-31	20-Apr-07									23.4																														
MW-31	9-Nov-07									9.9																														
MW-31	19-May-08									14.9																														
MW-31	6-Nov-08									10.1														0.15J																
MW-31	11-Mar-09									10.1																														
MW-31	4-Dec-09									4.62J																														
MW-31	12-May-10									4.9J																														
MW-31	26-Oct-10									2.6J																														
MW-31	17-Mar-11									2.5J																														
MW-31	1-Nov-11									2.1J																														
MW-31	25-Apr-12									1.3J																														
MW-31	23-Oct-12									2.0J																														
MW-31	17-Apr-13									1.4J																														
MW-31	16-Oct-13									1.4J																														

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-31d	1-May-98																																							
MW-31d	17-Aug-98																																							
MW-31d	9-Sep-98																																							
MW-31d	7-Oct-98																																							
MW-31d	8-Dec-98																																			10				
MW-31d	11-Jan-99																																							
MW-31d	8-Feb-99																																							
MW-31d	19-Apr-99																																			10				
MW-31d	3-Dec-99																																			41				
MW-31d	13-Apr-00																																							
MW-31d	19-Dec-00																																							
MW-31d	18-Apr-01									7																														
MW-31d	6-Dec-01									14																														
MW-31d	11-Apr-02									23																														
MW-31d	6-Nov-02									31																														
MW-31d	18-Apr-03									26																														
MW-31d	5-Nov-03									34																														
MW-31d	28-Apr-04									38.3																														
MW-31d	19-Nov-04									23.8																														
MW-31d	21-Apr-05									31.9																														
MW-31d	11-Nov-05									34																														
MW-31d	14-Apr-06									33.1																														
MW-31d	9-Nov-06									37.7																														
MW-31d	20-Apr-07									37.5																										23				
MW-31d	9-Nov-07									31.5																														
MW-31d	19-May-08									36.6																														
MW-31d	6-Nov-08									33																														
MW-31d	10-Mar-09									30.2																														
MW-31d	2-Dec-09									20																														
MW-31d	11-May-10									31																														
MW-31d	25-Oct-10									22																														
MW-31d	16-Mar-11									28																														
MW-31d	31-Oct-11									23																														
MW-31d	24-Apr-12									23																														
MW-31d	22-Oct-12									22																														
MW-31d	16-Apr-13									21																														
MW-31d	15-Oct-13									17																														

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-32	1-May-98																																							
MW-32	18-Aug-98																																							
MW-32	9-Sep-98																																							
MW-32	6-Oct-98																																							
MW-32	7-Dec-98																																							
MW-32	11-Jan-99																																							
MW-32	8-Feb-99																																							
MW-32	19-Apr-99																																							
MW-32	3-Dec-99																																							
MW-32	13-Apr-00																																							
MW-32	19-Dec-00																																							
MW-32	17-Apr-01																																							
MW-32	4-Dec-01																																							
MW-32	11-Apr-02																																							
MW-32	6-Nov-02																																							
MW-32	18-Apr-03																																							
MW-32	4-Nov-03																																			11				
MW-32	28-Apr-04																																							
MW-32	18-Nov-04																																							
MW-32	21-Apr-05																																							
MW-32	11-Nov-05																																							
MW-32	14-Apr-06																																							
MW-32	9-Nov-06																																							
MW-32	20-Apr-07																																							
MW-32	9-Nov-07																																							
MW-32	19-May-08																																							
MW-32	6-Nov-08																							0.47J																
MW-32	11-Mar-09																																							
MW-32	4-Dec-09				*1.65J						*455												*3.23J																	
MW-32	12-May-10																																							
MW-32	26-Oct-10																																							
MW-32	17-Mar-11																																							
MW-32	1-Nov-11																																							
MW-32	25-Apr-12																																							
MW-32	23-Oct-12																																							
MW-32	17-Apr-13																																							
MW-32	16-Oct-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
TB-1a	1-May-98															5.3													6.9	6.9											
TB-1a	18-Aug-98								20							39								22				7.5		9.8	7.6				23					
TB-1a	9-Sep-98								21							40								22				7.7		11	7.9				20					
TB-1a	7-Oct-98								17							35								16				8.2		11	7.1				13					
TB-1a (dup)	7-Oct-98								17							33								16				8.3		11	7.2				17					
TB-1a	9-Dec-98								14							23												5.3		8.2					11					
TB-1a	11-Jan-99								16							21												6.0		11	5.0				6					
TB-1a	8-Feb-99								15							18												7.0		10					8					
TB-1a	19-Apr-99								10							14												5.0		10					5					
TB-1a	3-Dec-99								11							19												6.0		10					9					
TB-1a	13-Apr-00								11							22												7.0		8	5.0				11					
TB-1a	20-Dec-00															13																								
TB-1a	17-Apr-01															11																								
TB-1a	3-Dec-01															7																								
TB-1a	12-Apr-02															8																								
TB-1a	5-Nov-02															9																								
TB-1a	17-Apr-03															30												7.0			6.0									
TB-1a	4-Nov-03									8						8																								
TB-1a	14-Apr-04									20.4																														
TB-1a	18-Nov-04									17.3																														
TB-1a	21-Apr-05									18.8																														
TB-1a	11-Nov-05									24.3																														
TB-1a	14-Apr-06									18.6																														
TB-1a	9-Nov-06									25.5																														
TB-1a	19-Apr-07									22.5																														
TB-1a	9-Nov-07									21.8																														
TB-1a	20-May-08			0.66J						11.5						0.21J								0.31J				0.17J												
TB-1a	11-Nov-08			0.54J						11.6						0.33J								1.1				0.16J												
TB-1a	11-Mar-09									5.6						0.33J												0.12J												
TB-1a	3-Dec-09									5.5						0.3J												0.16J												
TB-1a	12-May-10									1.3J																														
TB-1a	26-Oct-10									4.3J						0.46J												0.50J												
TB-1a	17-Mar-11									2.5J																														
TB-1a	1-Nov-11									1.6J																														
TB-1a	25-Apr-12									0.9J																														
TB-1a	23-Oct-12									0.74J																														
TB-1a	17-Apr-13									0.70J																														
TB-1a	16-Oct-13									0.35J																														

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
TB-1a deep	8-Jun-01																																							
TB-1a deep	6-Dec-01																																							
TB-1a deep	11-Apr-02																																							
TB-1a deep	6-Nov-02																																							
TB-1a deep	18-Apr-03									8																														
TB-1a deep	4-Nov-03																																			19				
TB-1a deep	28-Apr-04									22																														
TB-1a deep	18-Nov-04									17.9																														
TB-1a deep	21-Apr-05									25.6																														
TB-1a deep	11-Nov-05									30.6																														
TB-1a deep	14-Apr-06									29.1																														
TB-1a deep	10-Nov-06									35.6																														
TB-1a deep	20-Apr-07									32.4																														
TB-1a deep	9-Nov-07									26.2																														
TB-1a deep	19-May-08		0.77J							25.2														0.72J																
TB-1a deep	7-Nov-08									32.5														0.42J																
TB-1a deep	12-Mar-09									31.8																														
TB-1a deep	4-Dec-09									33.9																														
TB-1a deep	11-May-10									37																														
TB-1a deep	25-Oct-10									38																														
TB-1a deep	16-Mar-11									31																														
TB-1a deep	31-Oct-11									31																														
TB-1a deep	24-Apr-12									23																														
TB-1a deep	23-Oct-12									22																														
TB-1a deep	16-Apr-13									20																														
TB-1a deep	15-Oct-13									16																														
MW-33	6-Aug-98																																							
MW-33	7-Dec-98																																							
MW-33	26-Apr-99																																							
MW-33	2-Dec-99																																							
MW-33	13-Apr-00																																							
MW-33	18-Apr-01																																							
MW-33	9-Apr-02																																							
MW-33	16-Apr-03																																							
MW-33	21-Apr-04																																							
MW-33	22-Apr-05																																							
MW-33	14-Apr-06																																							
MW-33	20-Apr-07																																							
MW-33	15-May-08																																							
MW-33	12-Mar-09																																							
MW-33	12-May-10																																							
MW-33	16-Mar-11																																							
MW-33	25-Apr-12																																							
MW-33	17-Apr-13																																							

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-34	6-Aug-98																																							
MW-34	7-Dec-98																																							
MW-34	26-Apr-99																																							
MW-34	2-Dec-99																																							
MW-34	13-Apr-00																																							
MW-34	18-Apr-01																																							
MW-34	9-Apr-02																																							
MW-34	16-Apr-03																																							
MW-34	21-Apr-04																																							
MW-34	22-Apr-05																																							
MW-34	14-Apr-06															12.7			6.9																					
MW-34	20-Apr-07															13.8			6.2																					
MW-34	19-May-08		0.56J						1.74J	0.45J		0.95J			1.72J	15.3		0.23J	9.75					**10.7**				**2.14**		0.13J	**3.07**	0.56J			0.16J					
MW-34	12-Mar-09		0.47J						1.26J	0.37J		0.71J			1.72J	13.5		0.47J	9.34					**12.7**				**1.71**			2.67	0.68J			0.15J					
MW-34	12-May-10		0.64J						1.4J	0.70J		1.2			2.1J	**16**			8.7					**6**				**1.7**			2.9	0.96J								
MW-34	17-Mar-11											0.89J				**10**			11					**11**				**2.2**			**3.4**									
MW-34	26-Apr-12		0.60J						0.62J	0.60J		1.2			1.8J	**14**			9					**7.6**				**2.2**			**3.3**	0.92J								
MW-34	17-Apr-13		0.56J						0.60J	0.52J		1.1			1.8J	**13**			9.1					**7.6**				**2.1**			**2.6**	0.70J			0.19J					
MW-34d	6-Aug-98																																			**7.3**				
MW-34d (dup)	6-Aug-98																																							
MW-34d	7-Dec-98																																							
MW-34d	26-Apr-99																																							
MW-34d	2-Dec-99																																							
MW-34d	13-Apr-00																																							
MW-34d	18-Apr-01																																							
MW-34d	9-Apr-02															5																								
MW-34d	16-Apr-03															11																								
MW-34d	21-Apr-04															6.8																								
MW-34d	22-Apr-05															5.7																								
MW-34d	14-Apr-06																																							
MW-34d	20-Apr-07															6.9																				**35**				
MW-34d	19-May-08									0.21J					0.36J	1.64J			1.07J					0.2J				0.32J			0.38J	0.19J								
MW-34d	12-Mar-09															0.64J			0.62J									0.51J			0.19J					1.02J				
MW-34d	11-May-10														0.41J	3.3J			1.7J												0.59J									
MW-34d	16-Mar-11															1.7J			1.6J					0.43J																
MW-34d	25-Apr-12															0.77J			0.93J																					
MW-34d	16-Apr-13															0.83J			1.1J																					

Table 3b
Detected Groundwater Constituents - Volatile and Semi-Volatile Organic Compounds
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromomethane	1,2-Dibromoethane	Carbon Disulfide	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	p-Dichlorobenzene	m-Dichlorobenzene	o-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	Ethylbenzene	Iodomethane	Methylene Chloride	MEK (2-Butanone)	Naphthalene	Styrene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Trichlorofluoromethane	1,2,3-Trichloropropane	Vinyl Chloride	Total Xylenes	bis(2-ethylhexyl) Phthalate	Diethylphthalate	Di-n-Butylphthalate	Dimethylphthalate	3&4-Methylphenol
North Carolina 2L or Groundwater Protection Standard		6,000	1	0.6	10**	0.02	700	50	3,000	70	3	6	200	20	1,000	6	0.4	7	70	100	0.6	600	NE	5	4,000	6	70	0.7	600	200	3	2,000	0.005	0.03	500	3	6,000	700	NE	40
Solid Waste Section Limit		100	1	1	10	1	100	3	10	5	1	1	5	5	5	5	1	5	5	5	1	1	10	1	100	10	1	1	1	1	1	1	1	1	5	15	6,000	10	10	10
MW-35	6-Aug-98																																							
MW-35	7-Dec-98																																							
MW-35	26-Apr-99																																							
MW-35	2-Dec-99																																							
MW-35	13-Apr-00																																							
MW-35	18-Apr-01																																							
MW-35	9-Apr-02																																							
MW-35	16-Apr-03																																							
MW-35	21-Apr-04																																							
MW-35	22-Apr-05																																							
MW-35	14-Apr-06																																							
MW-35	20-Apr-07																																							
MW-35	19-May-08					0.55J				0.17J																		0.13J												
MW-35	10-Mar-09									0.15J					0.67J																									
MW-35	12-May-10														0.57J																									
MW-35	17-Mar-11																																							
MW-35	25-Apr-12																																							
MW-35	17-Apr-13														0.53J																									
MW-36	4-Dec-08		0.81J						0.77J	0.14J		1.46			2.25J	**23.5**		0.40J	7.6					0.77J				**2.00**			**3.4**	0.28J		**0.84J**				0.906J		
MW-36	10-Mar-09		0.86J						1.16J	0.13J		1.42			2.52J	**23.4**	0.36J	0.41J	7.9		0.3J			0.64J				**1.62**			**3.22**	0.38J		**0.96J**						
MW-36	4-Dec-09		0.68J		*1.78J				0.8J		*485	1.4			1.56J	**18.6**		0.33J	7.25		0.27J		*3.84J	0.46J				**0.92J**			2.29			**0.94J**						
MW-36	12-May-10		0.56J						0.45J			1.4			1.4J	**17**			6.5									**0.86J**			1.8			**0.96J**						
MW-36	26-Oct-10		0.45J									1.3			1.4J	**14**		0.42J	6.3									**1.10**			1.7			**0.96J**						
MW-36	17-Mar-11											1.1				**9.1**			6.3					0.47J							1.7			**0.8J**						
MW-36	1-Nov-11											0.86J				**8.9**			4.3J												1.1									
MW-36	25-Apr-12															5.5			3.3J												0.74J									
MW-36	23-Oct-12															5			2.9J												0.66J									
MW-36 (dup)	23-Oct-12															5.4			2.8J												0.67J									
MW-36	18-Apr-13											0.18J				3.7J			2.3J												0.42J									
MW-36	16-Oct-13															3.8J			2.5J																					
MW-36d	4-Dec-08		0.37J	0.24J						1.05J		0.28J			1.78J	**10.9**			3.18J					**9.11**				**1.95**	0.10J		1.5									
MW-36d	10-Mar-09		0.51J						0.74J	0.41J		0.39J			2.94J	**12.4**		0.28J	3.86J		0.12J			2.27				**1.35**			1.81	0.29J								
MW-36d	2-Dec-09		0.47J							0.4J		0.44J			1.71J	**10.7**		0.24J	4.2J					1.32				**0.91J**			1.64									
MW-36d	13-May-10		0.58J							0.50J		0.58J			2.5J	**12**			4.4J									**1.2**			1.6									
MW-36d (dup)	13-May-10		0.49J							0.51J		0.62J			2.4J	**12**			4.3J									**1.4**			1.6									
MW-36d	27-Oct-10		0.49J									0.53J			2.2J	**11**			5.0					0.58J							1.9									
MW-36d	18-Mar-11														1.4J	**8.8**			5.2					1				**1.0**			1.7									
MW-36d (dup)	18-Mar-11														1.2J	**8.9**			5.1					1.1				**1.1**			1.7									
MW-36d	2-Nov-11														1.4J	**9.2**			4.0J					0.89J				**1.0**			1.4									
MW-36d	26-Apr-12											0.53J			1.4J	**8**			4.0J									**0.86J**			1.3									
MW-36d	24-Oct-12									0.45J		0.56J			1.3J	**7.6**			3.8J					0.58J				0.68J			1.3									
MW-36d	18-Apr-13		0.25J													**7.1**			4.0J					0.54J				**0.73J**			1									
MW-36d	17-Oct-13		0.26J									0.63J			1.7J	**7.9**			5.5									0.63J			1.1									

Notes:
1. All units are in micrograms per liter (parts per billion).
2. ** Groundwater Protection Standard
3. NS - Not Sampled; NE - Standard Not Established; dup - Duplicate Sample
4. J - Indicates the analytical result is an estimated concentration between the method detection limit and the Solid Waste Section Reporting Limit.
5. B - The analyte concentration detected in the method blank was greater than the method detection limit.
6. MW-27 was abandoned on November 24, 2008 in accordance with 15A NCAC 2C .0113.
7. MW-36 and 36d were installed in November 2008.
8. MW-24 was dry during the November 2008 sampling event.
9. Monitoring wells MW-28, -28d, -33, -34, -34d, and -35 are sampled yearly during the spring event.
10. * - Solvent contamination in HCl-preserved bottles caused elevated levels of chloromethane, bromomethane, and iodomethane to appear in several analyses during the December 2009 sampling event.

- Concentration exceeds the North Carolina 2L or Groundwater Protection Standard
- Indicates the result is below the detection limits

Table 3c
Detected Surface Water Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Surface Water Sample Location	Sample Date	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
North Carolina 2B, Human Health, or Action Level Standard		10	200*	6.5	2	50	4*	7**	25	88	5	0.06**	0.47*	NS	50**
Solid Waste Section Limit		10	100	1	1	10	10	10	10	50	10	10	5.5	25	10
SW-2	13-Jun-95														
SW-2	31-Oct-95				**2**										
SW-2	28-Nov-96		25				2								21
SW-2	21-Apr-97		29												
SW-2	5-Nov-97														
SW-2	11-May-98														
SW-2	24-Nov-98														
SW-2	14-Apr-99														
SW-2	9-Apr-02														
SW-2	16-Apr-03														
SW-2	29-Oct-03														
SW-2	8-Apr-04														
SW-2	18-Nov-04				1										
SW-2	21-Apr-05														
SW-2	11-Nov-05														
SW-2	13-Apr-06														
SW-2	9-Nov-06														
SW-2	20-Apr-07														
SW-2	7-Nov-07														
SW-2	21-May-08		28.9J			1.53J		5.97J							5.81J
SW-2	7-Nov-08		33.5JB	3.10B		4.28JB		**7.72JB**	3.62JB			**8.20JB**		15.1JB	4.51J
SW-2	16-Mar-09		52.8JB	**9.06B**		4.73JB		**8.54JB**	3.61JB			**2.01JB**	**5.89**	10.4JB	12.5
SW-2	2-Dec-09		16.7J	0.46J				**7.65JB**						8.31JB	7.57JB
SW-2	13-May-10		33.8J			1.05J		1.62J							4.98J
SW-2	26-Oct-10		27.2J					3.32J						2.59J	4.67J
SW-2	17-Mar-11		41J					1.72J	2.27J				0.194J		
SW-2	1-Nov-11		77.1J			9.49J	**5.46J**	**14.1B**	4.12J	5.20JB		**2.35J**		22.0J	25.7
SW-2	26-Apr-12		33.6J					1.95J						2.03J	
SW-2	24-Oct-12		35J												
SW-2	18-Apr-13		40J			0.5JB	0.1J	1J							2JB
SW-2	17-Oct-13	0.5J	40J				0.1J	1J							

Table 3c
Detected Surface Water Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Surface Water Sample Location	Sample Date	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
North Carolina 2B, Human Health, or Action Level Standard		10	200*	6.5	2	50	4*	7**	25	88	5	0.06**	0.47*	NS	50**
Solid Waste Section Limit		10	100	1	1	10	10	10	10	50	10	10	5.5	25	10
SW-3	13-Jun-95														
SW-3	31-Oct-95														
SW-3	27-Nov-96		33				2								32
SW-3	21-Apr-97		19												
SW-3	1-Nov-97														**56**
SW-3	11-May-98														
SW-3	24-Nov-98														
SW-3	14-Apr-99														
SW-3	30-Nov-99														
SW-3	12-Apr-00														
SW-3	15-Dec-00														
SW-3	16-Apr-01														
SW-3	29-Nov-01														
SW-3	9-Apr-02														
SW-3	16-Apr-03														
SW-3	29-Oct-03					11.1									
SW-3	8-Apr-04														
SW-3	18-Nov-04														
SW-3	21-Apr-05														
SW-3	11-Nov-05														
SW-3	13-Apr-06														
SW-3	9-Nov-06														
SW-3	20-Apr-07														
SW-3	7-Nov-07				1										13
SW-3	19-May-08		28.5J			3.21J		6.36J				**4.09J**			
SW-3	6-Nov-08		40.8JB			3.41JB		5.94JB	8.95JB			**9.04JB**		6.43JB	4.79J
SW-3	16-Mar-09	3.86J	47.6JB	3.16B		5.02JB		**7.72JB**	5.76JB	5.09J		**1.89JB**	**5.97**	12.5JB	7.17J
SW-3	2-Dec-09		32.9J	0.49J		3.65J	2.65J	**12.1B**						14.9JB	14.3B
SW-3	11-May-10		28.2J											1.60J	4.62J
SW-3	26-Oct-10		17.6J			1.03J		4.08J						3.41J	4.15J
SW-3	17-Mar-11		31.7J						1.97J				0.231J	1.86J	
SW-3	1-Nov-11		33.4J			2.11J		5.21JB		2.22JB				4.06J	6.46J
SW-3	26-Apr-12		29.35J			1.63J		2.37J						3.87J	4.22J
SW-3	24-Oct-12		31.3J											1.69J	
SW-3	18-Apr-13		60J	0.1J		3JB	**4J**	4J	1J	2J				2J	10JB
SW-3	15-Oct-13		30J			26	0.2J	1J		0.8J					

Table 3c
Detected Surface Water Constituents - Metals
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Surface Water Sample Location	Sample Date	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
North Carolina 2B, Human Health, or Action Level Standard		**10**	**200***	**6.5**	**2**	**50**	**4***	**7****	**25**	**88**	**5**	**0.06****	**0.47***	**NS**	**50****
Solid Waste Section Limit		**10**	**100**	**1**	**1**	**10**	**10**	**10**	**10**	**50**	**10**	**10**	**5.5**	**25**	**10**
SW-7	7-Nov-08		50.8JB			16.0B	10.7	**20.3B**	9.63JB			**9.62JB**		19.8JB	6.33J
SW-7	16-Mar-09	3.45J	45.5JB	5.37B		4.51JB		**7.4JB**	9.39JB			**2.04JB**		14.8JB	7.09J
SW-7	2-Dec-09		21.1J	0.05J		4.8J		**7.02JB**						8.72JB	8.19JB
SW-7	13-May-10		25.0J											1.44J	
SW-7	26-Oct-10		21.6J			1.71J		4.07J						3.77J	4.95J
SW-7	18-Mar-11		30.9J								0.976J		0.188J		
SW-7	1-Nov-11		26.3J			1.19J		3.78JB		1.99JB					
SW-7	26-Apr-12		23.4J											1.63J	
SW-7	24-Oct-12		26.2J												
SW-7	18-Apr-13		30J			0.4JB	0.4J	0.7J		0.5J					
SW-7	17-Oct-13	0.9J	30J			0.5J	0.4J	0.6J	0.3J						
SW-8	7-Nov-08		26.7JB			3.14JB		**7.10JB**				**8.56JB**		7.92JB	
SW-8	16-Mar-09		44.8JB	6.11B		5.02JB		**7.51JB**	8.08JB			**1.56JB**		10.6JB	10.2
SW-8	2-Dec-09		28.1J	0.5J		2.38J		**8.11JB**						11.8JB	20.8B
SW-8	11-May-10		21.6J												
SW-8	26-Oct-10		21.6J					3.18J						3.49J	
SW-8	18-Mar-11		28J								0.947J		0.128J		
SW-8	1-Nov-11		24.8J			1.10J		5.18JB							
SW-8	26-Apr-12	3.67J	21.7J					1.79J						1.54J	
SW-8	24-Oct-12	4.22J	24.3J												
SW-8	18-Apr-13		30J			0.4J	0.2J	0.7J							
SW-8	17-Oct-13		30J				0.2J	0.5J							

Notes:

1. All units are in micrograms per liter (parts per billion).
2. * - Human Health Standard
3. ** - Action Level Standard
4. NS - No Standard
5. J - Indicates the analytical result is an estimated concentration between the method detection limit and the Solid Waste Section Reporting Limit.
6. B - The analyte concentration detected in the method blank was greater than the method detection limit.

- Concentration exceeds the North Carolina 2B Surface Water Standard, Human Health Standard, or Action Level Standard for Class C Waters
- Indicates the result is below the detection limit

Table 3d
Detected Surface Water Constituents - Volatile Organic Compounds
October 2013 Semi-Annula Sampling Event
North Wake Unlined Landfill

Surface Water Sample Location	Sample Date	Acetone	Bromodichloromethane	Bromoform	2-Butanone (MEK)	Carbon Disulfide	Chloroform	Chloromethane	Dibromochloromethane	Cis 1,2-Dichloroethene	1,1-Dichloroethane	Methylene Chloride	Tetrachloroethene	Toluene	Trichlorofluoromethane
North Carolina 2B, Human Health, or Freshwater Aquatic Life Standard		2,000**	17*	140*	160,000**	NS	170*	96*	13*	4,900*	20,000**	590*	3.3*	11	67,000*
Solid Waste Section Limit		100	1	3	100	1000	5	1	1	5	5	1	1	1	1
SW-2	18-Nov-04														
SW-2	21-Apr-05														
SW-2	11-Nov-05														
SW-2	14-Apr-06														
SW-2	9-Nov-06														
SW-2	19-Apr-07														
SW-2	9-Nov-07						0.2J	0.3J							
SW-2	21-May-08						0.13J								
SW-2	7-Nov-08						0.13J					0.21J			
SW-2	16-Mar-09														
SW-2	2-Dec-09														
SW-2	13-May-10														
SW-2	26-Oct-10														
SW-2	17-Mar-11														
SW-2	1-Nov-11														
SW-2	26-Apr-12														
SW-2	24-Oct-12														
SW-2	18-Apr-13														
SW-2	17-Oct-13														
SW-3	18-Nov-04														
SW-3	21-Apr-05														
SW-3	11-Nov-05														
SW-3	14-Apr-06														
SW-3	9-Nov-06														
SW-3	19-Apr-07														
SW-3	9-Nov-07	1.3J			0.9J			0.3J							
SW-3	19-May-08														
SW-3	6-Nov-08											0.25J			
SW-3	16-Mar-09														
SW-3	2-Dec-09	3.66J													
SW-3	11-May-10														
SW-3	26-Oct-10														
SW-3	17-Mar-11														
SW-3	1-Nov-11														
SW-3	26-Apr-12														
SW-3	24-Oct-12														
SW-3	18-Apr-13														
SW-3	15-Oct-13														
SW-7	7-Nov-08									0.20J	0.72J				
SW-7	16-Mar-09									0.070J	0.29J				
SW-7	2-Dec-09														
SW-7	13-May-10										0.61J				
SW-7	26-Oct-10														
SW-7	18-Mar-11										0.52J				
SW-7	1-Nov-11														
SW-7	26-Apr-12														
SW-7	24-Oct-12														
SW-7	18-Apr-13										0.36J				
SW-7	17-Oct-13										0.48J				

Table 3d
Detected Surface Water Constituents - Volatile Organic Compounds
October 2013 Semi-Annula Sampling Event
North Wake Unlined Landfill

Surface Water Sample Location	Sample Date	Acetone	Bromodichloromethane	Bromoform	2-Butanone (MEK)	Carbon Disulfide	Chloroform	Chloromethane	Dibromochloromethane	Cis 1,2-Dichloroethene	1,1-Dichloroethane	Methylene Chloride	Tetrachloroethene	Toluene	Trichlorofluoromethane
North Carolina 2B, Human Health, or Freshwater Aquatic Life Standard		2,000**	17*	140*	160,000**	NS	170*	96*	13*	4,900*	20,000**	590*	3.3*	11	67,000*
Solid Waste Section Limit		100	1	3	100	1000	5	1	1	5	5	1	1	1	1
SW-8	7-Nov-08										0.12J	0.20J			
SW-8	16-Mar-08														
SW-8	2-Dec-09														
SW-8	11-May-10														
SW-8	26-Oct-10														
SW-8	18-Mar-11														
SW-8	1-Nov-11														
SW-8	26-Apr-12														
SW-8	24-Oct-12														
SW-8	18-Apr-13														
SW-8	17-Oct-13														

Notes:

1. All units are in micrograms per liter (parts per billion).
2. * - Human Health Standard
3. ** Freshwater Aquatic Life Standard
4. NS - No Standard
5. The Human Health Standard is also the North Carolina 2B Surface Water Standard for tetrachloroethene.
6. J - Indicates the analytical result is an estimated concentration between the method detection limit and the Solid Waste Section Reporting Limit.

[shaded box] - Concentration exceeds the North Carolina 2B Surface Water Standard, Human Health Standard, or Freshwater Aquatic Life Standard for Class C Waters

[blank box] - Indicates the result is below the detection limit

Table 4
Constiuents Exceeding Standards
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

MONITORING WELL CODE	OCTOBER 2013 PARAMETERS EXCEEDING THE NORTH CAROLINA 2L OR GROUNDWATER PROTECTION STANDARD	MONITORING WELL CODE	OCTOBER 2013 PARAMETERS EXCEEDING THE NORTH CAROLINA 2L OR GROUNDWATER PROTECTION STANDARD
MW-11	**Cobalt*, Vanadium***	MW-28	Not Sampled
MW-11d	**Vanadium***	MW-28d	Not Sampled
MW-5R	None	MW-29d	None
MW-6	Cobalt*, **Thallium***, **Vanadium***	MW-30	Chromium, **Cobalt***, **Thallium*,** Vanadium*
MW-6d	Antimony*, **Cobalt***, **Vanadium***	MW-31	Chromium, **Vanadium***
MW-7	Cobalt*, **Vanadium***	MW-31d	**Vanadium***
MW-8	**Cobalt***	MW-32	Chromium, **Cobalt***, Vanadium*
MW-8d	**Cobalt*, Vanadium***	TB-1a	Cobalt*, **Vanadium***
MW-9	**Thallium***, **Vanadium***	TB-1a deep	**Antimony***, **Cobalt***, **Vanadium***
MW-10	**Cobalt***, **Vanadium***, Benzene, Tetrachloroethene, Trichloroethene, **Vinyl Chloride**	MW-33	Not Sampled
MW-10d	None	MW-34	Not Sampled
MW-22	Cadmium, Cobalt*, **Vanadium***	MW-34d	Not Sampled
MW-23	**Vanadium***	MW-35	Not Sampled
MW-23d	**Antimony***, **Vanadium***	MW-36	**Cobalt***, **Vanadium***
MW-24	**Thallium***, **Vanadium***	MW-36d	**Vanadium***, 1,1-Dichloroethane

Notes:
1. * - Groundwater Protection Standard
2. Bold - Indicates a J value detection in which the analytical result is an estimated concentration between the method detection limit and the Solid Waste Section Limit.
3. MW-27 was abandoned on November 24, 2008 in accordance with 15A NCAC 2C .0113.
4. MW-28, -28d, -33, -34, -34d, and -35 are sampled semi-annually during the spring sampling event.

Table 5
Geochemical Data
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Oxidation-Reduction Potential (millivolts)	pH (Standard Units)	Dissolved Oxygen	Biochemical Oxygen Demand	Chemical Oxygen Demand	Methane (µg/l)	Ethane (µg/l)	Ethene (µg/l)	Chloride	Nitrate	Total Organic Carbon	Alkalinity (CaCO3 - Lab)	Alkalinity (CaCO3 - Field)	Sulfate (Lab)	Sulfate (Field)	Sulfide (Lab)	Free Chlorine	Carbon Dioxide	Ferrous Iron (Lab)	Ferrous Iron (Field)	Acetic Acid	Butyric Acid	Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid	Dissolved Hydrogen (nanomoles)
MW-11	8-Dec-98	156.2	5.57	6.03						3.5	0.6	2.1	21	40				0.17	50	0.02									0.02
MW-11	18-Dec-00	742.0	5.69																										
MW-11	18-Apr-01		6.80																										
MW-11	27-Nov-01		5.48																										
MW-11	5-Apr-02		6.19																										
MW-11	5-Nov-02		6.14																										
MW-11	15-Apr-03		6.36																										
MW-11	29-Oct-03		6.47																										
MW-11	21-Apr-04		5.31																										
MW-11	15-May-08	135.8	5.53	6.71																									
MW-11	10-Nov-08	167.0	5.74	6.71	<2	6	<7.2	<20	<20	3.67	0.794	1.42	34		<0.3		<0.01		26	<0.2		<1	<1		<25		<1	<10	
MW-11	11-Mar-09	102.5	5.34	7.16	<2	<25	<7.2	<20	<20	3.38	0.719	0.543	32.2		<0.3		<0.05		158	0.21		<1	<1		<25		<1	<10	
MW-11	3-Dec-09	246.0	5.79	6.38	2.00	92	<7.2	<20	<20	2.92	0.662	0.343J	22.5		0.381		<0.05		53	<0.2		<1	<1		<25		<1	<10	
MW-11	12-May-10	154.2	5.85	5.46	<2	23	4	<2	<2	4.20J	0.089J	2.2	27		3.80J		<0.1		83.1	0.12		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-11	26-Oct-10	65.4	5.90	6.44	<2	18	10.3	<2	<2	4.10J	0.032J	1.3	37		2.10J		<0.1		99.9	<0.05		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-11	17-Mar-11	211.2	5.21	8.02	<2	17	0.52J	<2	<2	5B	0.6J	0.53J	32		2.1J		<0.1		67.6	<0.05		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-11	1-Nov-11	161.6	5.62	5.89	3.20	<10	<1	<2	<3	4.1JB	0.71J	0.35J	25		2.2J		<0.1		164	<0.05		0.8	<0.07		0.077J		0.16	<0.07	
MW-11	25-Apr-12	112.2	5.47	6.22	<2	<10	<0.43	<0.2	<0.54	3.1J	0.086J	0.76J	22		1.7J		<0.01		161D	<0.046		<0.04	<0.24	<0.87	0.13J	<0.048	<0.057	<0.061	
MW-11	23-Oct-12	237.1	5.82	7.22	<2	13	<0.43	<0.2	<0.54	3.7JB	0.150J	1.5	27		2.1J		<0.01		147D	<0.046		<0.031	<0.031	<0.078	<0.095	<0.052	<0.063	<0.01	
MW-11	17-Apr-13	102.3	5.94	5.73	<4	<16	<0.3	<0.061	<0.069	2.62	0.23	1.1	33.1		0.69		<0.4		100		0.8	<0.5	<1		<0.5		<0.5	<0.25	
MW-11	16-Oct-13	211.6	5.49	7.84	<4	<16	<0.3	<0.061	<0.069	3.16	0.26	0.7J	34.8		0.66		<0.4		82B		0.4	<0.5	<1		<0.5		<0.5	<0.25	
MW-11d	8-Dec-98	123.0	6.03	4.68						3.0	0.58	0.64	14	60				0.02	30										
MW-5	3-Dec-98		5.70							5.6																			
MW-5	20-Dec-00	38.0	5.40				4,500			13.4	0.07	2.7							141										
MW-5	16-Apr-01	85.4	5.20							8.5		8.8			6.8				141	1.07									1.07
MW-5	3-Dec-01	102.8	5.68				1,600			5.2					1.7				79.2										
MW-5	12-Apr-02	42.8	5.54				2,400			3.3					4.1				44	3.7									3.7
MW-5	5-Nov-02	64.6	5.72				1,500			8.7	0.34	1.2			4.7				244										
MW-5	17-Apr-03	-138.4	6.08	0.79			6,600			13		13.7			4.1				9										
MW-5	4-Nov-03	-142.0	5.60	0.14			3,200			19		14.74							205	18.5									18.5
MW-5R	14-Apr-04	-35.4	6.30	1.92			4,040			8.19		13.8			0.444		0.08		286										
MW-5R	21-May-08	94.8	6.02	0.14	<2	9	709	<100	<100	3.92	0.576	11.1	280		13.3		<0.01		264	<0.2		<1	<1		<25		<1	<10	1.1
MW-5R	10-Nov-08	113.0	6.07	0.31	<2	10	340	<20	<20	4.66	1.25	1.95	240		6.42		<0.01		211	<0.2		<1	<1		<25		<1	<10	1.6
MW-5R	11-Mar-09	61.3	5.73	0.31	<2	<25	<7.2	<20	<20	1.6	11.9	1.23	113		6.61		<0.05		141	<0.2		<1	<1		<25		<1	<10	2.1
MW-5R	3-Dec-09	272.4	5.78	0.99	<2	16	<7.2	<20	<20	1.34	12.6	2.26	61.9		7.29		<0.05		106	<0.2		<1	<1		<25		<1	<10	2.7
MW-5R	12-May-10	76.2	6.42	1.82	<2	<10	1	<2	<2	4.80J	0.54J	2.6	150		9.70J		<0.1		169	0.039J		<0.5	<0.5		<0.5		<0.5	<0.5	2.6
MW-5R	25-Oct-10	-64.3	6.34	1.05	<2	3.1J	9.72	<2	<2	3.90J	0.075J	0.93J	300		8.60J		<0.01		206	0.097		<0.5	<0.5		<0.5		<0.5	<0.5	4.2
MW-5R	16-Mar-11	141.9	5.94	1.89	<2	<10	1.60	<2	<2	3.8JB	0.53J	0.92J	250D		8.3J		<0.1		164	<0.05		<0.5	<0.5		<0.5		<0.5	<0.5	2.7
MW-5R	31-Oct-11	156.8	5.71	0.75	<2	<10	3.88	<2	<3	2.7JB	12.0	1.4	110D		3.9J		<0.1		335 D	0.140		0.51	<0.07		0.11J		<0.07	<0.07	1.9
MW-5R	24-Apr-12	192.5	5.72	1.48	<2	<10	<0.43	<0.2	<0.54	2.2J	10.0	1.1	110		3.4J		<0.01		321D	<0.046		<0.04	<0.24	<0.87	<0.62	<0.048	<0.057	<0.061	2.4
MW-5R	22-Oct-12	96.1	6.20	2.22	<2	13	1.64	<0.2	<0.54	3.1JB	4.3J	1.4	190		5J		<0.01		375D	<0.046		<0.031	<0.031	<0.078	<0.095	<0.052	<0.063	<0.01	9.1
MW-5R	17-Apr-13	110.1	6.46	0.73	<4	<16	0.31J	<0.061	<0.069	1.4	9.07	1.4	135		2.11		<0.4		180		0	<0.5	<1		<0.5		<0.5	<0.25	0.38J
MW-5R	16-Oct-13	132.5	6.08	1.88	<4	<16	2.3	<0.061	<0.069	1.70	9.90	1.1	184		2.98		<0.4		210B		0.2	<0.5	<1		<0.5		<0.5	<0.25	0.82

Table 5
Geochemical Data
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Oxidation-Reduction Potential (millivolts)	pH (Standard Units)	Dissolved Oxygen	Biochemical Oxygen Demand	Chemical Oxygen Demand	Methane (µg/l)	Ethane (µg/l)	Ethene (µg/l)	Chloride	Nitrate	Total Organic Carbon	Alkalinity (CaCO3 - Lab)	Alkalinity (CaCO3 - Field)	Sulfate (Lab)	Sulfate (Field)	Sulfide (Lab)	Free Chlorine	Carbon Dioxide	Ferrous Iron (Lab)	Ferrous Iron (Field)	Acetic Acid	Butyric Acid	Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid	Dissolved Hydrogen (nanomoles)
MW-6	3-Dec-98		5.71							6.8																			
MW-6	19-Dec-00	156.0	5.54				669			9.12	0.05	5.9							57										
MW-6	16-Apr-01	96.5	5.05				450			7.5		7.7			0.66				47										
MW-6	3-Dec-01	136.3	5.88				470			6.4					0.34				30.8										
MW-6	12-Apr-02	173.6	5.47				800			7.3					0.46				35										
MW-6	5-Nov-02	73.2	5.58				1,500			11	0.36	2.1			0.74				83										
MW-6	17-Apr-03	234.4	5.79	0.59			2,400			12	0.48	10.4			0.47				9										
MW-6	4-Nov-03	41.0	4.80	0.25			640			110		8.5			1.2				185										
MW-6	14-Apr-04	316.4	5.76	1.70			1,450			190		16.6			2.2				330										
MW-6	20-May-08	115.0	5.94	2.41	<4	78	2,740	<400	<400	185	0.19J	24.4	474		12		<0.01		466	0.22		<1	<1		<25		<1	<10	1.1
MW-6	11-Nov-08	84.0	6.14	1.36	2	106	1,190	<200	<200	231	<0.3	30.2	750		2.51J		<0.01		541	0.59		<1	<1		<25		<1	<10	1.9
MW-6	11-Mar-09	59.1	5.81	0.46	3	86	1,810	<200	<200	166	0.155J	22.3	476		8.4		<0.05		387	1.16		<1	<1		<25		<1	<10	3.9
MW-6	3-Dec-09	90.1	6.23	1.44	2	72	1,560	<200	<200	175	<0.3	19.4	507		8.66		<0.05		326	2.12		<1	<1		<25		<1	<10	2.3
MW-6	12-May-10	91.2	6.24	1.87	<2	130	918	<2	<2	210	<0.1	30	610		15J		<0.1		543	3.75		<0.5	<0.5		<0.5		<0.5	<0.5	3.3
MW-6	26-Oct-10	-110.9	6.50	2.36	<2	120	800	<2	<2	210	0.23J	26	930		13J		<0.1		692	1.20		34	4.3		60		54	<0.5	4.3
MW-6	16-Mar-11	25.3	5.89	2.48	<2	75	899	<2	<2	140BD	0.029J	14	500D		6.3J		<0.1		349D	0.77		<0.5	<0.5		<0.5		18	<0.5	2.2
MW-6	1-Nov-11	10.6	6.09	1.34	<2	94	4,600	<2	<3	170BD	0.053J	22	600D		12J		<0.1		820D	1.50		<0.07	8.7		<0.14		34	<0.07	1.9
MW-6	24-Apr-12	168.6	5.85	2.14	<2	32	5,660D	<0.2	<0.54	97	0.25J	4.4	190D		3.5J		<0.01		549D	<0.046		<0.04	<0.24	<0.87	<0.62	0.56	1.7	<0.061	2.6
MW-6	22-Oct-12	-134.6	6.34	4.33	<2	100	732D	<0.2	<0.54	160BD	<0.025	21	430D		11J		0.029		725D	3.6		<0.031	<0.031	<0.078	26	<0.052	30	<0.01	5.9
MW-6	17-Apr-13	-158.3	6.25	0.91	<4	<16	16	<0.061	<0.069	54.4	0.18J	3.5	105		2.82		<0.4		110		1.4	<0.5	<1		<0.5		<0.5	<0.25	0.76
MW-6	16-Oct-13	12.9	6.32	1.81	<4	40	45	<0.061	<0.069	93	0.16J	5.2	136		2.63		<0.4		98B		5.4	<0.5	<1		<0.5		<0.5	<0.25	0.93
MW-8	3-Dec-98		5.75							7.3																			
MW-8	20-Dec-00	66.0	5.42							6.84	0.09	5.9							22										
MW-8	16-Apr-01	53.6	5.61				17			3.2	0.23	1.3			0.89		0.04		32										
MW-8	3-Dec-01	111.4	6.40							3					0.61		0.01		39.6										
MW-8	12-Apr-02	50.7	6.00				42			3.5					0.81				31										
MW-8	5-Nov-02	43.8	6.05				11			3.4	0.42	0.7			1.1		0.06		29										
MW-8	17-Apr-03	171.4	6.30	1.70						4	0.33	2.3			1.1				13										
MW-8	4-Nov-03	127.0	5.15	1.68			22			3.9		0.7			1				44										
MW-8	14-Apr-04	234.9	5.86	1.58			371			3.82		2.2			0.912				52.8										
MW-8	20-May-08	62.9	5.83	1.42	<2	<5	631	<20	<20	5.85	0.158J	0.469J	59		5.46		<0.01		97	<0.2		<1	<1		<25		<1	<10	1.1
MW-8	10-Nov-08	55.0	5.84	0.26	<2	5	654	<20	<20	6.29	0.211J	0.603	60		<0.3		<0.01		101	<0.2		<1	<1		<25		<1	<10	1.4
MW-8	11-Mar-09	27.1	5.65	0.31	<2	<25	264	<100	<100	6.27	0.119J	0.752	68.7		0.793		<0.05		88	0.78		<1	<1		<25		<1	<10	1.1
MW-8	3-Dec-09	82.5	6.11	1.28	<2	20	647	<200	<200	6.09	0.256	0.749	63.5		1.07		<0.05		*	0.88		<1	<1		<25		<1	<10	2.1
MW-8	12-May-10	88.2	6.14	1.09	<2	9.6J	497	<2	<2	7.9	0.66J	1.3	73		2.2J		<0.1		127	0.793		<0.5	<0.5		<0.5		<0.5	<0.5	3.0
MW-8	25-Oct-10	-72.2	5.84	1.01	<2	14	572	<2	<2	16	0.3J	0.57J	72		3.3J		<0.1		139	0.068		<0.5	<0.5		1.7		<0.5	<0.5	4.9
MW-8	16-Mar-11	208.4	5.49	1.28	<2	<10	600	<2	<2	9.5B	0.12J	<1	68		2.8J		<0.1		148	<0.05		<0.5	<0.5		<0.5		<0.5	<0.5	2.2
MW-8	31-Oct-11	138.1	5.61	0.65	<2	11	1,750	<2	<3	7.8B	0.12J	0.84J	68		2.5J		<0.1		273D	0.130		0.99	<0.07		<0.14		0.33	<0.07	1.7
MW-8	24-Apr-12	161.7	5.64	1.67	<2	<10	1,870D	<0.2	<0.54	12	0.19J	0.95J	74		2.6J		<0.01		324D	<0.046		<0.04	<0.24	<0.87	<0.62	<0.048	<0.057	<0.061	2.0
MW-8	22-Oct-12	128.4	5.86	2.11	<2	<10	477D	<0.2	<0.54	14B	0.32J	0.820J	77		3.1J		<0.01		323D	<0.046		<0.031	<0.031	<0.078	1.1	<0.052	<0.063	0.01J	9.8
MW-8	17-Apr-13	96.8	6.23	0.48	<4	<16	520	0.14J	0.1J	16.9	0.2J	1.4	86.8		1.49		<0.4		180		0.9	<0.5	<1		<0.5		<0.5	<0.25	0.72
MW-8	16-Oct-13	146.8	5.79	1.74	<4	<16	430	0.11J	<0.069	19.7	0.18J	1.5	86.8		1.57		<0.4		200B		0.8	<0.5	<1		<0.5		<0.5	<0.25	0.85

Table 5
Geochemical Data
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Oxidation-Reduction Potential (millivolts)	pH (Standard Units)	Dissolved Oxygen	Biochemical Oxygen Demand	Chemical Oxygen Demand	Methane (µg/l)	Ethane (µg/l)	Ethene (µg/l)	Chloride	Nitrate	Total Organic Carbon	Alkalinity (CaCO3 - Lab)	Alkalinity (CaCO3 - Field)	Sulfate (Lab)	Sulfate (Field)	Sulfide (Lab)	Free Chlorine	Carbon Dioxide	Ferrous Iron (Lab)	Ferrous Iron (Field)	Acetic Acid	Butyric Acid	Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid	Dissolved Hydrogen (nanomoles)
MW-9	3-Dec-98		6.27							15																			
MW-9	20-Dec-00	102.0	4.79				3,340			21.9	0.09	12.3							176										
MW-9	16-Apr-01	63.6	5.79				790			19	0.24	5.5			0.75				121	1.28									1.28
MW-9	3-Dec-01	21.1	6.41				2,700			24					0.38				123	2.5									2.5
MW-9	12-Apr-02	76.8	6.11				1,200			29					0.32				136	9.8									9.8
MW-9	5-Nov-02	38.6	6.16				470			24		5.7			0.66				236	1.67									1.67
MW-9	17-Apr-03	-106.2	6.39	0.25			1,900			36		30.3			0.42				44	6.3									6.3
MW-9	4-Nov-03	-110.0	5.76	0.14			1,800			53		14.2			0.46				312	1.48									1.48
MW-9	14-Apr-04	57.6	6.33	0.81			3,500			92.5		13.3			0.386				299.2	ND									ND
MW-9	20-May-08	-97.3	6.28	1.39	7	10	2,980	<400	<400	20.1	<0.3	3.12	254		0.58		<0.01		260	18.3		<1	<1		<25		<1	<10	18.3
MW-9	11-Nov-08	-37.0	6.18	2.45	7	27	1,910	<200	<200	18.9	<0.3	3.36	263		<0.3		<0.01		264	15.4		<1	<1		<25		<1	<10	
MW-9	11-Mar-09	-8.9	6.03	2.07	<2	46	1,730	<200	<200	20.1	<0.3	4.56	262		0.608		<0.05		233	17.6		<1	0.4J		<25		0.4J	<10	
MW-9	3-Dec-09	-7.3	6.38	1.52	<2	44	1,740	<200	<200	20.5	<0.3	2.97	233		4.31		<0.05		167	14.8		<1	<1		<25		<1	<10	
MW-9	12-May-10	37.6	6.19	2.20	<2	66	1,150	<2	1J	27	0.076J	8.4	200		2.20J		<0.1		307	16.5		<0.5	<0.5		<0.5		2.9	<0.5	
MW-9	26-Oct-10	-71.2	6.30	3.54	<2	53	1,330	<2	<2	21	0.053J	3.0	270		2.60J		<0.1		348	8.5		2.3	<0.5		<0.5		2.5	<0.5	
MW-9	17-Mar-11	2.4	5.78	2.29	3	68	438	2.27	<2	18B	0.1J	5.8	220D		2.7J		<0.1		231D	7.7		<0.5	<0.5		<0.5		1.8	<0.5	
MW-9	1-Nov-11	6.3	5.95	1.94	<2	53	1,080	<2	<3	15B	0.075J	4.4	210D		2.9J		<0.1		414D	1.3		0.86	<0.07		<0.14		1.5	<0.07	
MW-9	25-Apr-12	94.8	5.95	3.11	5.4	34	2,810D	<0.2	1.59J	18	0.079J	6.1	250D		2.8J		<0.01		503D	7.8		<0.04	<0.24	<0.87	<0.62	<0.048	1.7	<0.061	
MW-9	23-Oct-12	83.4	6.72	8.77	<2	61	5.47	<0.2	<0.54	17B	<0.025	3.2	120		8.8J		<0.01		16.6	<0.230		<0.031	<0.031	<0.078	<0.095	<0.052	0.840	0.017	
MW-9	17-Apr-13	91.3	6.88	6.84	3.1	22	8.5	<0.061	<0.069	17.1	<0.03	3.5	130		7.42		<0.4		10		2.1	<0.5	<1		<0.5		<0.5	<0.25	
MW-9	16-Oct-13	165.7	6.88	7.89	<4	28	0.53J	<0.061	<0.069	20.4	0.17J	2.9	117		5.60		<0.4		27B		0	<0.5	<1		<0.5		<0.5	<0.25	
MW-10	3-Dec-98		5.85							6.8																			
MW-10	20-Dec-00	76.0	5.27				372			10.6	1.5	3.7							26										
MW-10	17-Apr-01	80.6	5.24				320			5.4	2.2	5.3			1.2				101										
MW-10	3-Dec-01	146.3	5.88							4.2	1.6				3				35.2										
MW-10	12-Apr-02	97.9	5.58				300			4.9					1.7				35										
MW-10	5-Nov-02	74.3	5.54				770			5.4	2	1.8			2.9		0.03		216										
MW-10	17-Apr-03	239.8	5.11	0.44			2,400			5	1.4	9.2			0.82				13										
MW-10	4-Nov-03	90.0	4.90	0.16						6.6	1	1.7			0.66				145										
MW-10	14-Apr-04	349.0	5.83	0.52			341			7.3	1.3	7.8			0.78				123										
MW-10	20-May-08	-14.6	5.61	0.55	3	35	1,950	<200	<200	3.77	0.162J	1.12	42		0.617		0.01		229	0.48		<1	<1		<25		<1	<10	0.48
MW-10	11-Nov-08	130.0	5.50	2.76	8	30	5,890	<200	<200	3.71	<0.3	1.31	96		<0.3		<0.01		370	1.79		1.4	<1		<25		<1	<10	
MW-10	11-Mar-09	97.8	5.34	2.56	<2	<25	2,310	<200	<200	3.04	<0.3	3.07	105		0.649		<0.05		339	1.23		<1	<1		<25		0.3J	<10	
MW-10	3-Dec-09	146.2	6.09	2.17	3	28	3,110	<200	<200	2.69	<0.3	1.02	112		0.624		<0.05		286	0.95		<1	<1		<25		<1	<10	
MW-10	12-May-10	80.2	5.74	2.21	3.2	25	1,830	<2	<2	5.6	<0.1	5.5	140		1.70J		<0.1		407	2.84		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-10	25-Oct-10	-39.2	5.66	2.77	2.4	31	2,620	<2	<2	4.2J	<0.1	1.5	130		2.20J		<0.1		583	0.38		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-10	17-Mar-11	119.7	5.29	3.18	<2	<10	2,000	<2	<2	4.3JB	0.039J	2.7	130		2.4J		<0.1		399D	0.26		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-10	31-Oct-11	120.1	5.41	2.12	<2	15	9,630	<2	<3	3.6JB	<0.1	1.1	130		2.4J		<0.1		777D	0.47		0.99	<0.07		0.12J		0.22	<0.07	
MW-10	25-Apr-12	127.9	5.41	2.62	<2	10	10,300D	<0.2	<0.54	3.5J	<0.025	3.3	120		3.1J		<0.01		832D	0.17		0.26	<0.24	0.59	0.17	<0.048	<0.057	<0.061	
MW-10	23-Oct-12	99.2	5.68	2.94	<2	28	8,220D	<0.2	<0.54	3.7JB	<0.025	3.6	120		2.4J		<0.01		646D	0.083		0.087	<0.031	<0.078	<0.095	<0.052	<0.063	0.011J	
MW-10	17-Apr-13	113.9	6.08	2.93	<4	<16	920	<0.061	<0.069	2.71	<0.03	1.5	132		0.75		<0.4		370		1.4	<0.5	<1		<0.5		<0.5	<0.25	
MW-10	16-Oct-13	84.8	5.65	4.05	<4	19J	3,100	<0.061	<0.069	2.74	<0.03	0.9J	117		0.73		<0.4		300B		1.8	<0.5	<1		<0.5		<0.5	<0.25	

Table 5
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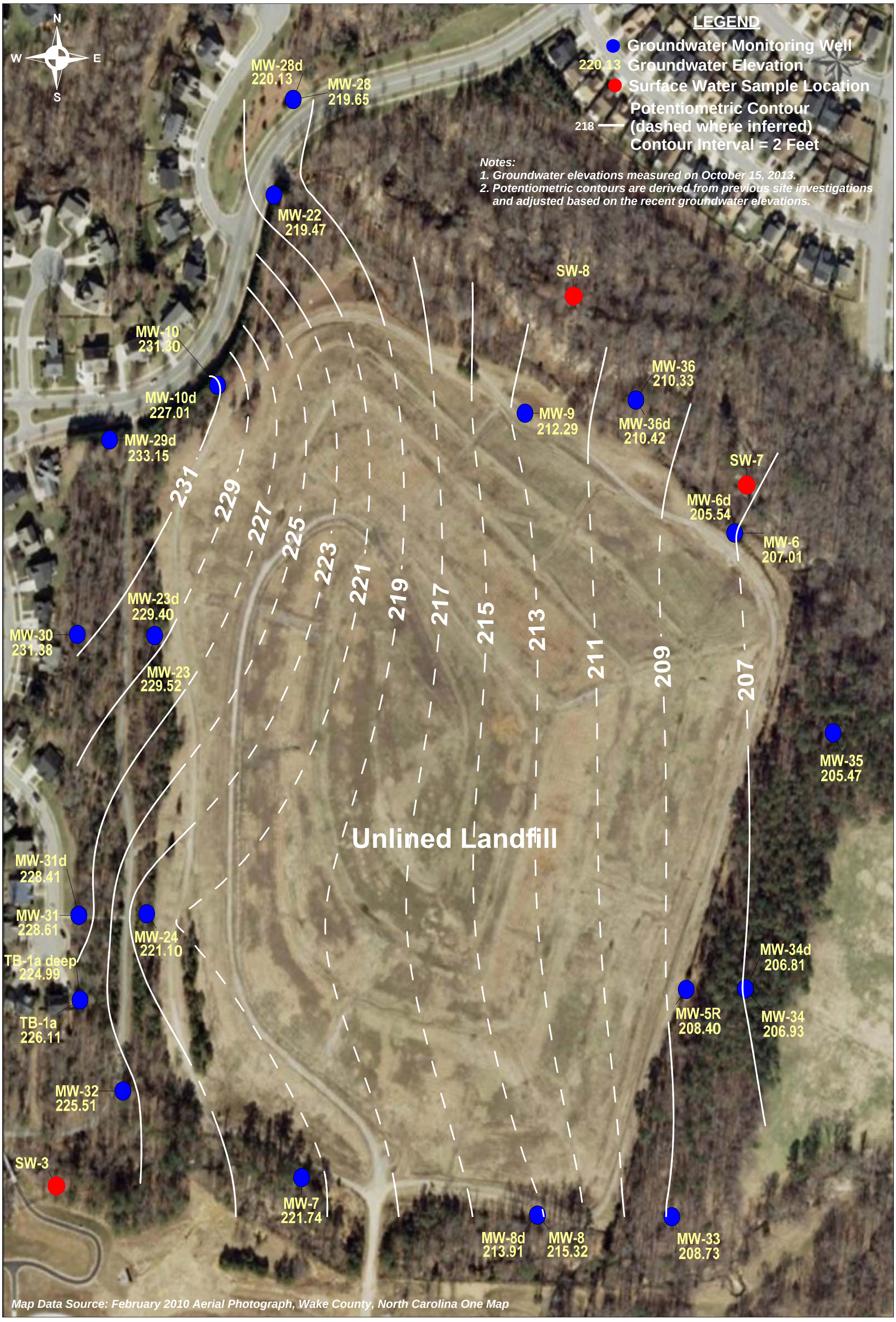
October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill

Monitoring Well Code	Sample Date	Oxidation-Reduction Potential (millivolts)	pH (Standard Units)	Dissolved Oxygen	Biochemical Oxygen Demand	Chemical Oxygen Demand	Methane (µg/l)	Ethane (µg/l)	Ethene (µg/l)	Chloride	Nitrate	Total Organic Carbon	Alkalinity (CaCO3 - Lab)	Alkalinity (CaCO3 - Field)	Sulfate (Lab)	Sulfate (Field)	Sulfide (Lab)	Free Chlorine	Carbon Dioxide	Ferrous Iron (Lab)	Ferrous Iron (Field)	Acetic Acid	Butyric Acid	Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid	Dissolved Hydrogen (nanomoles)
MW-24	8-Dec-98	145.9	5.75	1.02						4.2		2.5	66	140		2		0.07	260	0.78									0.78
MW-24	20-Dec-00	67.0	5.61				4,410			8.25	0.08	2.5							101										
MW-24	16-Apr-01	92.5	5.20				2,500			4.2	0.28	5			0.59				121	1.18									1.18
MW-24	3-Dec-01	102.8	5.83				2,100			2.9									52.8	0.3									0.3
MW-24	12-Apr-02	16.9	5.59				1,800			1.5									92	0.6									0.6
MW-24	5-Nov-02	62.1	5.76				2,200			0.56		1.6			0.48		0.01		171	0.21									0.21
MW-24	17-Apr-03	9.5	5.79	0.50			88			3.6	0.33	4.4			0.35				33										
MW-24	4-Nov-03	-20	4.92	0.42			17			2.9		1.7			0.46				141										
MW-24	14-Apr-04	178.0	6.29	2.09			139			2.94		6.2			0.42				88										
MW-24	20-May-08	100.9	5.84	4.56	4	<5	<7.2	<20	<20	3.6	0.273J	0.421J	39		<0.3		0.03		75	2.72		<1	<1		<25		<1	<10	2.72
TB-1a	9-Dec-98	193.8	5.98	0.64						4.1		0.54	95	120		2		0.05	500	0.15									0.15
TB-1a	20-Dec-00	63.0	5.52				2,470			6.6	0.09	3.3							62										
TB-1a	17-Apr-01	78.3	5.63				1,500			5.1	0.29	2.4			0.58		0.1		99										
TB-1a	3-Dec-01	111.2	6.01							3.1									52.8										
TB-1a	12-Apr-02	41.8	5.70				990			1.6									84										
TB-1a	5-Nov-02	58.0	5.83				400			4.2		0.7			0.47				138										
TB-1a	17-Apr-03	162.6	5.82	0.54			17			6.1	0.79	8.5			0.82		0.03		4										
TB-1a	4-Nov-03	1.0	5.04	0.16						7.5		1.6			0.46				213										
TB-1a	14-Apr-04	256.6	5.36	0.94						8.47		4.8			0.577				101.2										
TB-1a	20-May-08	-102.1	5.94	2.22	<2	<5	<7.2	<20	<20	14.9	0.356	0.864	42		11.6		<0.01		48	0.24		<1	<1		<25		<1	0.9J	0.24
TB-1a	11-Nov-08	65.0	6.11	4.08	<2	50	5.1J	<20	<20	15.1	0.338	1.13	42		4.08		<0.01		106	1.59		<1	<1		<25		<1	<10	
TB-1a	11-Mar-09	-43.6	5.91	1.98	<2	<25	<7.2	<20	<20	12.8	0.209J	1.05	53.4		10.5		<0.05		114	3.06		<1	<1		<25		<1	<10	
TB-1a	3-Dec-09	88.1	6.24	1.97	<2	20	<7.2	<20	<20	12.7	0.456	1.22	61.6		11.9		<0.05		88	4.7		<1	<1		<25		<1	<10	
MW-36	12-May-10	160.9	5.87	1.51	<2	36	3	<2	<2	8.1	2.30J	2.9	74		5.30J		<0.1		162	1.0		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-36	26-Oct-10	-17.9	5.94	4.01	<2	51	307	1.52J	<2	7.2	0.19J	1.3	78		4.90J		<0.1		175	<0.05		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-36	17-Mar-11	99.4	5.45	2.36	<2	38	44	<2	<2	7.2B	0.67J	1.5	84		4.6J		<0.1		140	<0.25		<0.5	<0.5		<0.5		<0.5	<0.5	
MW-36	1-Nov-11	129.6	5.66	1.96	<2	36	618	<2	<3	6.4B	0.51J	0.8J	62		4.4J		<0.1		242D	0.052		0.99	<0.07		<0.14		0.21	<0.07	
MW-36	25-Apr-12	122.2	5.71	2.84	5.2	29	186D	<0.2	<0.54	5.9	0.5J	1.1	60		3.9J		<0.01		336D	<0.046		<0.04	<0.24	<0.87	0.073J	<0.048	<0.057	<0.061	
MW-36	23-Oct-12	139.1	5.92	8.39	<2	<10	39.6	<0.2	<0.54	6B	0.490J	1.7	67		3.9J		<0.01		196D	<0.046		<0.031	<0.031	<0.078	<0.095	<0.052	<0.063	<0.01	
MW-36	17-Apr-13	118.1	6.05	2.44	12	<16	6.4	<0.061	<0.069	5.59	0.59	1.1	66.3		2.19		<0.4		98		0.8	<0.5	<1		<0.5		<0.5	<0.25	
MW-36	16-Oct-13	188.5	5.82	3.89	<4	38	9.8	<0.061	<0.069	5.50	0.73	1.1	59.2		2.19		<0.4		81B		1.5	<0.5	<1		<0.5		<0.5	<0.25	

Notes:

1. All units are in milligrams per liter (parts per million), unless otherwise noted.
2. µg/L - micrograms per liter (parts per billion)
3. CaCO3 - Calcium Carbonate
4. MW-11 and -11d are background wells for the North Wake Unlined Landfill.
5. J - Indicates the analytical result is an estimated concentration between the method detection limit and the Solid Waste Section Reporting Limit.
6. B - The analyte concentration detected in the method blank was greater than the method detection limit.
7. D - Analyzed at dilution.
8. * Carbon dioxide samples from MW-8 were not analyzed during the December 2009 sampling event due to laboratory oversight.

- Blank cells indicate no data collected, except for hexanoic and pentanoic acid. These acids were only reported for the 2012 monitoring events.



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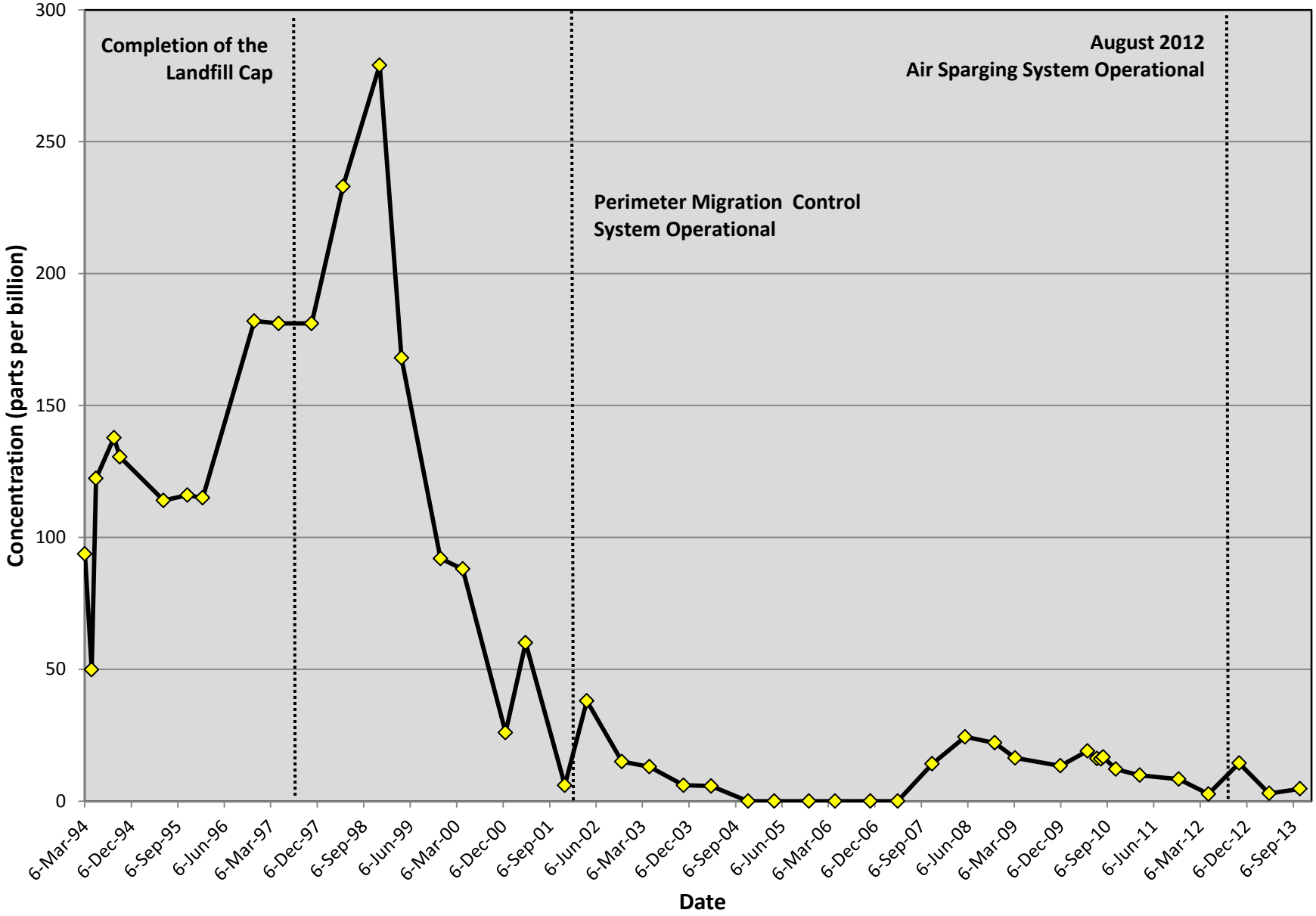
Scale in Feet

0 100 200

Figure 1: Potentiometric Surface Map

October 2013 Semi-Annual Sampling Event
North Wake Unlined Landfill
Raleigh, North Carolina

Figure 2
MW-6 - Total Volatile Organic Compounds Concentration Trend
North Wake Unlined Landfill



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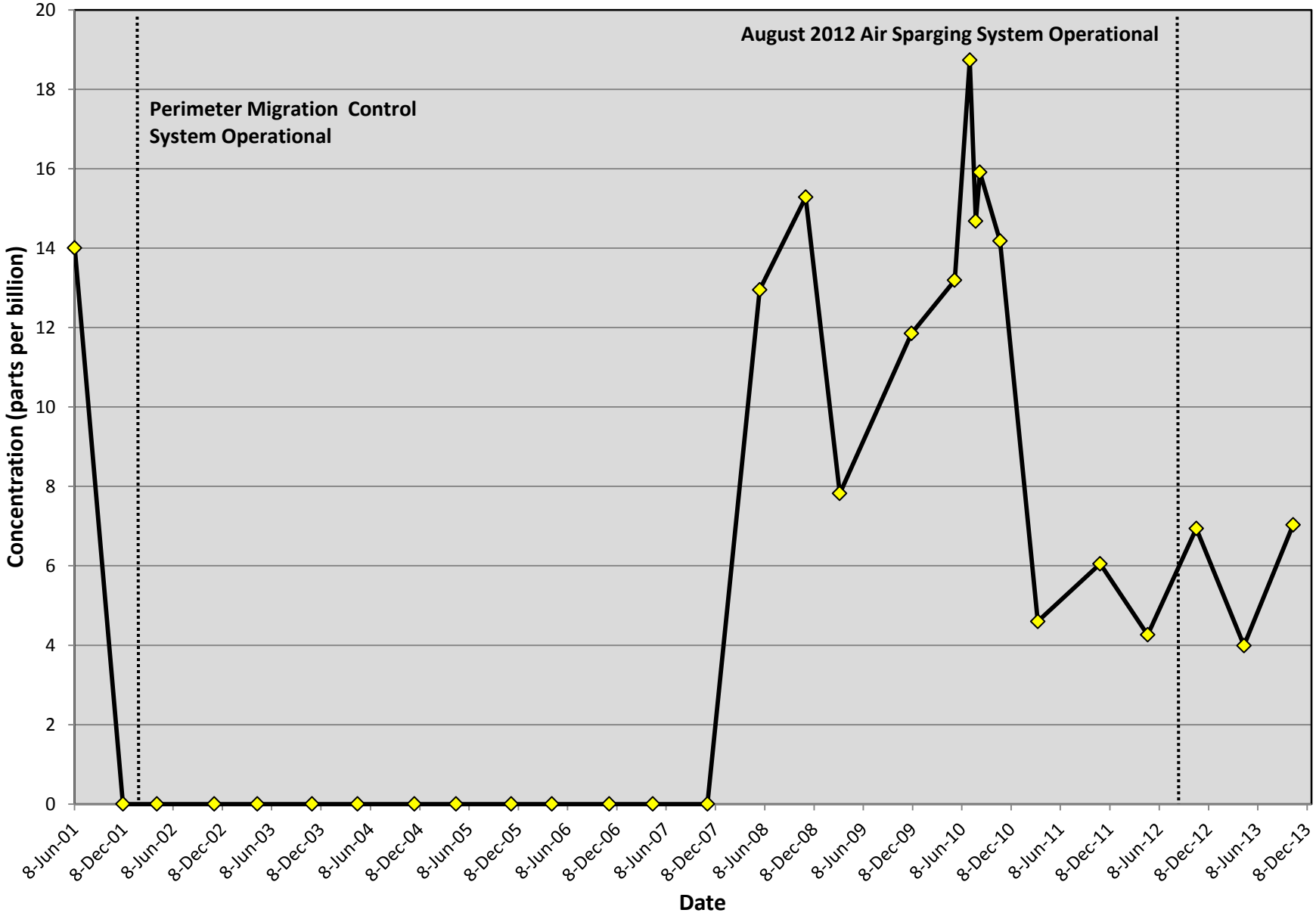
December 2013

Figure 3
MW-6d - Total Volatile Organic Compounds Concentration Trend
North Wake Unlined Landfill



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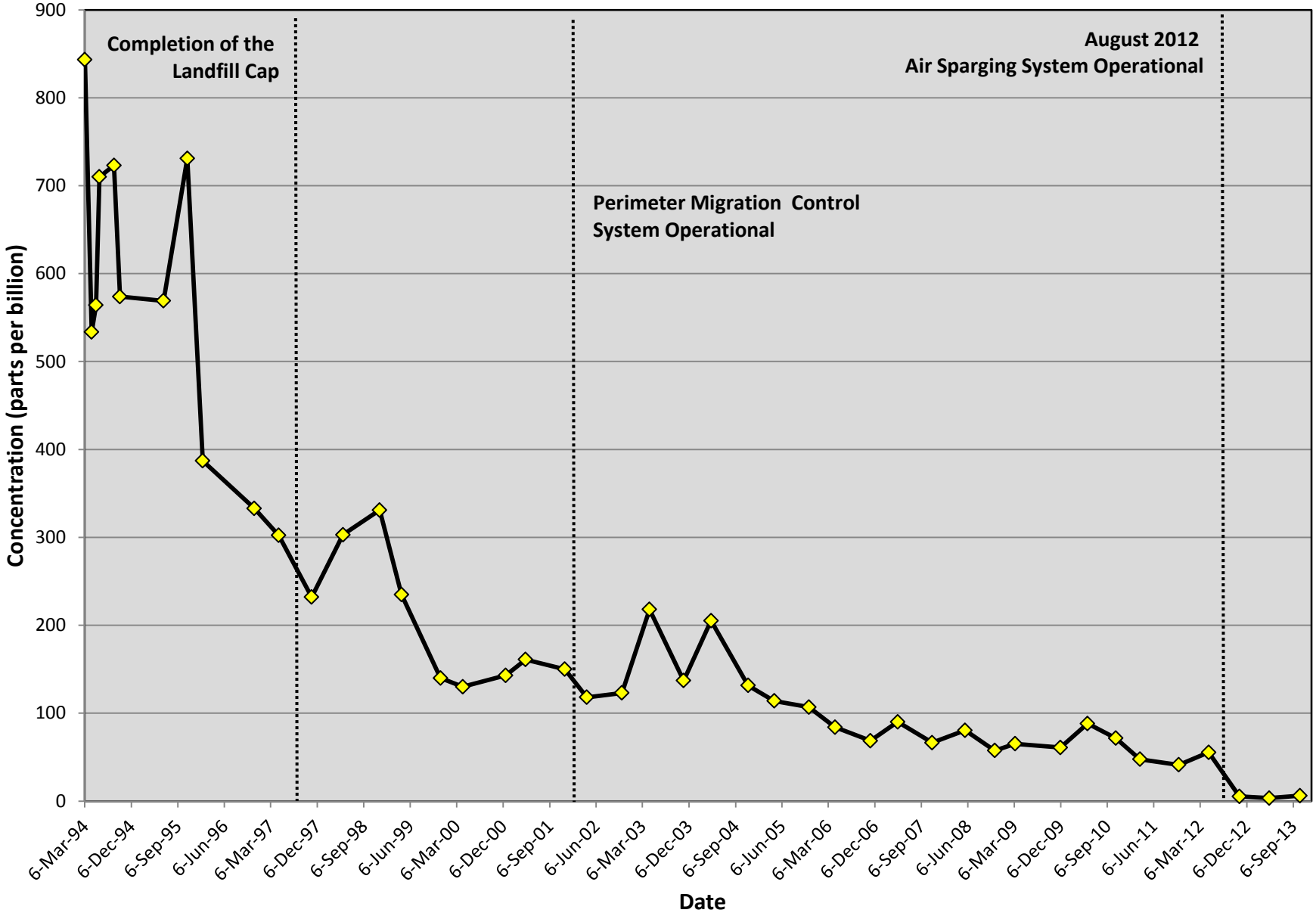
December 2013

Figure 4
MW-9 - Total Volatile Organic Compounds Concentration Trend
North Wake Unlined Landfill



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December 2013

Figure 5
MW-36 - Total Volatile Organic Compounds Concentration Trend
North Wake Unlined Landfill

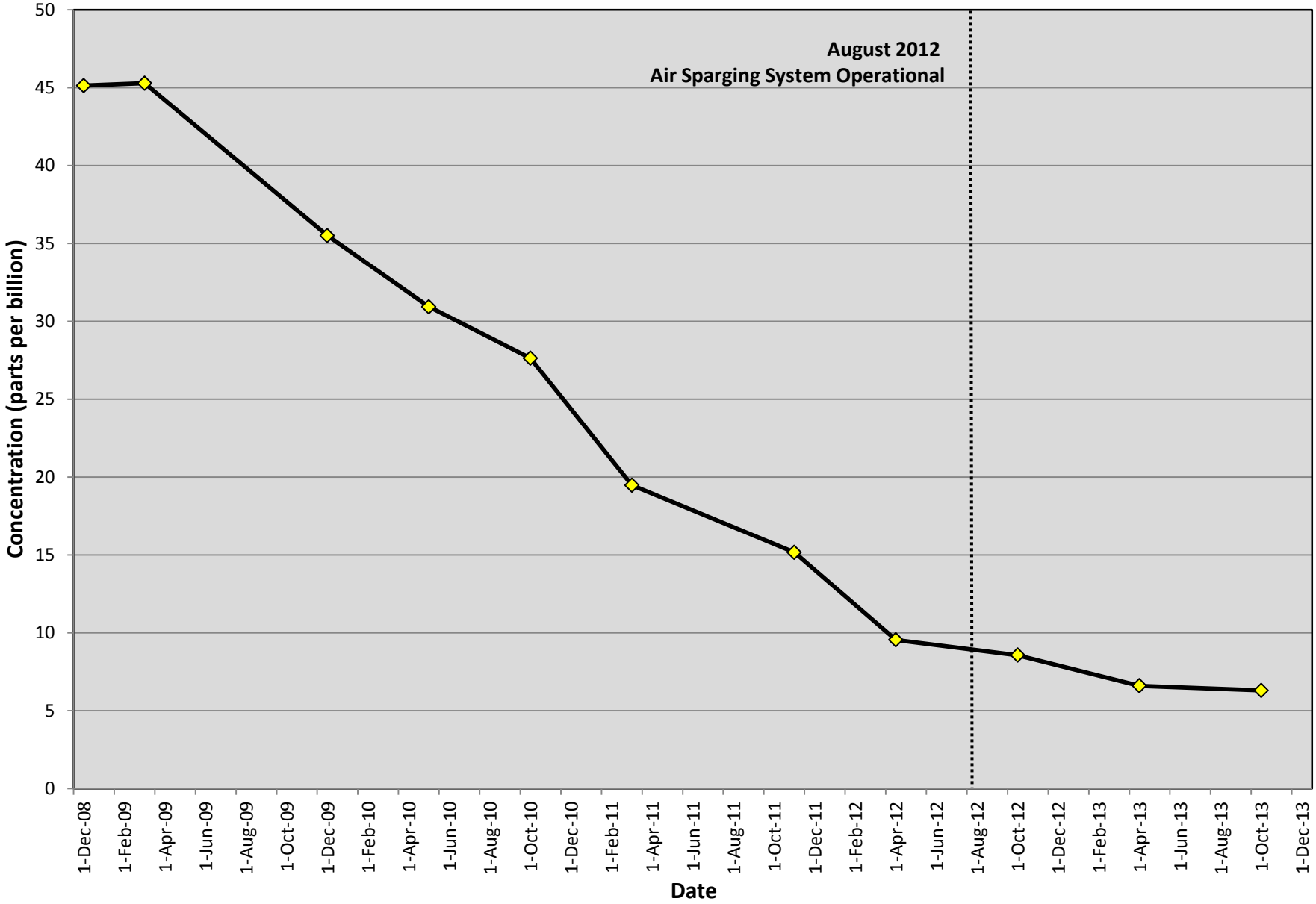
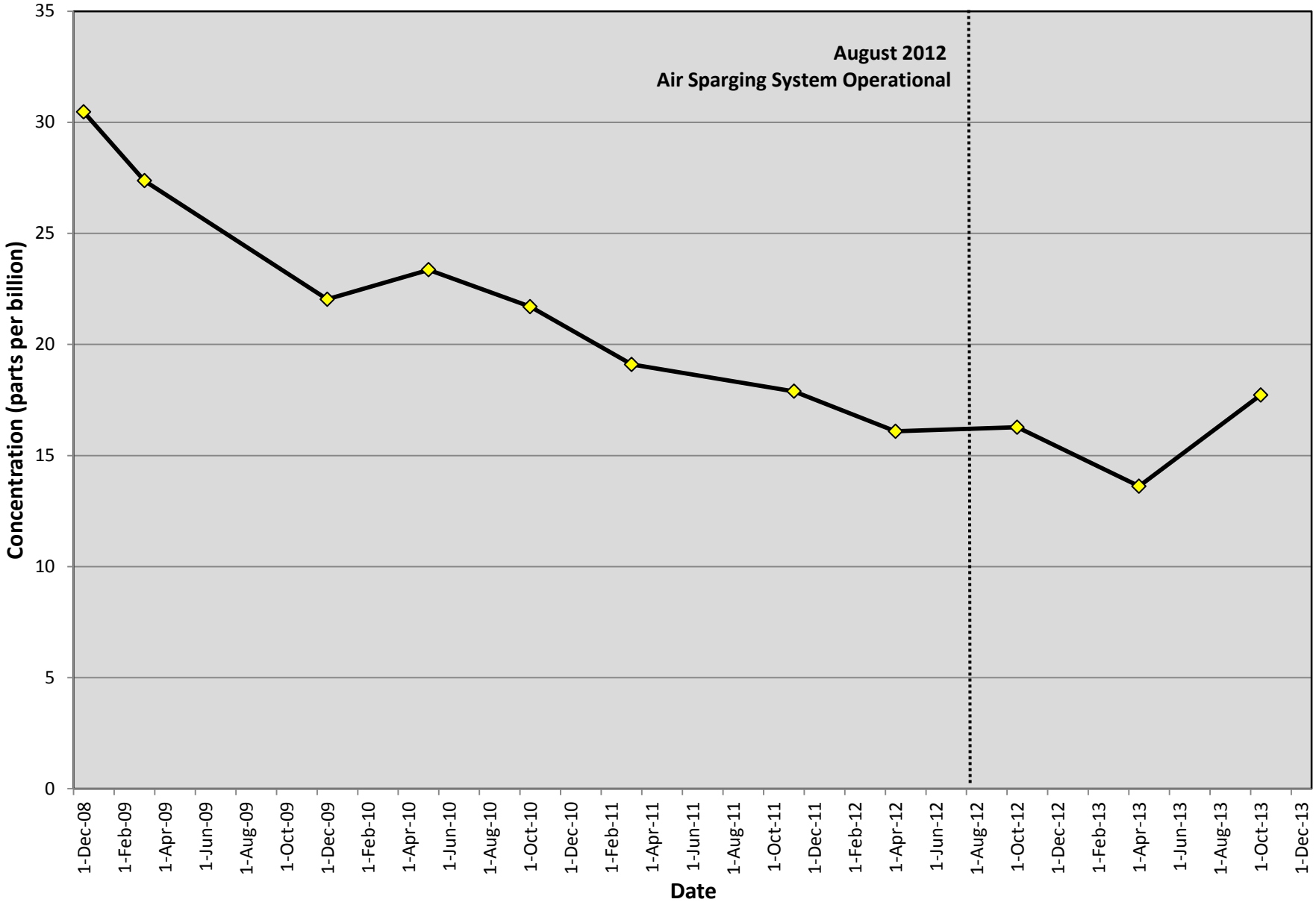


Figure 6
MW-36d - Total Volatile Organic Compounds Concentration Trend
North Wake Unlined Landfill



CDM Smith

December 2013

Appendix A

November 01, 2013 Service Request No:J1306213

Aaron Weispfenning
CDM Smith, Inc.
5400 Glenwood Ave
Suite 300
Raleigh, NC 27612

Laboratory Results for: North Wake Unlined Landfill

Dear Aaron,

Enclosed are the results of the sample(s) submitted to our laboratory October 18, 2013
For your reference, these analyses have been assigned our service request number **J1306213.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

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PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-SW2	Lab ID: J1306213-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	40	J	0.3	100	ug/L	6010C
Arsenic, Total Recoverable	0.5	J	0.5	10	ug/L	6020A
Cobalt, Total Recoverable	0.1	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	1.0	J	0.3	10	ug/L	6020A

CLIENT ID: 9209-SW3	Lab ID: J1306213-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	30	J	0.3	100	ug/L	6010C
Chromium, Total Recoverable	26		0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.2	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	1.0	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	0.8	J	0.5	50	ug/L	6020A

CLIENT ID: 9209-SW7	Lab ID: J1306213-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	30	J	0.3	100	ug/L	6010C
Arsenic, Total Recoverable	0.9	J	0.5	10	ug/L	6020A
Chromium, Total Recoverable	0.5	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.4	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	0.6	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	0.3	J	0.2	10	ug/L	6020A
1,1-Dichloroethane (1,1-DCA)	0.48	J	0.30	5.0	ug/L	8260B

CLIENT ID: 9209-SW8	Lab ID: J1306213-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	30	J	0.3	100	ug/L	6010C
Cobalt, Total Recoverable	0.2	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	0.5	J	0.3	10	ug/L	6020A

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2014
North Carolina Department of Environment and Natural Resources	527	12/31/2013
Virginia Environmental Accreditation Program	460191	12/14/2013
Louisiana Department of Environmental Quality	02086	6/30/2014
Georgia Department of Natural Resources	958	6/30/2014
Kentucky Division of Waste Management	63	6/30/2014
South Carolina Department of Health and Environmental Control	96021001	6/30/2014
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2014
Maine Department of Health and Human Services	2011006	2/3/2015
Department of Defense	66206	5/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2014

Data Qualifiers

CAS Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

CAS Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Wake County Solid Waste Management **Service Request:**J1306213
Project: North Wake Unlined Landfill

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1306213-001	9209-SW2	10/17/2013	1130
J1306213-002	9209-SW3	10/15/2013	1300
J1306213-003	9209-SW7	10/17/2013	0845
J1306213-004	9209-SW8	10/17/2013	0850
J1306213-005	Trip Blank	10/15/2013	0000

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:30
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW2	**Units:**	ug/L
Lab Code:	J1306213-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 00:20	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 00:20	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 00:20	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 00:20	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 00:20	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 00:20	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 00:20	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 00:20	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 00:20	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 00:20	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 00:20	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 00:20	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 00:20	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 00:20	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 00:20	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 00:20	
Acetone	5.6 U	100	5.6	1	10/23/13 00:20	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 00:20	
Benzene	0.21 U	1.0	0.21	1	10/23/13 00:20	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 00:20	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 00:20	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 00:20	
Bromomethane	0.23 U	10	0.23	1	10/23/13 00:20	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 00:20	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 00:20	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 00:20	
Chloroethane	0.52 U	10	0.52	1	10/23/13 00:20	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 00:20	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 00:20	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 00:20	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 00:20	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 00:20	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 00:20	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 00:20	
Iodomethane	2.7 U	10	2.7	1	10/23/13 00:20	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 00:20	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 00:20	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 00:20	
Styrene	0.29 U	1.0	0.29	1	10/23/13 00:20	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 00:20	
Toluene	0.19 U	1.0	0.19	1	10/23/13 00:20	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 00:20	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 00:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:30
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW2	**Units:**	ug/L
Lab Code:	J1306213-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 00:20	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 00:20	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 00:20	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 00:20	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 00:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	72 - 121	10/23/13 00:20	
4-Bromofluorobenzene	102	86 - 113	10/23/13 00:20	
Dibromofluoromethane	95	86 - 112	10/23/13 00:20	
Toluene-d8	93	88 - 115	10/23/13 00:20	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:30
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW2	**Basis:**	NA
Lab Code:	J1306213-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 03:59	10/21/13	
Arsenic, Total Recoverable	6020A	**0.5**	**J**	ug/L	10	0.5	1	10/22/13 03:59	10/21/13	
Barium, Total Recoverable	6010C	**40**	**J**	ug/L	100	0.3	1	10/23/13 22:56	10/21/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 03:59	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 03:59	10/21/13	
Chromium, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 03:59	10/21/13	
Cobalt, Total Recoverable	6020A	**0.1**	**J**	ug/L	10	0.03	1	10/22/13 03:59	10/21/13	
Copper, Total Recoverable	6020A	**1.0**	**J**	ug/L	10	0.3	1	10/22/13 03:59	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 03:59	10/21/13	
Nickel, Total Recoverable	6020A	0.5	U	ug/L	50	0.5	1	10/22/13 03:59	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 03:59	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 22:56	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 03:59	10/21/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 22:56	10/21/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/23/13 22:56	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 13:00
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW3	**Units:**	ug/L
Lab Code:	J1306213-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 00:48	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 00:48	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 00:48	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 00:48	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 00:48	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 00:48	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 00:48	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 00:48	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 00:48	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 00:48	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 00:48	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 00:48	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 00:48	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 00:48	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 00:48	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 00:48	
Acetone	5.6 U	100	5.6	1	10/23/13 00:48	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 00:48	
Benzene	0.21 U	1.0	0.21	1	10/23/13 00:48	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 00:48	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 00:48	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 00:48	
Bromomethane	0.23 U	10	0.23	1	10/23/13 00:48	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 00:48	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 00:48	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 00:48	
Chloroethane	0.52 U	10	0.52	1	10/23/13 00:48	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 00:48	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 00:48	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 00:48	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 00:48	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 00:48	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 00:48	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 00:48	
Iodomethane	2.7 U	10	2.7	1	10/23/13 00:48	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 00:48	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 00:48	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 00:48	
Styrene	0.29 U	1.0	0.29	1	10/23/13 00:48	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 00:48	
Toluene	0.19 U	1.0	0.19	1	10/23/13 00:48	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 00:48	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 00:48	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 13:00
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW3	**Units:**	ug/L
Lab Code:	J1306213-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 00:48	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 00:48	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 00:48	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 00:48	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 00:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	93	72 - 121	10/23/13 00:48	
4-Bromofluorobenzene	105	86 - 113	10/23/13 00:48	
Dibromofluoromethane	96	86 - 112	10/23/13 00:48	
Toluene-d8	94	88 - 115	10/23/13 00:48	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 13:00
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW3	**Basis:**	NA
Lab Code:	J1306213-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 04:35	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 04:35	10/21/13	
Barium, Total Recoverable	6010C	**30**	**J**	ug/L	100	0.3	1	10/23/13 23:27	10/21/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 04:35	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 04:35	10/21/13	
Chromium, Total Recoverable	6020A	**26**		ug/L	10	0.2	1	10/22/13 04:35	10/21/13	
Cobalt, Total Recoverable	6020A	**0.2**	**J**	ug/L	10	0.03	1	10/22/13 04:35	10/21/13	
Copper, Total Recoverable	6020A	**1.0**	**J**	ug/L	10	0.3	1	10/22/13 04:35	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 04:35	10/21/13	
Nickel, Total Recoverable	6020A	**0.8**	**J**	ug/L	50	0.5	1	10/22/13 04:35	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 04:35	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 23:27	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 04:35	10/21/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 23:27	10/21/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/23/13 23:27	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:45
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW7	**Units:**	ug/L
Lab Code:	J1306213-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 01:16	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 01:16	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 01:16	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 01:16	
1,1-Dichloroethane (1,1-DCA)	**0.48 J**	5.0	0.30	1	10/23/13 01:16	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 01:16	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 01:16	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 01:16	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 01:16	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 01:16	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 01:16	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 01:16	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 01:16	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 01:16	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 01:16	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 01:16	
Acetone	5.6 U	100	5.6	1	10/23/13 01:16	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 01:16	
Benzene	0.21 U	1.0	0.21	1	10/23/13 01:16	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 01:16	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 01:16	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 01:16	
Bromomethane	0.23 U	10	0.23	1	10/23/13 01:16	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 01:16	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 01:16	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 01:16	
Chloroethane	0.52 U	10	0.52	1	10/23/13 01:16	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 01:16	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 01:16	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 01:16	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 01:16	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 01:16	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 01:16	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 01:16	
Iodomethane	2.7 U	10	2.7	1	10/23/13 01:16	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 01:16	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 01:16	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 01:16	
Styrene	0.29 U	1.0	0.29	1	10/23/13 01:16	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 01:16	
Toluene	0.19 U	1.0	0.19	1	10/23/13 01:16	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 01:16	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 01:16	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:45
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW7	**Units:**	ug/L
Lab Code:	J1306213-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 01:16	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 01:16	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 01:16	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 01:16	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 01:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	10/23/13 01:16	
4-Bromofluorobenzene	104	86 - 113	10/23/13 01:16	
Dibromofluoromethane	99	86 - 112	10/23/13 01:16	
Toluene-d8	95	88 - 115	10/23/13 01:16	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:45
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW7	**Basis:**	NA
Lab Code:	J1306213-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 04:40	10/21/13	
Arsenic, Total Recoverable	6020A	**0.9**	**J**	ug/L	10	0.5	1	10/22/13 04:40	10/21/13	
Barium, Total Recoverable	6010C	**30**	**J**	ug/L	100	0.3	1	10/23/13 23:32	10/21/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 04:40	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 04:40	10/21/13	
Chromium, Total Recoverable	6020A	**0.5**	**J**	ug/L	10	0.2	1	10/22/13 04:40	10/21/13	
Cobalt, Total Recoverable	6020A	**0.4**	**J**	ug/L	10	0.03	1	10/22/13 04:40	10/21/13	
Copper, Total Recoverable	6020A	**0.6**	**J**	ug/L	10	0.3	1	10/22/13 04:40	10/21/13	
Lead, Total Recoverable	6020A	**0.3**	**J**	ug/L	10	0.2	1	10/22/13 04:40	10/21/13	
Nickel, Total Recoverable	6020A	0.5	U	ug/L	50	0.5	1	10/22/13 04:40	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 04:40	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 23:32	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 04:40	10/21/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 23:32	10/21/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/23/13 23:32	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:50
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW8	**Units:**	ug/L
Lab Code:	J1306213-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 01:44	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 01:44	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 01:44	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 01:44	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 01:44	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 01:44	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 01:44	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 01:44	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 01:44	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 01:44	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 01:44	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 01:44	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 01:44	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 01:44	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 01:44	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 01:44	
Acetone	5.6 U	100	5.6	1	10/23/13 01:44	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 01:44	
Benzene	0.21 U	1.0	0.21	1	10/23/13 01:44	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 01:44	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 01:44	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 01:44	
Bromomethane	0.23 U	10	0.23	1	10/23/13 01:44	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 01:44	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 01:44	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 01:44	
Chloroethane	0.52 U	10	0.52	1	10/23/13 01:44	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 01:44	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 01:44	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 01:44	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 01:44	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 01:44	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 01:44	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 01:44	
Iodomethane	2.7 U	10	2.7	1	10/23/13 01:44	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 01:44	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 01:44	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 01:44	
Styrene	0.29 U	1.0	0.29	1	10/23/13 01:44	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 01:44	
Toluene	0.19 U	1.0	0.19	1	10/23/13 01:44	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 01:44	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 01:44	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:50
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW8	**Units:**	ug/L
Lab Code:	J1306213-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 01:44	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 01:44	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 01:44	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 01:44	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 01:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	72 - 121	10/23/13 01:44	
4-Bromofluorobenzene	108	86 - 113	10/23/13 01:44	
Dibromofluoromethane	95	86 - 112	10/23/13 01:44	
Toluene-d8	94	88 - 115	10/23/13 01:44	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:50
Sample Matrix:	Surface Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-SW8	**Basis:**	NA
Lab Code:	J1306213-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 04:45	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 04:45	10/21/13	
Barium, Total Recoverable	6010C	**30**	**J**	ug/L	100	0.3	1	10/23/13 23:37	10/21/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 04:45	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 04:45	10/21/13	
Chromium, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 04:45	10/21/13	
Cobalt, Total Recoverable	6020A	**0.2**	**J**	ug/L	10	0.03	1	10/22/13 04:45	10/21/13	
Copper, Total Recoverable	6020A	**0.5**	**J**	ug/L	10	0.3	1	10/22/13 04:45	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 04:45	10/21/13	
Nickel, Total Recoverable	6020A	0.5	U	ug/L	50	0.5	1	10/22/13 04:45	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 04:45	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 23:36	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 04:45	10/21/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 23:36	10/21/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/23/13 23:37	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 00:00
Sample Matrix:	Water	**Date Received:**	10/18/13 09:55
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1306213-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 02:12	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 02:12	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 02:12	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 02:12	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 02:12	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 02:12	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 02:12	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 02:12	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 02:12	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 02:12	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 02:12	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 02:12	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 02:12	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 02:12	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 02:12	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 02:12	
Acetone	5.6 U	100	5.6	1	10/23/13 02:12	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 02:12	
Benzene	0.21 U	1.0	0.21	1	10/23/13 02:12	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 02:12	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 02:12	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 02:12	
Bromomethane	0.23 U	10	0.23	1	10/23/13 02:12	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 02:12	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 02:12	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 02:12	
Chloroethane	0.52 U	10	0.52	1	10/23/13 02:12	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 02:12	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 02:12	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 02:12	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 02:12	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 02:12	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 02:12	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 02:12	
Iodomethane	2.7 U	10	2.7	1	10/23/13 02:12	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 02:12	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 02:12	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 02:12	
Styrene	0.29 U	1.0	0.29	1	10/23/13 02:12	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 02:12	
Toluene	0.19 U	1.0	0.19	1	10/23/13 02:12	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 02:12	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 02:12	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 00:00
Sample Matrix:	Water	**Date Received:**	10/18/13 09:55
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1306213-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 02:12	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 02:12	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 02:12	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 02:12	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 02:12	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	72 - 121	10/23/13 02:12	
4-Bromofluorobenzene	106	86 - 113	10/23/13 02:12	
Dibromofluoromethane	96	86 - 112	10/23/13 02:12	
Toluene-d8	92	88 - 115	10/23/13 02:12	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Surface Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1307463-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 23:53	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 23:53	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 23:53	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 23:53	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 23:53	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 23:53	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 23:53	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 23:53	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 23:53	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 23:53	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 23:53	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 23:53	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 23:53	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 23:53	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 23:53	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 23:53	
Acetone	5.6 U	100	5.6	1	10/22/13 23:53	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 23:53	
Benzene	0.21 U	1.0	0.21	1	10/22/13 23:53	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 23:53	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 23:53	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 23:53	
Bromomethane	0.23 U	10	0.23	1	10/22/13 23:53	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 23:53	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 23:53	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 23:53	
Chloroethane	0.52 U	10	0.52	1	10/22/13 23:53	
Chloroform	0.35 U	5.0	0.35	1	10/22/13 23:53	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 23:53	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 23:53	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 23:53	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 23:53	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 23:53	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 23:53	
Iodomethane	2.7 U	10	2.7	1	10/22/13 23:53	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 23:53	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 23:53	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 23:53	
Styrene	0.29 U	1.0	0.29	1	10/22/13 23:53	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 23:53	
Toluene	0.19 U	1.0	0.19	1	10/22/13 23:53	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 23:53	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 23:53	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Surface Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1307463-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 23:53	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 23:53	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 23:53	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 23:53	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 23:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	72 - 121	10/22/13 23:53	
4-Bromofluorobenzene	105	86 - 113	10/22/13 23:53	
Dibromofluoromethane	95	86 - 112	10/22/13 23:53	
Toluene-d8	95	88 - 115	10/22/13 23:53	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Surface Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1306213-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 03:34	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 03:34	10/21/13	
Barium, Total Recoverable	6010C	**1**	**J**	ug/L	100	0.3	1	10/23/13 22:38	10/21/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 03:34	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 03:34	10/21/13	
Chromium, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 03:34	10/21/13	
Cobalt, Total Recoverable	6020A	0.03	U	ug/L	10	0.03	1	10/22/13 03:34	10/21/13	
Copper, Total Recoverable	6020A	0.3	U	ug/L	10	0.3	1	10/22/13 03:34	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 03:34	10/21/13	
Nickel, Total Recoverable	6020A	0.5	U	ug/L	50	0.5	1	10/22/13 03:34	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 03:34	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 22:37	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 03:34	10/21/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 22:37	10/21/13	
Zinc, Total Recoverable	6010C	**3**	**J**	ug/L	20	2	1	10/23/13 22:38	10/21/13	

Client: Wake County Solid Waste Management **Service Request:** J1306213
Project: North Wake Unlined Landfill
Sample Matrix: Surface Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4 72 - 121	4-Bromofluorobenzene 86 - 113	Dibromofluoromethane 86 - 112
9209-SW2	J1306213-001	95	102	95
9209-SW3	J1306213-002	93	105	96
9209-SW7	J1306213-003	97	104	99
9209-SW8	J1306213-004	96	108	95
Trip Blank	J1306213-005	96	106	96
Lab Control Sample	JQ1307463-01	93	94	96
Method Blank	JQ1307463-02	95	105	95

Client: Wake County Solid Waste Management **Service Request:** J1306213
Project: North Wake Unlined Landfill
Sample Matrix: Surface Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
9209-SW2	J1306213-001	93
9209-SW3	J1306213-002	94
9209-SW7	J1306213-003	95
9209-SW8	J1306213-004	94
Trip Blank	J1306213-005	92
Lab Control Sample	JQ1307463-01	93
Method Blank	JQ1307463-02	95

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/22/13
Sample Matrix:	Surface Water		

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	364589

Lab Control Sample
JQ1307463-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	18.1	20.0	91	77-118
1,1,1-Trichloroethane (TCA)	20.8	20.0	104	70-122
1,1,2,2-Tetrachloroethane	18.1	20.0	91	66-135
1,1,2-Trichloroethane	18.0	20.0	90	75-122
1,1-Dichloroethane (1,1-DCA)	20.2	20.0	101	79-117
1,1-Dichloroethene (1,1-DCE)	20.7	20.0	103	72-128
1,2,3-Trichloropropane	17.9	20.0	89	70-123
1,2-Dibromo-3-chloropropane (DBCP)	18.1	20.0	91	60-122
1,2-Dibromoethane (EDB)	17.8	20.0	89	76-118
1,2-Dichlorobenzene	18.0	20.0	90	81-115
1,2-Dichloroethane	20.0	20.0	100	70-117
1,2-Dichloropropane	20.2	20.0	101	79-117
1,4-Dichlorobenzene	18.5	20.0	92	82-115
2-Butanone (MEK)	96.0	100	96	62-138
2-Hexanone	87.2	100	87	74-127
4-Methyl-2-pentanone (MIBK)	89.7	100	90	77-120
Acetone	101	100	101	42-161
Acrylonitrile	98.9	100	99	63-132
Benzene	20.2	20.0	101	80-117
Bromochloromethane	19.0	20.0	95	78-118
Bromodichloromethane	19.8	20.0	99	75-118
Bromoform	17.1	20.0	85	63-121
Bromomethane	20.0	20.0	100	31-153
Carbon Disulfide	98.9	100	99	72-128
Carbon Tetrachloride	20.2	20.0	101	67-124
Chlorobenzene	18.1	20.0	91	83-118
Chloroethane	20.0	20.0	100	68-132
Chloroform	20.1	20.0	101	77-116
Chloromethane	19.8	20.0	99	60-128
cis-1,2-Dichloroethene	19.9	20.0	100	78-117
cis-1,3-Dichloropropene	18.0	20.0	90	80-119
Dibromochloromethane	17.4	20.0	87	74-121
Dibromomethane	19.7	20.0	98	76-117
Ethylbenzene	19.4	20.0	97	82-119
Iodomethane	98.1	100	98	51-137
m,p-Xylenes	37.1	40.0	93	79-122
Methylene Chloride	20.2	20.0	101	75-123
o-Xylene	18.6	20.0	93	80-119
Styrene	18.8	20.0	94	80-121
Tetrachloroethene (PCE)	18.4	20.0	92	75-126
Toluene	19.0	20.0	95	52-152

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306213
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/22/13
Sample Matrix:	Surface Water		

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	364589

Lab Control Sample
JQ1307463-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	19.9	20.0	100	75-121
trans-1,3-Dichloropropene	17.1	20.0	85	76-118
trans-1,4-Dichloro-2-butene	11.3	20.0	57	10-198
Trichloroethene (TCE)	20.2	20.0	101	78-122
Trichlorofluoromethane	20.9	20.0	104	58-134
Vinyl Acetate	92.2	100	92	36-169
Vinyl Chloride	20.0	20.0	100	69-138

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Wake County Solid Waste Management
Project: North Wake Unlined Landfill
Sample Matrix: Surface Water

Service Request:J1306213
Date Collected:10/17/13
Date Received:10/18/13
Date Analyzed:10/22/13 - 10/23/13

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name: 9209-SW2
Lab Code: J1306213-001

Units:ug/L
Basis:NA

			Matrix Spike J1306213-001MS			Duplicate Matrix Spike J1306213-001DMS					
Analyte Name	**Method**	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Antimony, Total Recoverable	6020A	0.2	51.6	50.0	103	59.3	50.0	119	75-125	14	20
Arsenic, Total Recoverable	6020A	0.5	51	50	101	52	50	102	75-125	1	20
Barium, Total Recoverable	6010C	40	560	500	104	560	500	104	75-125	<1	20
Beryllium, Total Recoverable	6020A	0.04	25.6	25.0	102	26.2	25.0	105	75-125	2	20
Cadmium, Total Recoverable	6020A	0.10	20.5	20.0	103	20.7	20.0	104	75-125	<1	20
Chromium, Total Recoverable	6020A	0.2	52	50	105	53	50	107	75-125	2	20
Cobalt, Total Recoverable	6020A	0.1	52	50	104	52	50	104	75-125	<1	20
Copper, Total Recoverable	6020A	1.0	52	50	103	53	50	104	75-125	1	20
Lead, Total Recoverable	6020A	0.2	26	25	102	25	25	101	75-125	<1	20
Nickel, Total Recoverable	6020A	0.5	104	100	104	105	100	105	75-125	1	20
Selenium, Total Recoverable	6020A	2	102	100	102	102	100	102	75-125	<1	20
Silver, Total Recoverable	6010C	2	520	500	104	521	500	104	75-125	<1	20
Thallium, Total Recoverable	6020A	0.05	10.1	10.0	101	10.1	10.0	101	75-125	<1	20
Vanadium, Total Recoverable	6010C	2	993	1000	99	992	1000	99	75-125	<1	20
Zinc, Total Recoverable	6010C	2	1040	1000	104	1040	1000	104	75-125	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Wake County Solid Waste Management
Project: North Wake Unlined Landfill
Sample Matrix: Surface Water

Service Request:J1306213
Date Analyzed:10/22/13 - 10/23/13

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
J1306213-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony, Total Recoverable	6020A	52.1	50.0	104	80-120
Arsenic, Total Recoverable	6020A	51.4	50	103	80-120
Barium, Total Recoverable	6010C	514	500	103	80-120
Beryllium, Total Recoverable	6020A	24.4	25.0	98	80-120
Cadmium, Total Recoverable	6020A	20.7	20.0	103	80-120
Chromium, Total Recoverable	6020A	51.5	50	103	80-120
Cobalt, Total Recoverable	6020A	52.0	50	104	80-120
Copper, Total Recoverable	6020A	51.2	50	102	80-120
Lead, Total Recoverable	6020A	25.9	25	104	80-120
Nickel, Total Recoverable	6020A	104	100	104	80-120
Selenium, Total Recoverable	6020A	103	100	103	80-120
Silver, Total Recoverable	6010C	515	500	103	80-120
Thallium, Total Recoverable	6020A	10.2	10.0	102	80-120
Vanadium, Total Recoverable	6010C	984	1000	98	80-120
Zinc, Total Recoverable	6010C	1030	1000	103	80-120

ALS Environmental

Cooler Receipt Form

Client: CDM Smith Service Request #: J1306213

Project: N. Wake Unlined LF

Cooler received on 10.18.13 and opened on 10.18.13 GB

COURIER: ALS UPS FEDEX Client Other _____ Airbill # 803743955605

1	Were custody seals on outside of cooler?	Yes	No			
	If yes, how many and where?	#:___ on lid		other		
2	Were seals intact and signature and date correct?	Yes	No	N/A		
3	Were custody papers properly filled out?	Yes	No	N/A		
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	2.7				
5	Thermometer ID	T81				
6	Temperature Blank Present?	Yes	No			
7	Were Ice or Ice Packs present	Ice	Ice Packs	No		
8	Did all bottles arrive in good condition (unbroken, etc....)?	Yes	No	N/A		
9	Type of packing material present	Netting	Vial Holder	Bubble Wrap		
		Paper	Styrofoam	Other	N/A	
10	Were all bottle labels complete (sample ID, preservation, etc....)?	Yes	No	N/A		
11	Did all bottle labels and tags agree with custody papers?	Yes	No	N/A		
12	Were the correct bottles used for the tests indicated?	Yes	No	N/A		
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	N/A		
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2					
	Preservative additions noted below					
14	Were all samples received within analysis holding times?	Yes	No	N/A		
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No	N/A		
16	Where did the bottles originate?	ALS	Client			

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above: Trip Blank included

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Ph(904) 739-2277 / FAX (904) 739-2011

SR # J1306213
ALS Contact

Page 1 of 1

J1306213 5
CDM Smith, Inc.
North Wake Unlined Landfill

Project Name: North Wake Unlined Landfill	Project Number:
Report To: Aaron Weispfenning	Report CC:
Company/Address: CDM Smith, 5400 Glenwood Ave, Suite 300, Raleigh, NC 27612	
Phone #: 919-325-3532	FAX #:
Sampler's Signature: [signature]	Sampler's Printed Name: Aaron Weispfenning

ANALYSIS REQUESTED (Include Method Number and

Preservative: 1. HCL; 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. NaHSO4; 8. Other

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS		Appendix I VOCs	Appendix I Metals	REMARKS
9209-SW2		10.17.13	1130	SW	4		X	X	
9209-SW3		10-15-13	1300	SW	4		X	X	
9209-SW7		10.17.13	845	SW	4		X	X	
9209-SW8		10.17.13	850	SW	4		X	X	

Special Instructions/Comments:
report according to NC SWS guidelines, provide edd, report "J" values
Send results to weispfenningan@cdmsmith.com
2.7°C

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
Edata X Yes ___ No

INVOICE INFORMATION
P.O. #
Bill to: Wake County

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: [signature]	Signature:	Signature:	Signature: [signature]	Signature:	Signature:
Printed Name: Aaron Weispfenning	Printed Name:	Printed Name:	Printed Name: [signature]	Printed Name:	Printed Name:
Firm: CDM Smith	Firm: FedEx	Firm: FedEx	Firm: ALS	Firm:	Firm:
Date/Time: 10-17-13 1300	Date/Time:	Date/Time:	Date/Time: 10.18.13 0955	Date/Time:	Date/Time:

November 04, 2013

Service Request No: J1306159

Aaron Weispfenning
CDM Smith, Inc.
5400 Glenwood Ave
Suite 300
Raleigh, NC 27612

Laboratory Results for: North Wake Unlined Landfill

Dear Aaron:

Enclosed are the results of the sample(s) submitted to our laboratory on October 17, 2013. For your reference, these analyses have been assigned our service request number **J1306159**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Craig Myers
Project Manager

Page 1 of 15 11/4/13

Client:
Project: North Wake Unlined Landfill

Service Request: J1306159

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1306159-001	MW-6	10/16/13	13:15
J1306159-002	MW-5R	10/16/13	14:35
J1306159-003	MW-8	10/16/13	15:40

2

ALS Environmental

Cooler Receipt Form

Client: CDM Smith

Service Request #: J1306159

Project: N. Wake unlined

Cooler received on 10/17/13 and opened on 10/17/13 by BL

COURIER: ALS UPS FEDEX Client Other _____ Airbill # 7969 2966 5481

1	Were custody seals on outside of cooler?	Yes	No	
	If yes, how many and where?	#:___ on lid	other	
2	Were seals intact and signature and date correct?	Yes	No	N/A
3	Were custody papers properly filled out?	Yes	No	N/A
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	NA		
5	Thermometer ID	NA		
6	Temperature Blank Present?	Yes	No	
7	Were Ice or Ice Packs present	Ice	Ice Packs	No
8	Did all bottles arrive in good condition (unbroken, etc....)?	Yes	No	N/A
9	Type of packing material present	Netting	Vial Holder	Bubble Wrap
		Paper	Styrofoam	Other N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	Yes	No	N/A
11	Did all bottle labels and tags agree with custody papers?	Yes	No	N/A
12	Were the correct bottles used for the tests indicated?	Yes	No	N/A
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	N/A
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2			
	Preservative additions noted below			
14	Were all samples received within analysis holding times?	Yes	No	N/A
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No	N/A
16	Where did the bottles originate?	ALS	Client	

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: 10/17/13 Date: BL

Microseeps Lab. Proj. # _____

CHAIN - OF - CUSTODY RECORD

Microseeps COC cont. # J1308159

Phone: (412) 826-5245 Microseeps, Inc. - 220 William Pitt Way - Pittsburgh, PA 15238 Fax No. : (412) 826-3433

Company : CDM Smith

Co. Address : 5400 Glenwood Ave Suite 300 Raleigh NC 27616

Phone # : 919-325-3500 Fax # :

Proj. Manager : Aaron Weispfenning

Proj. Name/Number : N Wake Unlined Landfill

Sampler's signature :

Cooler Temp.

Results to : A. Weispfenning CDM Smith

Invoice to : Wake County

Parameters Requested: [redacted]

Sample ID	Sample Description	Sample Type Water	Vapor	Solid	Date	Time	# bottles	Dissolved Hydrogen	Remarks :
MW-6			X		10-16-13	1315	1	X	
MW-5R			X		10-16-13	1435	1	X	
MW-8			X		10-16-13	1540	1	X	

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
	CDM Smith	10-16-13	1700		ALS	10/17/13	904
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Accompany Samples YELLOW COPY : Laboratory File PINK COPY : Submitter

ALS Environmental Services
9143 Philips Highway, Suite 200
Jacksonville, FL 32256
Tel 904-739-2277
Fax 904-739-2011

Appendix A

Subcontracted Analytical Results

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

October 29, 2013

Craig Myers
ALS Environmental
9143 Phillips Highway
Suite 200
Jacksonville, FL 32256

RE: **J1306159**

Microseeps Workorder: 10418

Dear Craig Myers:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, October 18, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Robbin Robl 10/29/2013
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 10

CERTIFICATE OF ANALYSIS
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Microseeps
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:	NELAP: State of Florida, Department of Health, Bureau of Laboratories
Accreditation ID:	E87832
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
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: State of Louisiana, Department of Environmental Quality
Accreditation ID:	04104
Scope:	Solid and Chemical Materials; Non-Potable Water
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, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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

SAMPLE SUMMARY

Workorder: 10418 J1306159

Lab ID	Sample ID	Matrix	Date Collected	Date Received
104180001	MW-6	Bubble Strip	10/16/2013 13:15	10/18/2013 10:30
104180002	MW-5R	Bubble Strip	10/16/2013 14:35	10/18/2013 10:30
104180003	MW-8	Bubble Strip	10/16/2013 15:40	10/18/2013 10:30

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

ANALYTICAL RESULTS

Workorder: 10418 J1306159

Lab ID: 104180001 Date Received: 10/18/2013 10:30 Matrix: Bubble Strip
Sample ID: MW-6 Date Collected: 10/16/2013 13:15

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Hydrogen	0.93	nM	0.60	0.049	1			10/28/2013 10:38	GT	

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

ANALYTICAL RESULTS

Workorder: 10418 J1306159

Lab ID: 104180002 Date Received: 10/18/2013 10:30 Matrix: Bubble Strip
Sample ID: MW-5R Date Collected: 10/16/2013 14:35

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Hydrogen	0.82	nM	0.60	0.049	1			10/28/2013 10:50	GT	

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

ANALYTICAL RESULTS

Workorder: 10418 J1306159

Lab ID: 104180003 Date Received: 10/18/2013 10:30 Matrix: Bubble Strip
Sample ID: MW-8 Date Collected: 10/16/2013 15:40

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Hydrogen	0.85	nM	0.60	0.049	1			10/28/2013 11:06	GT	

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

ANALYTICAL RESULTS QUALIFIERS

Workorder: 10418 J1306159

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).

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

QUALITY CONTROL DATA

Workorder: 10418 J1306159

QC Batch: DISG/3352 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 104180001, 104180002, 104180003

METHOD BLANK: 23721

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	0.60 U	0.60	

LABORATORY CONTROL SAMPLE & LCSD: 23722 23723

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	

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 10418 J1306159

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
104180001	MW-6			AM20GAX	DISG/3352
104180002	MW-5R			AM20GAX	DISG/3352
104180003	MW-8			AM20GAX	DISG/3352

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ALS Environmental Chain of Custody

9143 Philips Highway, Suite 200 • Jacksonville, FL 32256 • 904-739-2277 • FAX 904-739-2011

ALS Contact: Craig Myers

Project Number: J1306159
Project Manager: Craig Myers

10418

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Misc Out 1 None
J1306159-001	MW-6	1	~~Water~~ Air	10/16/13	1315	Microseeps, Inc.	X
J1306159-002	MW-5R		~~Water~~ Air	10/16/13	1435	Microseeps, Inc.	X
J1306159-003	MW-8		~~Water~~ Air	10/16/13	1540	Microseeps, Inc.	X

Test Comments

Misc Out 1 - None J1306159-001,2,3 Dissolved Hydrogen

Special Instructions/Comments

15

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements

____RUSH (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

✓ STANDARD

Requested FAX Date: _____

Requested Report Date: 10/31/13

Report Requirements

____ I. Results Only

✓ II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

PQL/MDL/J Y

EDD Y

Invoice Information

PO# J1306159

Bill to

Relinquished By: 10/17/13 Received By: 10/18/13 1030 Airbill Number:

November 01, 2013 Service Request No:J1306153

Elliott Cornell
Wake County Solid Waste Management
9025 Deponie Drive
Raleigh, NC 27614

Laboratory Results for: North Wake Unlined Landfill

Dear Elliott,

Enclosed are the results of the sample(s) submitted to our laboratory October 17, 2013
For your reference, these analyses have been assigned our service request number **J1306153.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

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SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW5R	Lab ID: J1306153-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	1.70		0.11	0.50	mg/L	300.0
Nitrate as Nitrogen	9.90		0.03	0.20	mg/L	300.0
Sulfate	2.98		0.18	0.50	mg/L	300.0
Barium, Total Recoverable	90	J	0.3	100	ug/L	6010C
Zinc, Total Recoverable	5	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.05	J	0.04	1.0	ug/L	6020A
Chromium, Total Recoverable	1	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.5	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	0.4	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	3	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.1	J	0.05	5.5	ug/L	6020A
Alkalinity as CaCO3, Total	184		5.0	5.0	mg/L	SM 2320 B
Bicarbonate Alkalinity as CaCO3	184		5.0	5.0	mg/L	SM 2320 B
Carbon, Total Organic (TOC)	1.1		0.09	1.0	mg/L	SM 5310 B

CLIENT ID: 9209-MW6	Lab ID: J1306153-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	93.0		0.11	0.50	mg/L	300.0
Nitrate as Nitrogen	0.16	J	0.03	0.20	mg/L	300.0
Sulfate	2.63		0.18	0.50	mg/L	300.0
Barium, Total Recoverable	90	J	0.3	100	ug/L	6010C
Silver, Total Recoverable	2	J	2	10	ug/L	6010C
Vanadium, Total Recoverable	3	J	2	25	ug/L	6010C
Zinc, Total Recoverable	5	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.04	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.3	J	0.10	1.0	ug/L	6020A
Cobalt, Total Recoverable	34		0.03	10	ug/L	6020A
Copper, Total Recoverable	2	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	5	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.2	J	0.05	5.5	ug/L	6020A
Mercury, Total	0.02	J	0.02	0.20	ug/L	7470A
1,1-Dichloroethane (1,1-DCA)	3.0	J	0.30	5.0	ug/L	8260B
1,4-Dichlorobenzene	0.48	J	0.16	1.0	ug/L	8260B
cis-1,2-Dichloroethene	0.60	J	0.36	5.0	ug/L	8260B
Trichloroethene (TCE)	0.57	J	0.36	1.0	ug/L	8260B
Alkalinity as CaCO3, Total	136		5.0	5.0	mg/L	SM 2320 B
Bicarbonate Alkalinity as CaCO3	136		5.0	5.0	mg/L	SM 2320 B
Carbon, Total Organic (TOC)	5.2		0.09	1.0	mg/L	SM 5310 B
Chemical Oxygen Demand, Total	40		16	20	mg/L	SM21 5220

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW7	Lab ID: J1306153-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	60	J	0.3	100	ug/L	6010C
Silver, Total Recoverable	3	J	2	10	ug/L	6010C
Vanadium, Total Recoverable	12	J	2	25	ug/L	6010C
Zinc, Total Recoverable	11	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.1	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.6	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	5	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	37		0.03	10	ug/L	6020A
Copper, Total Recoverable	11		0.3	10	ug/L	6020A
Lead, Total Recoverable	1	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	12	J	0.5	50	ug/L	6020A
Mercury, Total	0.04	J	0.02	0.20	ug/L	7470A
1,4-Dichlorobenzene	1.5		0.16	1.0	ug/L	8260B
Benzene	0.81	J	0.21	1.0	ug/L	8260B
Chlorobenzene	0.40	J	0.16	3.0	ug/L	8260B

CLIENT ID: 9209-MW8	Lab ID: J1306153-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	19.7		0.11	0.50	mg/L	300.0
Nitrate as Nitrogen	0.18	J	0.03	0.20	mg/L	300.0
Sulfate	1.57		0.18	0.50	mg/L	300.0
Barium, Total Recoverable	50	J	0.3	100	ug/L	6010C
Beryllium, Total Recoverable	0.1	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.2	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	2	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	2	J	0.03	10	ug/L	6020A
Nickel, Total Recoverable	4	J	0.5	50	ug/L	6020A
1,1-Dichloroethane (1,1-DCA)	0.62	J	0.30	5.0	ug/L	8260B
1,4-Dichlorobenzene	0.47	J	0.16	1.0	ug/L	8260B
Benzene	0.48	J	0.21	1.0	ug/L	8260B
Chlorobenzene	0.17	J	0.16	3.0	ug/L	8260B
cis-1,2-Dichloroethene	37		0.36	5.0	ug/L	8260B
Alkalinity as CaCO3, Total	86.8		5.0	5.0	mg/L	SM 2320 B
Bicarbonate Alkalinity as CaCO3	86.8		5.0	5.0	mg/L	SM 2320 B
Carbon, Total Organic (TOC)	1.5		0.09	1.0	mg/L	SM 5310 B

CLIENT ID: 9209-MW9	Lab ID: J1306153-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	20.4		0.11	0.50	mg/L	300.0
Nitrate as Nitrogen	0.17	J	0.03	0.20	mg/L	300.0
Sulfate	5.60		0.18	0.50	mg/L	300.0
Barium, Total Recoverable	120		0.3	100	ug/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW9	Lab ID: J1306153-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Vanadium, Total Recoverable	6	J	2	25	ug/L	6010C
Zinc, Total Recoverable	16	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.2	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	1.1		0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	2	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.4	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	2	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	1	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	2	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.2	J	0.05	5.5	ug/L	6020A
1,1-Dichloroethane (1,1-DCA)	2.0	J	0.30	5.0	ug/L	8260B
cis-1,2-Dichloroethene	4.2	J	0.36	5.0	ug/L	8260B
Alkalinity as CaCO3, Total	117		5.0	5.0	mg/L	SM 2320 B
Bicarbonate Alkalinity as CaCO3	117		5.0	5.0	mg/L	SM 2320 B
Carbon, Total Organic (TOC)	2.9		0.09	1.0	mg/L	SM 5310 B
Chemical Oxygen Demand, Total	28		16	20	mg/L	SM21 5220

CLIENT ID: 9209-MW10	Lab ID: J1306153-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	2.74		0.11	0.50	mg/L	300.0
Sulfate	0.73		0.18	0.50	mg/L	300.0
Barium, Total Recoverable	30	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	4	J	2	25	ug/L	6010C
Zinc, Total Recoverable	9	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.3	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.2	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	0.4	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	2	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	2	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	1	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	3	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.05	J	0.05	5.5	ug/L	6020A
Mercury, Total	0.29		0.02	0.20	ug/L	7470A
1,1-Dichloroethane (1,1-DCA)	4.0	J	0.30	5.0	ug/L	8260B
1,4-Dichlorobenzene	2.4		0.16	1.0	ug/L	8260B
Benzene	1.1		0.21	1.0	ug/L	8260B
Chlorobenzene	0.17	J	0.16	3.0	ug/L	8260B
cis-1,2-Dichloroethene	23		0.36	5.0	ug/L	8260B
Tetrachloroethene (PCE)	2.1		0.22	1.0	ug/L	8260B
Trichloroethene (TCE)	3.0		0.36	1.0	ug/L	8260B
Vinyl Chloride	0.76	J	0.36	1.0	ug/L	8260B
Alkalinity as CaCO3, Total	117		5.0	5.0	mg/L	SM 2320 B

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW10	Lab ID: J1306153-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Bicarbonate Alkalinity as CaCO3	117		5.0	5.0	mg/L	SM 2320 B
Carbon, Total Organic (TOC)	0.9	J	0.09	1.0	mg/L	SM 5310 B
Chemical Oxygen Demand, Total	19	J	16	20	mg/L	SM21 5220

CLIENT ID: 9209-MW10d	Lab ID: J1306153-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	3	BJ	0.3	100	ug/L	6010C
Antimony, Total Recoverable	0.3	J	0.2	6.0	ug/L	6020A
Cadmium, Total Recoverable	0.2	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	1	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.05	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	0.7	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	0.6	J	0.5	50	ug/L	6020A
1,1-Dichloroethane (1,1-DCA)	1.8	J	0.30	5.0	ug/L	8260B
cis-1,2-Dichloroethene	0.56	J	0.36	5.0	ug/L	8260B
Methylene Chloride	0.57	J	0.21	5.0	ug/L	8260B

CLIENT ID: 9209-MW11	Lab ID: J1306153-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	3.16		0.11	0.50	mg/L	300.0
Nitrate as Nitrogen	0.26		0.03	0.20	mg/L	300.0
Sulfate	0.66		0.18	0.50	mg/L	300.0
Barium, Total Recoverable	100		0.3	100	ug/L	6010C
Vanadium, Total Recoverable	5	J	2	25	ug/L	6010C
Zinc, Total Recoverable	15	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.1	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.2	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	2	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	1	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	4	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	0.5	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	0.9	J	0.5	50	ug/L	6020A
Alkalinity as CaCO3, Total	34.8		5.0	5.0	mg/L	SM 2320 B
Bicarbonate Alkalinity as CaCO3	34.8		5.0	5.0	mg/L	SM 2320 B
Carbon, Total Organic (TOC)	0.7	J	0.09	1.0	mg/L	SM 5310 B

CLIENT ID: 9209-MW22	Lab ID: J1306153-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	50	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	3	J	2	25	ug/L	6010C
Zinc, Total Recoverable	8	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.1	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	3.5		0.10	1.0	ug/L	6020A

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW22	Lab ID: J1306153-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chromium, Total Recoverable	1	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	25		0.03	10	ug/L	6020A
Copper, Total Recoverable	1	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	1	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	10	J	0.5	50	ug/L	6020A

CLIENT ID: 9209-MW23	Lab ID: J1306153-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	30	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	5	J	2	25	ug/L	6010C
Zinc, Total Recoverable	6	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.2	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.1	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	3	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.7	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	4	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	2	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	2	J	0.5	50	ug/L	6020A
Mercury, Total	0.02	J	0.02	0.20	ug/L	7470A

CLIENT ID: 9209-MW24	Lab ID: J1306153-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	60	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	8	J	2	25	ug/L	6010C
Zinc, Total Recoverable	46		2	20	ug/L	6010C
Beryllium, Total Recoverable	0.6	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.1	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	4	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.9	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	5	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	7	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	2	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.2	J	0.05	5.5	ug/L	6020A
Mercury, Total	0.09	J	0.02	0.20	ug/L	7470A
Chloroform	7.9		0.35	5.0	ug/L	8260B

CLIENT ID: 9209-MW30	Lab ID: J1306153-012					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	220		0.3	100	ug/L	6010C
Vanadium, Total Recoverable	50		2	25	ug/L	6010C
Zinc, Total Recoverable	40		2	20	ug/L	6010C
Beryllium, Total Recoverable	1.4		0.04	1.0	ug/L	6020A
Chromium, Total Recoverable	49		0.4	20	ug/L	6020A

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW30	Lab ID: J1306153-012					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Cobalt, Total Recoverable	9	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	63		0.3	10	ug/L	6020A
Lead, Total Recoverable	6	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	21	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.3	J	0.05	5.5	ug/L	6020A
Mercury, Total	0.03	J	0.02	0.20	ug/L	7470A

CLIENT ID: 9209-MW31	Lab ID: J1306153-013					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	30	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	5	J	2	25	ug/L	6010C
Zinc, Total Recoverable	13	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.1	J	0.04	1.0	ug/L	6020A
Chromium, Total Recoverable	11		0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.4	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	5	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	2	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	5	J	0.5	50	ug/L	6020A
Chloroform	1.4	J	0.35	5.0	ug/L	8260B

CLIENT ID: 9209-MW31d	Lab ID: J1306153-014					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	20	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	5	J	2	25	ug/L	6010C
Zinc, Total Recoverable	16	BJ	2	20	ug/L	6010C
Antimony, Total Recoverable	0.8	J	0.2	6.0	ug/L	6020A
Chromium, Total Recoverable	6	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.06	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	1	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	0.8	J	0.5	50	ug/L	6020A
Chloroform	17		0.35	5.0	ug/L	8260B

CLIENT ID: 9209-MW32	Lab ID: J1306153-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	70	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	32		2	25	ug/L	6010C
Zinc, Total Recoverable	25		2	20	ug/L	6010C
Beryllium, Total Recoverable	0.6	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.3	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	11		0.2	10	ug/L	6020A
Cobalt, Total Recoverable	6	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	50		0.3	10	ug/L	6020A
Lead, Total Recoverable	0.9	J	0.2	10	ug/L	6020A

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW32	Lab ID: J1306153-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Nickel, Total Recoverable	10	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.1	J	0.05	5.5	ug/L	6020A

CLIENT ID: 9209-TB-1a	Lab ID: J1306153-016					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	60	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	14	J	2	25	ug/L	6010C
Zinc, Total Recoverable	14	BJ	2	20	ug/L	6010C
Beryllium, Total Recoverable	0.08	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.3	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	6	J	0.4	20	ug/L	6020A
Cobalt, Total Recoverable	10		0.03	10	ug/L	6020A
Copper, Total Recoverable	35		0.3	10	ug/L	6020A
Lead, Total Recoverable	1	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	9	J	0.5	50	ug/L	6020A
Mercury, Total	0.12	J	0.02	0.20	ug/L	7470A
Chloroform	0.35	J	0.35	5.0	ug/L	8260B

CLIENT ID: 9209-TB-1a deep	Lab ID: J1306153-017					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	20	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	3	J	2	25	ug/L	6010C
Zinc, Total Recoverable	9	BJ	2	20	ug/L	6010C
Antimony, Total Recoverable	2.2	J	0.2	6.0	ug/L	6020A
Cadmium, Total Recoverable	0.1	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	6	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	1	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	6	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	5	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	4	J	0.5	50	ug/L	6020A
Chloroform	16		0.35	5.0	ug/L	8260B

CLIENT ID: 9209-MW36	Lab ID: J1306153-018					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Chloride	5.50		0.11	0.50	mg/L	300.0
Nitrate as Nitrogen	0.73		0.03	0.20	mg/L	300.0
Sulfate	2.19		0.18	0.50	mg/L	300.0
Barium, Total Recoverable	60	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	10	J	2	25	ug/L	6010C
Zinc, Total Recoverable	4	BJ	2	20	ug/L	6010C
Arsenic, Total Recoverable	0.6	J	0.5	10	ug/L	6020A
Beryllium, Total Recoverable	0.2	J	0.04	1.0	ug/L	6020A
Chromium, Total Recoverable	7	J	0.2	10	ug/L	6020A

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW36	Lab ID: J1306153-018					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Cobalt, Total Recoverable	2	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	8	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	0.6	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	4	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.05	J	0.05	5.5	ug/L	6020A
1,1-Dichloroethane (1,1-DCA)	3.8	J	0.30	5.0	ug/L	8260B
cis-1,2-Dichloroethene	2.5	J	0.36	5.0	ug/L	8260B
Alkalinity as CaCO3, Total	59.2		5.0	5.0	mg/L	SM 2320 B
Bicarbonate Alkalinity as CaCO3	59.2		5.0	5.0	mg/L	SM 2320 B
Carbon, Total Organic (TOC)	1.1		0.09	1.0	mg/L	SM 5310 B
Chemical Oxygen Demand, Total	38		16	20	mg/L	SM21 5220

CLIENT ID: 9209-DUP	Lab ID: J1306153-019					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	90	J	0.3	100	ug/L	6010C
Silver, Total Recoverable	2	J	2	10	ug/L	6010C
Vanadium, Total Recoverable	3	J	2	25	ug/L	6010C
Cadmium, Total Recoverable	0.2	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	0.6	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	35		0.03	10	ug/L	6020A
Copper, Total Recoverable	2	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	6	J	0.5	50	ug/L	6020A
Thallium, Total Recoverable	0.2	J	0.05	5.5	ug/L	6020A
Mercury, Total	0.04	J	0.02	0.20	ug/L	7470A
1,1-Dichloroethane (1,1-DCA)	3.0	J	0.30	5.0	ug/L	8260B
1,4-Dichlorobenzene	0.54	J	0.16	1.0	ug/L	8260B
Acetone	8.2	J	5.6	100	ug/L	8260B
cis-1,2-Dichloroethene	0.55	J	0.36	5.0	ug/L	8260B
Trichloroethene (TCE)	0.54	J	0.36	1.0	ug/L	8260B

9143 Philips Highway, Suite 200, Jacksonville, FL 32256 | 904-739-2277 | www.caslab.com

Client: Wake County Solid Waste Management
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

Service Request:J1306153
Date Received:10/17/13

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Nineteen water samples and one trip blank were received for analysis at ALS Environmental on 10/17/13. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Volatile Organic Analyses:

No significant data anomalies were noted with this analysis.

Metals Analyses:

No significant data anomalies were noted with this analysis.

General Chemistry Analyses:

Method SM5210B (BOD): The sample dilution series for all samples in delivery group J1306153 did not meet the oxygen depletion criterion of at least 2 mg/L. The reported results are based on the highest dilution performed and are therefore the minimum values possible for these samples. The analysis could not be repeated because holding time for the test had expired.

Subcontracted Analytical Parameters:

The samples were delivered to ALS Environmental in Rochester, NY on 10/18/13 for Organic Acid determination. The certified analytical results have been included in their entirety in this report.

The samples were delivered to ALS Environmental in Simi Valley, CA on 10/18/13 for RSK-175 determination. The certified analytical report has been included in its entirety in Appendix A: Subcontracted Analytical Results.

Approved by _____ Date 11/1/2013

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2014
North Carolina Department of Environment and Natural Resources	527	12/31/2013
Virginia Environmental Accreditation Program	460191	12/14/2013
Louisiana Department of Environmental Quality	02086	6/30/2014
Georgia Department of Natural Resources	958	6/30/2014
Kentucky Division of Waste Management	63	6/30/2014
South Carolina Department of Health and Environmental Control	96021001	6/30/2014
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2014
Maine Department of Health and Human Services	2011006	2/3/2015
Department of Defense	66206	5/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2014

Data Qualifiers

CAS Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

CAS Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Wake County Solid Waste Management **Service Request:** J1306153
Project: North Wake Unlined Landfill

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1306153-001	9209-MW5R	10/16/2013	1420
J1306153-002	9209-MW6	10/16/2013	1300
J1306153-003	9209-MW7	10/16/2013	1555
J1306153-004	9209-MW8	10/16/2013	1525
J1306153-005	9209-MW9	10/16/2013	0930
J1306153-006	9209-MW10	10/16/2013	1200
J1306153-007	9209-MW10d	10/16/2013	1210
J1306153-008	9209-MW11	10/16/2013	0900
J1306153-009	9209-MW22	10/16/2013	1630
J1306153-010	9209-MW23	10/16/2013	1615
J1306153-011	9209-MW24	10/16/2013	1605
J1306153-012	9209-MW30	10/16/2013	0805
J1306153-013	9209-MW31	10/16/2013	0700
J1306153-014	9209-MW31d	10/15/2013	1115
J1306153-015	9209-MW32	10/16/2013	0750
J1306153-016	9209-TB-1a	10/16/2013	0725
J1306153-017	9209-TB-1a deep	10/15/2013	1250
J1306153-018	9209-MW36	10/16/2013	1015
J1306153-019	9209-DUP	10/16/2013	1100
J1306153-020	9209-Trip Blank	10/16/2013	0000

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 14:20
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW5R	**Units:**	ug/L
Lab Code:	J1306153-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/21/13 20:02	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/21/13 20:02	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/21/13 20:02	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/21/13 20:02	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/21/13 20:02	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/21/13 20:02	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/21/13 20:02	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/21/13 20:02	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/21/13 20:02	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/21/13 20:02	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/21/13 20:02	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/21/13 20:02	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/21/13 20:02	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/21/13 20:02	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/21/13 20:02	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/21/13 20:02	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/21/13 20:02	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/21/13 20:02	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/21/13 20:02	
2-Hexanone	2.2 U	50	2.2	1	10/21/13 20:02	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/21/13 20:02	
Acetone	5.6 U	100	5.6	1	10/21/13 20:02	
Acetonitrile	18 U	55	18	1	10/21/13 20:02	
Acrolein	28 U	53	28	1	10/21/13 20:02	
Acrylonitrile	1.5 U	200	1.5	1	10/21/13 20:02	
Allyl Chloride	0.39 U	10	0.39	1	10/21/13 20:02	
Benzene	0.21 U	1.0	0.21	1	10/21/13 20:02	
Bromochloromethane	0.27 U	5.0	0.27	1	10/21/13 20:02	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/21/13 20:02	
Bromoform	0.42 U	3.0	0.42	1	10/21/13 20:02	
Bromomethane	0.23 U	10	0.23	1	10/21/13 20:02	
Carbon Disulfide	2.4 U	100	2.4	1	10/21/13 20:02	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/21/13 20:02	
Chlorobenzene	0.16 U	3.0	0.16	1	10/21/13 20:02	
Chloroethane	0.52 U	10	0.52	1	10/21/13 20:02	
Chloroform	0.35 U	5.0	0.35	1	10/21/13 20:02	
Chloromethane	0.36 U	1.0	0.36	1	10/21/13 20:02	
Chloroprene	0.12 U	20	0.12	1	10/21/13 20:02	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/21/13 20:02	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/21/13 20:02	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/21/13 20:02	
Dibromomethane	0.36 U	10	0.36	1	10/21/13 20:02	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/21/13 20:02	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 14:20
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW5R	**Units:**	ug/L
Lab Code:	J1306153-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 20:02	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 20:02	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 20:02	
Iodomethane	2.7 U	10	2.7	1	10/21/13 20:02	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 20:02	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 20:02	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 20:02	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 20:02	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 20:02	
Naphthalene	0.38 U	10	0.38	1	10/21/13 20:02	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 20:02	
Propionitrile	3.9 U	150	3.9	1	10/21/13 20:02	
Styrene	0.29 U	1.0	0.29	1	10/21/13 20:02	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 20:02	
Toluene	0.19 U	1.0	0.19	1	10/21/13 20:02	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 20:02	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 20:02	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 20:02	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/21/13 20:02	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 20:02	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 20:02	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 20:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/21/13 20:02	
4-Bromofluorobenzene	106	86 - 113	10/21/13 20:02	
Dibromofluoromethane	98	86 - 112	10/21/13 20:02	
Toluene-d8	93	88 - 115	10/21/13 20:02	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 14:20
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW5R	**Units:**	mg/L
Lab Code:	J1306153-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/23/13 15:31	
Acetic Acid	0.50 U	1.0	0.50	1	10/23/13 15:31	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/23/13 15:31	
Lactic Acid	0.50 U	1.0	0.50	1	10/23/13 15:31	
Propionic Acid	0.50 U	1.0	0.50	1	10/23/13 15:31	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 14:20
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW5R	**Basis:**	NA
Lab Code:	J1306153-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/21/13 23:52	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/21/13 23:52	10/18/13	
Barium, Total Recoverable	6010C	**90**	**J**	ug/L	100	0.3	1	10/23/13 20:36	10/18/13	
Beryllium, Total Recoverable	6020A	**0.05**	**J**	ug/L	1.0	0.04	1	10/21/13 23:52	10/18/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/21/13 23:52	10/18/13	
Chromium, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/24/13 00:26	10/18/13	
Cobalt, Total Recoverable	6020A	**0.5**	**J**	ug/L	10	0.03	1	10/21/13 23:52	10/18/13	
Copper, Total Recoverable	6020A	**0.4**	**J**	ug/L	10	0.3	1	10/21/13 23:52	10/18/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/21/13 23:52	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:26	10/18/13	
Nickel, Total Recoverable	6020A	**3**	**J**	ug/L	50	0.5	1	10/21/13 23:52	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/21/13 23:52	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 20:36	10/18/13	
Thallium, Total Recoverable	6020A	**0.1**	**J**	ug/L	5.5	0.05	1	10/21/13 23:52	10/18/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 20:36	10/18/13	
Zinc, Total Recoverable	6010C	**5**	**BJ**	ug/L	20	2	1	10/23/13 20:36	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 14:20
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW5R	**Basis:**	NA
Lab Code:	J1306153-001		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	**184**		mg/L	5.0	5.0	1	10/24/13	NA	
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**184**		mg/L	5.0	5.0	1	10/24/13	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B	4.0	U	mg/L	4.0	4.0	2	10/18/13 07:00	NA	
Carbon, Total Organic (TOC)	SM 5310 B	**1.1**		mg/L	1.0	0.09	1	10/18/13	NA	
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0	U	mg/L	5.0	5.0	1	10/24/13	NA	
Chemical Oxygen Demand, Total	SM21 5220 D	16	U	mg/L	20	16	1	10/24/13	10/24/13	
Chloride	300.0	**1.70**		mg/L	0.50	0.11	1	10/18/13	NA	
Nitrate as Nitrogen	300.0	**9.90**		mg/L	0.20	0.03	1	10/18/13	NA	
Sulfate	300.0	**2.98**		mg/L	0.50	0.18	1	10/18/13	NA	
Sulfide, Total	SM 4500-S2- F	0.4	U	mg/L	2.0	0.4	1	10/23/13	NA	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 13:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW6	**Units:**	ug/L
Lab Code:	J1306153-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	5.0	0.19	1	10/21/13 20:30	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/21/13 20:30	
1,1,2,2-Tetrachloroethane	0.29	U	3.0	0.29	1	10/21/13 20:30	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/21/13 20:30	
1,1-Dichloroethane (1,1-DCA)	**3.0**	**J**	5.0	0.30	1	10/21/13 20:30	
1,1-Dichloroethene (1,1-DCE)	0.16	U	5.0	0.16	1	10/21/13 20:30	
1,1-Dichloropropene	0.32	U	5.0	0.32	1	10/21/13 20:30	
1,2,3-Trichloropropane	0.42	U	2.0	0.42	1	10/21/13 20:30	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/21/13 20:30	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	13	2.3	1	10/21/13 20:30	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/21/13 20:30	
1,2-Dichlorobenzene	0.48	U	5.0	0.48	1	10/21/13 20:30	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/21/13 20:30	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/21/13 20:30	
1,3-Dichlorobenzene	0.22	U	5.0	0.22	1	10/21/13 20:30	
1,3-Dichloropropane	0.18	U	1.0	0.18	1	10/21/13 20:30	
1,4-Dichlorobenzene	**0.48**	**J**	1.0	0.16	1	10/21/13 20:30	
2,2-Dichloropropane	0.46	U	15	0.46	1	10/21/13 20:30	
2-Butanone (MEK)	3.8	U	100	3.8	1	10/21/13 20:30	
2-Hexanone	2.2	U	50	2.2	1	10/21/13 20:30	
4-Methyl-2-pentanone (MIBK)	1.1	U	100	1.1	1	10/21/13 20:30	
Acetone	5.6	U	100	5.6	1	10/21/13 20:30	
Acetonitrile	18	U	55	18	1	10/21/13 20:30	
Acrolein	28	U	53	28	1	10/21/13 20:30	
Acrylonitrile	1.5	U	200	1.5	1	10/21/13 20:30	
Allyl Chloride	0.39	U	10	0.39	1	10/21/13 20:30	
Benzene	0.21	U	1.0	0.21	1	10/21/13 20:30	
Bromochloromethane	0.27	U	5.0	0.27	1	10/21/13 20:30	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/21/13 20:30	
Bromoform	0.42	U	3.0	0.42	1	10/21/13 20:30	
Bromomethane	0.23	U	10	0.23	1	10/21/13 20:30	
Carbon Disulfide	2.4	U	100	2.4	1	10/21/13 20:30	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/21/13 20:30	
Chlorobenzene	0.16	U	3.0	0.16	1	10/21/13 20:30	
Chloroethane	0.52	U	10	0.52	1	10/21/13 20:30	
Chloroform	0.35	U	5.0	0.35	1	10/21/13 20:30	
Chloromethane	0.36	U	1.0	0.36	1	10/21/13 20:30	
Chloroprene	0.12	U	20	0.12	1	10/21/13 20:30	
cis-1,2-Dichloroethene	**0.60**	**J**	5.0	0.36	1	10/21/13 20:30	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/21/13 20:30	
Dibromochloromethane	0.21	U	3.0	0.21	1	10/21/13 20:30	
Dibromomethane	0.36	U	10	0.36	1	10/21/13 20:30	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/21/13 20:30	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 13:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW6	**Units:**	ug/L
Lab Code:	J1306153-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 20:30	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 20:30	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 20:30	
Iodomethane	2.7 U	10	2.7	1	10/21/13 20:30	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 20:30	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 20:30	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 20:30	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 20:30	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 20:30	
Naphthalene	0.38 U	10	0.38	1	10/21/13 20:30	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 20:30	
Propionitrile	3.9 U	150	3.9	1	10/21/13 20:30	
Styrene	0.29 U	1.0	0.29	1	10/21/13 20:30	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 20:30	
Toluene	0.19 U	1.0	0.19	1	10/21/13 20:30	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 20:30	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 20:30	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 20:30	
Trichloroethene (TCE)	**0.57 J**	1.0	0.36	1	10/21/13 20:30	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 20:30	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 20:30	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 20:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	72 - 121	10/21/13 20:30	
4-Bromofluorobenzene	106	86 - 113	10/21/13 20:30	
Dibromofluoromethane	97	86 - 112	10/21/13 20:30	
Toluene-d8	95	88 - 115	10/21/13 20:30	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 13:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW6	**Units:**	mg/L
Lab Code:	J1306153-002	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/23/13 16:17	
Acetic Acid	0.50 U	1.0	0.50	1	10/23/13 16:17	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/23/13 16:17	
Lactic Acid	0.50 U	1.0	0.50	1	10/23/13 16:17	
Propionic Acid	0.50 U	1.0	0.50	1	10/23/13 16:17	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 13:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW6	**Basis:**	NA
Lab Code:	J1306153-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/21/13 23:57	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/21/13 23:57	10/18/13	
Barium, Total Recoverable	6010C	**90**	**J**	ug/L	100	0.3	1	10/23/13 20:41	10/18/13	
Beryllium, Total Recoverable	6020A	**0.04**	**J**	ug/L	1.0	0.04	1	10/21/13 23:57	10/18/13	
Cadmium, Total Recoverable	6020A	**0.3**	**J**	ug/L	1.0	0.10	1	10/21/13 23:57	10/18/13	
Chromium, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/24/13 00:31	10/18/13	
Cobalt, Total Recoverable	6020A	**34**		ug/L	10	0.03	1	10/21/13 23:57	10/18/13	
Copper, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.3	1	10/21/13 23:57	10/18/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/21/13 23:57	10/18/13	
Mercury, Total	7470A	**0.02**	**J**	ug/L	0.20	0.02	1	10/22/13 14:27	10/18/13	
Nickel, Total Recoverable	6020A	**5**	**J**	ug/L	50	0.5	1	10/21/13 23:57	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/21/13 23:57	10/18/13	
Silver, Total Recoverable	6010C	**2**	**J**	ug/L	10	2	1	10/23/13 20:41	10/18/13	
Thallium, Total Recoverable	6020A	**0.2**	**J**	ug/L	5.5	0.05	1	10/21/13 23:57	10/18/13	
Vanadium, Total Recoverable	6010C	**3**	**J**	ug/L	25	2	1	10/23/13 20:41	10/18/13	
Zinc, Total Recoverable	6010C	**5**	**BJ**	ug/L	20	2	1	10/23/13 20:41	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 13:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW6	**Basis:**	NA
Lab Code:	J1306153-002		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	**136**	mg/L	5.0	5.0	1	10/24/13	NA	
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**136**	mg/L	5.0	5.0	1	10/24/13	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B	4.0 U	mg/L	4.0	4.0	2	10/18/13 07:00	NA	
Carbon, Total Organic (TOC)	SM 5310 B	**5.2**	mg/L	1.0	0.09	1	10/18/13	NA	
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0 U	mg/L	5.0	5.0	1	10/24/13	NA	
Chemical Oxygen Demand, Total	SM21 5220 D	**40**	mg/L	20	16	1	10/24/13	10/24/13	
Chloride	300.0	**93.0**	mg/L	0.50	0.11	1	10/18/13	NA	
Nitrate as Nitrogen	300.0	**0.16 J**	mg/L	0.20	0.03	1	10/18/13	NA	
Sulfate	300.0	**2.63**	mg/L	0.50	0.18	1	10/18/13	NA	
Sulfide, Total	SM 4500-S2- F	0.4 U	mg/L	2.0	0.4	1	10/23/13	NA	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 15:55
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW7	**Units:**	ug/L
Lab Code:	J1306153-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/21/13 20:57	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/21/13 20:57	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/21/13 20:57	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/21/13 20:57	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/21/13 20:57	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/21/13 20:57	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/21/13 20:57	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/21/13 20:57	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/21/13 20:57	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/21/13 20:57	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/21/13 20:57	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/21/13 20:57	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/21/13 20:57	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/21/13 20:57	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/21/13 20:57	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/21/13 20:57	
1,4-Dichlorobenzene	**1.5**	1.0	0.16	1	10/21/13 20:57	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/21/13 20:57	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/21/13 20:57	
2-Hexanone	2.2 U	50	2.2	1	10/21/13 20:57	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/21/13 20:57	
Acetone	5.6 U	100	5.6	1	10/21/13 20:57	
Acetonitrile	18 U	55	18	1	10/21/13 20:57	
Acrolein	28 U	53	28	1	10/21/13 20:57	
Acrylonitrile	1.5 U	200	1.5	1	10/21/13 20:57	
Allyl Chloride	0.39 U	10	0.39	1	10/21/13 20:57	
Benzene	**0.81 J**	1.0	0.21	1	10/21/13 20:57	
Bromochloromethane	0.27 U	5.0	0.27	1	10/21/13 20:57	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/21/13 20:57	
Bromoform	0.42 U	3.0	0.42	1	10/21/13 20:57	
Bromomethane	0.23 U	10	0.23	1	10/21/13 20:57	
Carbon Disulfide	2.4 U	100	2.4	1	10/21/13 20:57	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/21/13 20:57	
Chlorobenzene	**0.40 J**	3.0	0.16	1	10/21/13 20:57	
Chloroethane	0.52 U	10	0.52	1	10/21/13 20:57	
Chloroform	0.35 U	5.0	0.35	1	10/21/13 20:57	
Chloromethane	0.36 U	1.0	0.36	1	10/21/13 20:57	
Chloroprene	0.12 U	20	0.12	1	10/21/13 20:57	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/21/13 20:57	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/21/13 20:57	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/21/13 20:57	
Dibromomethane	0.36 U	10	0.36	1	10/21/13 20:57	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/21/13 20:57	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 15:55
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW7	**Units:**	ug/L
Lab Code:	J1306153-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 20:57	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 20:57	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 20:57	
Iodomethane	2.7 U	10	2.7	1	10/21/13 20:57	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 20:57	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 20:57	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 20:57	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 20:57	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 20:57	
Naphthalene	0.38 U	10	0.38	1	10/21/13 20:57	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 20:57	
Propionitrile	3.9 U	150	3.9	1	10/21/13 20:57	
Styrene	0.29 U	1.0	0.29	1	10/21/13 20:57	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 20:57	
Toluene	0.19 U	1.0	0.19	1	10/21/13 20:57	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 20:57	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 20:57	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 20:57	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/21/13 20:57	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 20:57	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 20:57	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 20:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/21/13 20:57	
4-Bromofluorobenzene	102	86 - 113	10/21/13 20:57	
Dibromofluoromethane	99	86 - 112	10/21/13 20:57	
Toluene-d8	95	88 - 115	10/21/13 20:57	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 15:55
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW7	**Basis:**	NA
Lab Code:	J1306153-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 00:02	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 00:02	10/18/13	
Barium, Total Recoverable	6010C	**60**	**J**	ug/L	100	0.3	1	10/23/13 20:45	10/18/13	
Beryllium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.04	1	10/22/13 00:02	10/18/13	
Cadmium, Total Recoverable	6020A	**0.6**	**J**	ug/L	1.0	0.10	1	10/22/13 00:02	10/18/13	
Chromium, Total Recoverable	6020A	**5**	**J**	ug/L	10	0.2	1	10/24/13 00:36	10/18/13	
Cobalt, Total Recoverable	6020A	**37**		ug/L	10	0.03	1	10/22/13 00:02	10/18/13	
Copper, Total Recoverable	6020A	**11**		ug/L	10	0.3	1	10/22/13 00:02	10/18/13	
Lead, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/22/13 00:02	10/18/13	
Mercury, Total	7470A	**0.04**	**J**	ug/L	0.20	0.02	1	10/22/13 14:29	10/18/13	
Nickel, Total Recoverable	6020A	**12**	**J**	ug/L	50	0.5	1	10/22/13 00:02	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 00:02	10/18/13	
Silver, Total Recoverable	6010C	**3**	**J**	ug/L	10	2	1	10/23/13 20:45	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 00:02	10/18/13	
Vanadium, Total Recoverable	6010C	**12**	**J**	ug/L	25	2	1	10/23/13 20:45	10/18/13	
Zinc, Total Recoverable	6010C	**11**	**BJ**	ug/L	20	2	1	10/23/13 20:45	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 15:25
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW8	**Units:**	ug/L
Lab Code:	J1306153-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/21/13 21:25	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/21/13 21:25	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/21/13 21:25	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/21/13 21:25	
1,1-Dichloroethane (1,1-DCA)	**0.62 J**	5.0	0.30	1	10/21/13 21:25	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/21/13 21:25	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/21/13 21:25	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/21/13 21:25	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/21/13 21:25	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/21/13 21:25	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/21/13 21:25	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/21/13 21:25	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/21/13 21:25	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/21/13 21:25	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/21/13 21:25	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/21/13 21:25	
1,4-Dichlorobenzene	**0.47 J**	1.0	0.16	1	10/21/13 21:25	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/21/13 21:25	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/21/13 21:25	
2-Hexanone	2.2 U	50	2.2	1	10/21/13 21:25	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/21/13 21:25	
Acetone	5.6 U	100	5.6	1	10/21/13 21:25	
Acetonitrile	18 U	55	18	1	10/21/13 21:25	
Acrolein	28 U	53	28	1	10/21/13 21:25	
Acrylonitrile	1.5 U	200	1.5	1	10/21/13 21:25	
Allyl Chloride	0.39 U	10	0.39	1	10/21/13 21:25	
Benzene	**0.48 J**	1.0	0.21	1	10/21/13 21:25	
Bromochloromethane	0.27 U	5.0	0.27	1	10/21/13 21:25	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/21/13 21:25	
Bromoform	0.42 U	3.0	0.42	1	10/21/13 21:25	
Bromomethane	0.23 U	10	0.23	1	10/21/13 21:25	
Carbon Disulfide	2.4 U	100	2.4	1	10/21/13 21:25	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/21/13 21:25	
Chlorobenzene	**0.17 J**	3.0	0.16	1	10/21/13 21:25	
Chloroethane	0.52 U	10	0.52	1	10/21/13 21:25	
Chloroform	0.35 U	5.0	0.35	1	10/21/13 21:25	
Chloromethane	0.36 U	1.0	0.36	1	10/21/13 21:25	
Chloroprene	0.12 U	20	0.12	1	10/21/13 21:25	
cis-1,2-Dichloroethene	**37**	5.0	0.36	1	10/21/13 21:25	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/21/13 21:25	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/21/13 21:25	
Dibromomethane	0.36 U	10	0.36	1	10/21/13 21:25	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/21/13 21:25	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 15:25
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW8	**Units:**	ug/L
Lab Code:	J1306153-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 21:25	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 21:25	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 21:25	
Iodomethane	2.7 U	10	2.7	1	10/21/13 21:25	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 21:25	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 21:25	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 21:25	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 21:25	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 21:25	
Naphthalene	0.38 U	10	0.38	1	10/21/13 21:25	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 21:25	
Propionitrile	3.9 U	150	3.9	1	10/21/13 21:25	
Styrene	0.29 U	1.0	0.29	1	10/21/13 21:25	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 21:25	
Toluene	0.19 U	1.0	0.19	1	10/21/13 21:25	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 21:25	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 21:25	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 21:25	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/21/13 21:25	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 21:25	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 21:25	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 21:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/21/13 21:25	
4-Bromofluorobenzene	106	86 - 113	10/21/13 21:25	
Dibromofluoromethane	95	86 - 112	10/21/13 21:25	
Toluene-d8	94	88 - 115	10/21/13 21:25	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 15:25
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW8	**Units:**	mg/L
Lab Code:	J1306153-004	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/23/13 17:03	
Acetic Acid	0.50 U	1.0	0.50	1	10/23/13 17:03	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/23/13 17:03	
Lactic Acid	0.50 U	1.0	0.50	1	10/23/13 17:03	
Propionic Acid	0.50 U	1.0	0.50	1	10/23/13 17:03	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 15:25
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW8	**Basis:**	NA
Lab Code:	J1306153-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 00:07	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 00:07	10/18/13	
Barium, Total Recoverable	6010C	**50**	**J**	ug/L	100	0.3	1	10/23/13 20:50	10/18/13	
Beryllium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.04	1	10/22/13 00:07	10/18/13	
Cadmium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.10	1	10/22/13 00:07	10/18/13	
Chromium, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.2	1	10/24/13 00:41	10/18/13	
Cobalt, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.03	1	10/22/13 00:07	10/18/13	
Copper, Total Recoverable	6020A	0.3	U	ug/L	10	0.3	1	10/22/13 00:07	10/18/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 00:07	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:30	10/18/13	
Nickel, Total Recoverable	6020A	**4**	**J**	ug/L	50	0.5	1	10/22/13 00:07	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 00:07	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 20:50	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 00:07	10/18/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 20:50	10/18/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/23/13 20:50	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 15:25
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW8	**Basis:**	NA
Lab Code:	J1306153-004		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	**86.8**		mg/L	5.0	5.0	1	10/24/13	NA	
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**86.8**		mg/L	5.0	5.0	1	10/24/13	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B	4.0	U	mg/L	4.0	4.0	2	10/18/13 07:00	NA	
Carbon, Total Organic (TOC)	SM 5310 B	**1.5**		mg/L	1.0	0.09	1	10/18/13	NA	
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0	U	mg/L	5.0	5.0	1	10/24/13	NA	
Chemical Oxygen Demand, Total	SM21 5220 D	16	U	mg/L	20	16	1	10/28/13	10/28/13	
Chloride	300.0	**19.7**		mg/L	0.50	0.11	1	10/18/13	NA	
Nitrate as Nitrogen	300.0	**0.18**	**J**	mg/L	0.20	0.03	1	10/18/13	NA	
Sulfate	300.0	**1.57**		mg/L	0.50	0.18	1	10/18/13	NA	
Sulfide, Total	SM 4500-S2- F	0.4	U	mg/L	2.0	0.4	1	10/23/13	NA	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:30
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW9	**Units:**	ug/L
Lab Code:	J1306153-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/21/13 21:53	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/21/13 21:53	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/21/13 21:53	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/21/13 21:53	
1,1-Dichloroethane (1,1-DCA)	**2.0 J**	5.0	0.30	1	10/21/13 21:53	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/21/13 21:53	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/21/13 21:53	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/21/13 21:53	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/21/13 21:53	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/21/13 21:53	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/21/13 21:53	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/21/13 21:53	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/21/13 21:53	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/21/13 21:53	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/21/13 21:53	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/21/13 21:53	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/21/13 21:53	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/21/13 21:53	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/21/13 21:53	
2-Hexanone	2.2 U	50	2.2	1	10/21/13 21:53	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/21/13 21:53	
Acetone	5.6 U	100	5.6	1	10/21/13 21:53	
Acetonitrile	18 U	55	18	1	10/21/13 21:53	
Acrolein	28 U	53	28	1	10/21/13 21:53	
Acrylonitrile	1.5 U	200	1.5	1	10/21/13 21:53	
Allyl Chloride	0.39 U	10	0.39	1	10/21/13 21:53	
Benzene	0.21 U	1.0	0.21	1	10/21/13 21:53	
Bromochloromethane	0.27 U	5.0	0.27	1	10/21/13 21:53	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/21/13 21:53	
Bromoform	0.42 U	3.0	0.42	1	10/21/13 21:53	
Bromomethane	0.23 U	10	0.23	1	10/21/13 21:53	
Carbon Disulfide	2.4 U	100	2.4	1	10/21/13 21:53	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/21/13 21:53	
Chlorobenzene	0.16 U	3.0	0.16	1	10/21/13 21:53	
Chloroethane	0.52 U	10	0.52	1	10/21/13 21:53	
Chloroform	0.35 U	5.0	0.35	1	10/21/13 21:53	
Chloromethane	0.36 U	1.0	0.36	1	10/21/13 21:53	
Chloroprene	0.12 U	20	0.12	1	10/21/13 21:53	
cis-1,2-Dichloroethene	**4.2 J**	5.0	0.36	1	10/21/13 21:53	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/21/13 21:53	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/21/13 21:53	
Dibromomethane	0.36 U	10	0.36	1	10/21/13 21:53	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/21/13 21:53	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:30
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW9	**Units:**	ug/L
Lab Code:	J1306153-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 21:53	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 21:53	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 21:53	
Iodomethane	2.7 U	10	2.7	1	10/21/13 21:53	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 21:53	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 21:53	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 21:53	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 21:53	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 21:53	
Naphthalene	0.38 U	10	0.38	1	10/21/13 21:53	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 21:53	
Propionitrile	3.9 U	150	3.9	1	10/21/13 21:53	
Styrene	0.29 U	1.0	0.29	1	10/21/13 21:53	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 21:53	
Toluene	0.19 U	1.0	0.19	1	10/21/13 21:53	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 21:53	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 21:53	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 21:53	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/21/13 21:53	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 21:53	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 21:53	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 21:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	72 - 121	10/21/13 21:53	
4-Bromofluorobenzene	100	86 - 113	10/21/13 21:53	
Dibromofluoromethane	97	86 - 112	10/21/13 21:53	
Toluene-d8	95	88 - 115	10/21/13 21:53	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:30
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW9	**Units:**	mg/L
Lab Code:	J1306153-005	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/23/13 17:50	
Acetic Acid	0.50 U	1.0	0.50	1	10/23/13 17:50	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/23/13 17:50	
Lactic Acid	0.50 U	1.0	0.50	1	10/23/13 17:50	
Propionic Acid	0.50 U	1.0	0.50	1	10/23/13 17:50	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:30
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW9	**Basis:**	NA
Lab Code:	J1306153-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 00:12	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 00:12	10/18/13	
Barium, Total Recoverable	6010C	**120**		ug/L	100	0.3	1	10/23/13 20:55	10/18/13	
Beryllium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.04	1	10/22/13 00:12	10/18/13	
Cadmium, Total Recoverable	6020A	**1.1**		ug/L	1.0	0.10	1	10/22/13 00:12	10/18/13	
Chromium, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.2	1	10/24/13 00:47	10/18/13	
Cobalt, Total Recoverable	6020A	**0.4**	**J**	ug/L	10	0.03	1	10/22/13 00:12	10/18/13	
Copper, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.3	1	10/22/13 00:12	10/18/13	
Lead, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/22/13 00:12	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:31	10/18/13	
Nickel, Total Recoverable	6020A	**2**	**J**	ug/L	50	0.5	1	10/22/13 00:12	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 00:12	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 20:55	10/18/13	
Thallium, Total Recoverable	6020A	**0.2**	**J**	ug/L	5.5	0.05	1	10/22/13 00:12	10/18/13	
Vanadium, Total Recoverable	6010C	**6**	**J**	ug/L	25	2	1	10/23/13 20:55	10/18/13	
Zinc, Total Recoverable	6010C	**16**	**BJ**	ug/L	20	2	1	10/23/13 20:55	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:30
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW9	**Basis:**	NA
Lab Code:	J1306153-005		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	**117**	mg/L	5.0	5.0	1	10/24/13	NA	
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**117**	mg/L	5.0	5.0	1	10/24/13	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B	4.0 U	mg/L	4.0	4.0	2	10/18/13 07:00	NA	
Carbon, Total Organic (TOC)	SM 5310 B	**2.9**	mg/L	1.0	0.09	1	10/18/13	NA	
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0 U	mg/L	5.0	5.0	1	10/24/13	NA	
Chemical Oxygen Demand, Total	SM21 5220 D	**28**	mg/L	20	16	1	10/28/13	10/28/13	
Chloride	300.0	**20.4**	mg/L	0.50	0.11	1	10/18/13	NA	
Nitrate as Nitrogen	300.0	**0.17 J**	mg/L	0.20	0.03	1	10/18/13	NA	
Sulfate	300.0	**5.60**	mg/L	0.50	0.18	1	10/18/13	NA	
Sulfide, Total	SM 4500-S2- F	0.4 U	mg/L	2.0	0.4	1	10/23/13	NA	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 12:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW10	**Units:**	ug/L
Lab Code:	J1306153-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/21/13 22:21	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/21/13 22:21	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/21/13 22:21	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/21/13 22:21	
1,1-Dichloroethane (1,1-DCA)	**4.0 J**	5.0	0.30	1	10/21/13 22:21	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/21/13 22:21	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/21/13 22:21	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/21/13 22:21	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/21/13 22:21	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/21/13 22:21	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/21/13 22:21	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/21/13 22:21	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/21/13 22:21	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/21/13 22:21	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/21/13 22:21	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/21/13 22:21	
1,4-Dichlorobenzene	**2.4**	1.0	0.16	1	10/21/13 22:21	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/21/13 22:21	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/21/13 22:21	
2-Hexanone	2.2 U	50	2.2	1	10/21/13 22:21	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/21/13 22:21	
Acetone	5.6 U	100	5.6	1	10/21/13 22:21	
Acetonitrile	18 U	55	18	1	10/21/13 22:21	
Acrolein	28 U	53	28	1	10/21/13 22:21	
Acrylonitrile	1.5 U	200	1.5	1	10/21/13 22:21	
Allyl Chloride	0.39 U	10	0.39	1	10/21/13 22:21	
Benzene	**1.1**	1.0	0.21	1	10/21/13 22:21	
Bromochloromethane	0.27 U	5.0	0.27	1	10/21/13 22:21	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/21/13 22:21	
Bromoform	0.42 U	3.0	0.42	1	10/21/13 22:21	
Bromomethane	0.23 U	10	0.23	1	10/21/13 22:21	
Carbon Disulfide	2.4 U	100	2.4	1	10/21/13 22:21	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/21/13 22:21	
Chlorobenzene	**0.17 J**	3.0	0.16	1	10/21/13 22:21	
Chloroethane	0.52 U	10	0.52	1	10/21/13 22:21	
Chloroform	0.35 U	5.0	0.35	1	10/21/13 22:21	
Chloromethane	0.36 U	1.0	0.36	1	10/21/13 22:21	
Chloroprene	0.12 U	20	0.12	1	10/21/13 22:21	
cis-1,2-Dichloroethene	**23**	5.0	0.36	1	10/21/13 22:21	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/21/13 22:21	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/21/13 22:21	
Dibromomethane	0.36 U	10	0.36	1	10/21/13 22:21	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/21/13 22:21	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 12:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW10	**Units:**	ug/L
Lab Code:	J1306153-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 22:21	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 22:21	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 22:21	
Iodomethane	2.7 U	10	2.7	1	10/21/13 22:21	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 22:21	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 22:21	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 22:21	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 22:21	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 22:21	
Naphthalene	0.38 U	10	0.38	1	10/21/13 22:21	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 22:21	
Propionitrile	3.9 U	150	3.9	1	10/21/13 22:21	
Styrene	0.29 U	1.0	0.29	1	10/21/13 22:21	
Tetrachloroethene (PCE)	**2.1**	1.0	0.22	1	10/21/13 22:21	
Toluene	0.19 U	1.0	0.19	1	10/21/13 22:21	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 22:21	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 22:21	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 22:21	
Trichloroethene (TCE)	**3.0**	1.0	0.36	1	10/21/13 22:21	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 22:21	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 22:21	
Vinyl Chloride	**0.76 J**	1.0	0.36	1	10/21/13 22:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	72 - 121	10/21/13 22:21	
4-Bromofluorobenzene	104	86 - 113	10/21/13 22:21	
Dibromofluoromethane	98	86 - 112	10/21/13 22:21	
Toluene-d8	96	88 - 115	10/21/13 22:21	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 12:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW10	**Units:**	mg/L
Lab Code:	J1306153-006	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/23/13 18:36	
Acetic Acid	0.50 U	1.0	0.50	1	10/23/13 18:36	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/23/13 18:36	
Lactic Acid	0.50 U	1.0	0.50	1	10/23/13 18:36	
Propionic Acid	0.50 U	1.0	0.50	1	10/23/13 18:36	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 12:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW10	**Basis:**	NA
Lab Code:	J1306153-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 00:17	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 00:17	10/18/13	
Barium, Total Recoverable	6010C	**30**	**J**	ug/L	100	0.3	1	10/23/13 21:00	10/18/13	
Beryllium, Total Recoverable	6020A	**0.3**	**J**	ug/L	1.0	0.04	1	10/22/13 00:17	10/18/13	
Cadmium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.10	1	10/22/13 00:17	10/18/13	
Chromium, Total Recoverable	6020A	**0.4**	**J**	ug/L	10	0.2	1	10/24/13 00:52	10/18/13	
Cobalt, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.03	1	10/22/13 00:17	10/18/13	
Copper, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.3	1	10/22/13 00:17	10/18/13	
Lead, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/22/13 00:17	10/18/13	
Mercury, Total	7470A	**0.29**		ug/L	0.20	0.02	1	10/22/13 14:32	10/18/13	
Nickel, Total Recoverable	6020A	**3**	**J**	ug/L	50	0.5	1	10/22/13 00:17	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 00:17	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 21:00	10/18/13	
Thallium, Total Recoverable	6020A	**0.05**	**J**	ug/L	5.5	0.05	1	10/22/13 00:17	10/18/13	
Vanadium, Total Recoverable	6010C	**4**	**J**	ug/L	25	2	1	10/23/13 21:00	10/18/13	
Zinc, Total Recoverable	6010C	**9**	**BJ**	ug/L	20	2	1	10/23/13 21:00	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 12:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW10	**Basis:**	NA
Lab Code:	J1306153-006		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	**117**		mg/L	5.0	5.0	1	10/24/13	NA	
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**117**		mg/L	5.0	5.0	1	10/24/13	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B	4.0	U	mg/L	4.0	4.0	2	10/18/13 07:00	NA	
Carbon, Total Organic (TOC)	SM 5310 B	**0.9**	**J**	mg/L	1.0	0.09	1	10/18/13	NA	
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0	U	mg/L	5.0	5.0	1	10/24/13	NA	
Chemical Oxygen Demand, Total	SM21 5220 D	**19**	**J**	mg/L	20	16	1	10/28/13	10/28/13	
Chloride	300.0	**2.74**		mg/L	0.50	0.11	1	10/18/13	NA	
Nitrate as Nitrogen	300.0	0.03	U	mg/L	0.20	0.03	1	10/18/13	NA	
Sulfate	300.0	**0.73**		mg/L	0.50	0.18	1	10/18/13	NA	
Sulfide, Total	SM 4500-S2- F	0.4	U	mg/L	2.0	0.4	1	10/23/13	NA	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 12:10
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW10d	**Units:**	ug/L
Lab Code:	J1306153-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	5.0	0.19	1	10/21/13 22:49	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/21/13 22:49	
1,1,2,2-Tetrachloroethane	0.29	U	3.0	0.29	1	10/21/13 22:49	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/21/13 22:49	
1,1-Dichloroethane (1,1-DCA)	**1.8**	**J**	5.0	0.30	1	10/21/13 22:49	
1,1-Dichloroethene (1,1-DCE)	0.16	U	5.0	0.16	1	10/21/13 22:49	
1,1-Dichloropropene	0.32	U	5.0	0.32	1	10/21/13 22:49	
1,2,3-Trichloropropane	0.42	U	2.0	0.42	1	10/21/13 22:49	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/21/13 22:49	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	13	2.3	1	10/21/13 22:49	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/21/13 22:49	
1,2-Dichlorobenzene	0.48	U	5.0	0.48	1	10/21/13 22:49	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/21/13 22:49	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/21/13 22:49	
1,3-Dichlorobenzene	0.22	U	5.0	0.22	1	10/21/13 22:49	
1,3-Dichloropropane	0.18	U	1.0	0.18	1	10/21/13 22:49	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/21/13 22:49	
2,2-Dichloropropane	0.46	U	15	0.46	1	10/21/13 22:49	
2-Butanone (MEK)	3.8	U	100	3.8	1	10/21/13 22:49	
2-Hexanone	2.2	U	50	2.2	1	10/21/13 22:49	
4-Methyl-2-pentanone (MIBK)	1.1	U	100	1.1	1	10/21/13 22:49	
Acetone	5.6	U	100	5.6	1	10/21/13 22:49	
Acetonitrile	18	U	55	18	1	10/21/13 22:49	
Acrolein	28	U	53	28	1	10/21/13 22:49	
Acrylonitrile	1.5	U	200	1.5	1	10/21/13 22:49	
Allyl Chloride	0.39	U	10	0.39	1	10/21/13 22:49	
Benzene	0.21	U	1.0	0.21	1	10/21/13 22:49	
Bromochloromethane	0.27	U	5.0	0.27	1	10/21/13 22:49	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/21/13 22:49	
Bromoform	0.42	U	3.0	0.42	1	10/21/13 22:49	
Bromomethane	0.23	U	10	0.23	1	10/21/13 22:49	
Carbon Disulfide	2.4	U	100	2.4	1	10/21/13 22:49	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/21/13 22:49	
Chlorobenzene	0.16	U	3.0	0.16	1	10/21/13 22:49	
Chloroethane	0.52	U	10	0.52	1	10/21/13 22:49	
Chloroform	0.35	U	5.0	0.35	1	10/21/13 22:49	
Chloromethane	0.36	U	1.0	0.36	1	10/21/13 22:49	
Chloroprene	0.12	U	20	0.12	1	10/21/13 22:49	
cis-1,2-Dichloroethene	**0.56**	**J**	5.0	0.36	1	10/21/13 22:49	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/21/13 22:49	
Dibromochloromethane	0.21	U	3.0	0.21	1	10/21/13 22:49	
Dibromomethane	0.36	U	10	0.36	1	10/21/13 22:49	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/21/13 22:49	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 12:10
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW10d	**Units:**	ug/L
Lab Code:	J1306153-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 22:49	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 22:49	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 22:49	
Iodomethane	2.7 U	10	2.7	1	10/21/13 22:49	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 22:49	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 22:49	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 22:49	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 22:49	
Methylene Chloride	**0.57 J**	5.0	0.21	1	10/21/13 22:49	
Naphthalene	0.38 U	10	0.38	1	10/21/13 22:49	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 22:49	
Propionitrile	3.9 U	150	3.9	1	10/21/13 22:49	
Styrene	0.29 U	1.0	0.29	1	10/21/13 22:49	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 22:49	
Toluene	0.19 U	1.0	0.19	1	10/21/13 22:49	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 22:49	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 22:49	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 22:49	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/21/13 22:49	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 22:49	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 22:49	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 22:49	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	72 - 121	10/21/13 22:49	
4-Bromofluorobenzene	105	86 - 113	10/21/13 22:49	
Dibromofluoromethane	96	86 - 112	10/21/13 22:49	
Toluene-d8	95	88 - 115	10/21/13 22:49	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 12:10
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW10d	**Basis:**	NA
Lab Code:	J1306153-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	**0.3**	**J**	ug/L	6.0	0.2	1	10/22/13 00:52	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 00:52	10/18/13	
Barium, Total Recoverable	6010C	**3**	**BJ**	ug/L	100	0.3	1	10/29/13 01:31	10/25/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 00:52	10/18/13	
Cadmium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.10	1	10/22/13 00:52	10/18/13	
Chromium, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/30/13 17:17	10/18/13	
Cobalt, Total Recoverable	6020A	**0.05**	**J**	ug/L	10	0.03	1	10/22/13 00:52	10/18/13	
Copper, Total Recoverable	6020A	**0.7**	**J**	ug/L	10	0.3	1	10/22/13 00:52	10/18/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 00:52	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:33	10/18/13	
Nickel, Total Recoverable	6020A	**0.6**	**J**	ug/L	50	0.5	1	10/22/13 00:52	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 00:52	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/29/13 01:31	10/25/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 00:52	10/18/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/29/13 01:31	10/25/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/29/13 01:31	10/25/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW11	**Units:**	ug/L
Lab Code:	J1306153-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/21/13 23:16	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/21/13 23:16	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/21/13 23:16	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/21/13 23:16	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/21/13 23:16	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/21/13 23:16	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/21/13 23:16	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/21/13 23:16	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/21/13 23:16	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/21/13 23:16	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/21/13 23:16	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/21/13 23:16	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/21/13 23:16	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/21/13 23:16	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/21/13 23:16	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/21/13 23:16	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/21/13 23:16	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/21/13 23:16	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/21/13 23:16	
2-Hexanone	2.2 U	50	2.2	1	10/21/13 23:16	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/21/13 23:16	
Acetone	5.6 U	100	5.6	1	10/21/13 23:16	
Acetonitrile	18 U	55	18	1	10/21/13 23:16	
Acrolein	28 U	53	28	1	10/21/13 23:16	
Acrylonitrile	1.5 U	200	1.5	1	10/21/13 23:16	
Allyl Chloride	0.39 U	10	0.39	1	10/21/13 23:16	
Benzene	0.21 U	1.0	0.21	1	10/21/13 23:16	
Bromochloromethane	0.27 U	5.0	0.27	1	10/21/13 23:16	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/21/13 23:16	
Bromoform	0.42 U	3.0	0.42	1	10/21/13 23:16	
Bromomethane	0.23 U	10	0.23	1	10/21/13 23:16	
Carbon Disulfide	2.4 U	100	2.4	1	10/21/13 23:16	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/21/13 23:16	
Chlorobenzene	0.16 U	3.0	0.16	1	10/21/13 23:16	
Chloroethane	0.52 U	10	0.52	1	10/21/13 23:16	
Chloroform	0.35 U	5.0	0.35	1	10/21/13 23:16	
Chloromethane	0.36 U	1.0	0.36	1	10/21/13 23:16	
Chloroprene	0.12 U	20	0.12	1	10/21/13 23:16	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/21/13 23:16	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/21/13 23:16	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/21/13 23:16	
Dibromomethane	0.36 U	10	0.36	1	10/21/13 23:16	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/21/13 23:16	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW11	**Units:**	ug/L
Lab Code:	J1306153-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 23:16	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 23:16	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 23:16	
Iodomethane	2.7 U	10	2.7	1	10/21/13 23:16	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 23:16	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 23:16	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 23:16	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 23:16	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 23:16	
Naphthalene	0.38 U	10	0.38	1	10/21/13 23:16	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 23:16	
Propionitrile	3.9 U	150	3.9	1	10/21/13 23:16	
Styrene	0.29 U	1.0	0.29	1	10/21/13 23:16	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 23:16	
Toluene	0.19 U	1.0	0.19	1	10/21/13 23:16	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 23:16	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 23:16	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 23:16	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/21/13 23:16	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 23:16	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 23:16	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 23:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	72 - 121	10/21/13 23:16	
4-Bromofluorobenzene	103	86 - 113	10/21/13 23:16	
Dibromofluoromethane	97	86 - 112	10/21/13 23:16	
Toluene-d8	98	88 - 115	10/21/13 23:16	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW11	**Units:**	mg/L
Lab Code:	J1306153-008	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/23/13 18:36	
Acetic Acid	0.50 U	1.0	0.50	1	10/23/13 18:36	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/23/13 18:36	
Lactic Acid	0.50 U	1.0	0.50	1	10/23/13 18:36	
Propionic Acid	0.50 U	1.0	0.50	1	10/23/13 18:36	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW11	**Basis:**	NA
Lab Code:	J1306153-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 00:58	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 00:58	10/18/13	
Barium, Total Recoverable	6010C	**100**		ug/L	100	0.3	1	10/23/13 21:27	10/18/13	
Beryllium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.04	1	10/22/13 00:58	10/18/13	
Cadmium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.10	1	10/22/13 00:58	10/18/13	
Chromium, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.2	1	10/30/13 17:22	10/18/13	
Cobalt, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.03	1	10/22/13 00:58	10/18/13	
Copper, Total Recoverable	6020A	**4**	**J**	ug/L	10	0.3	1	10/22/13 00:58	10/18/13	
Lead, Total Recoverable	6020A	**0.5**	**J**	ug/L	10	0.2	1	10/22/13 00:58	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:44	10/18/13	
Nickel, Total Recoverable	6020A	**0.9**	**J**	ug/L	50	0.5	1	10/22/13 00:58	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 00:58	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 21:27	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 00:58	10/18/13	
Vanadium, Total Recoverable	6010C	**5**	**J**	ug/L	25	2	1	10/23/13 21:27	10/18/13	
Zinc, Total Recoverable	6010C	**15**	**BJ**	ug/L	20	2	1	10/23/13 21:27	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 09:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW11	**Basis:**	NA
Lab Code:	J1306153-008		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	**34.8**		mg/L	5.0	5.0	1	10/24/13	NA	
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**34.8**		mg/L	5.0	5.0	1	10/24/13	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B	4.0	U	mg/L	4.0	4.0	2	10/18/13 07:00	NA	
Carbon, Total Organic (TOC)	SM 5310 B	**0.7**	**J**	mg/L	1.0	0.09	1	10/18/13	NA	
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0	U	mg/L	5.0	5.0	1	10/24/13	NA	
Chemical Oxygen Demand, Total	SM21 5220 D	16	U	mg/L	20	16	1	10/28/13	10/28/13	
Chloride	300.0	**3.16**		mg/L	0.50	0.11	1	10/18/13	NA	
Nitrate as Nitrogen	300.0	**0.26**		mg/L	0.20	0.03	1	10/18/13	NA	
Sulfate	300.0	**0.66**		mg/L	0.50	0.18	1	10/18/13	NA	
Sulfide, Total	SM 4500-S2- F	0.4	U	mg/L	2.0	0.4	1	10/23/13	NA	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:30
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW22	**Units:**	ug/L
Lab Code:	J1306153-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/21/13 23:44	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/21/13 23:44	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/21/13 23:44	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/21/13 23:44	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/21/13 23:44	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/21/13 23:44	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/21/13 23:44	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/21/13 23:44	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/21/13 23:44	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/21/13 23:44	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/21/13 23:44	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/21/13 23:44	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/21/13 23:44	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/21/13 23:44	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/21/13 23:44	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/21/13 23:44	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/21/13 23:44	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/21/13 23:44	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/21/13 23:44	
2-Hexanone	2.2 U	50	2.2	1	10/21/13 23:44	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/21/13 23:44	
Acetone	5.6 U	100	5.6	1	10/21/13 23:44	
Acetonitrile	18 U	55	18	1	10/21/13 23:44	
Acrolein	28 U	53	28	1	10/21/13 23:44	
Acrylonitrile	1.5 U	200	1.5	1	10/21/13 23:44	
Allyl Chloride	0.39 U	10	0.39	1	10/21/13 23:44	
Benzene	0.21 U	1.0	0.21	1	10/21/13 23:44	
Bromochloromethane	0.27 U	5.0	0.27	1	10/21/13 23:44	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/21/13 23:44	
Bromoform	0.42 U	3.0	0.42	1	10/21/13 23:44	
Bromomethane	0.23 U	10	0.23	1	10/21/13 23:44	
Carbon Disulfide	2.4 U	100	2.4	1	10/21/13 23:44	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/21/13 23:44	
Chlorobenzene	0.16 U	3.0	0.16	1	10/21/13 23:44	
Chloroethane	0.52 U	10	0.52	1	10/21/13 23:44	
Chloroform	0.35 U	5.0	0.35	1	10/21/13 23:44	
Chloromethane	0.36 U	1.0	0.36	1	10/21/13 23:44	
Chloroprene	0.12 U	20	0.12	1	10/21/13 23:44	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/21/13 23:44	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/21/13 23:44	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/21/13 23:44	
Dibromomethane	0.36 U	10	0.36	1	10/21/13 23:44	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/21/13 23:44	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:30
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW22	**Units:**	ug/L
Lab Code:	J1306153-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 23:44	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 23:44	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 23:44	
Iodomethane	2.7 U	10	2.7	1	10/21/13 23:44	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 23:44	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 23:44	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 23:44	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 23:44	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 23:44	
Naphthalene	0.38 U	10	0.38	1	10/21/13 23:44	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 23:44	
Propionitrile	3.9 U	150	3.9	1	10/21/13 23:44	
Styrene	0.29 U	1.0	0.29	1	10/21/13 23:44	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 23:44	
Toluene	0.19 U	1.0	0.19	1	10/21/13 23:44	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 23:44	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 23:44	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 23:44	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/21/13 23:44	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 23:44	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 23:44	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 23:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	72 - 121	10/21/13 23:44	
4-Bromofluorobenzene	103	86 - 113	10/21/13 23:44	
Dibromofluoromethane	101	86 - 112	10/21/13 23:44	
Toluene-d8	93	88 - 115	10/21/13 23:44	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:30
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW22	**Basis:**	NA
Lab Code:	J1306153-009		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 01:03	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:03	10/18/13	
Barium, Total Recoverable	6010C	**50**	**J**	ug/L	100	0.3	1	10/23/13 21:41	10/18/13	
Beryllium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.04	1	10/22/13 01:03	10/18/13	
Cadmium, Total Recoverable	6020A	**3.5**		ug/L	1.0	0.10	1	10/22/13 01:03	10/18/13	
Chromium, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/30/13 17:27	10/18/13	
Cobalt, Total Recoverable	6020A	**25**		ug/L	10	0.03	1	10/22/13 01:03	10/18/13	
Copper, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.3	1	10/22/13 01:03	10/18/13	
Lead, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/22/13 01:03	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:45	10/18/13	
Nickel, Total Recoverable	6020A	**10**	**J**	ug/L	50	0.5	1	10/22/13 01:03	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:03	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 21:41	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 01:03	10/18/13	
Vanadium, Total Recoverable	6010C	**3**	**J**	ug/L	25	2	1	10/23/13 21:41	10/18/13	
Zinc, Total Recoverable	6010C	**8**	**BJ**	ug/L	20	2	1	10/23/13 21:41	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW23	**Units:**	ug/L
Lab Code:	J1306153-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 10:57	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 10:57	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 10:57	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 10:57	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 10:57	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 10:57	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 10:57	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 10:57	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 10:57	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 10:57	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 10:57	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 10:57	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 10:57	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 10:57	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 10:57	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 10:57	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 10:57	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 10:57	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 10:57	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 10:57	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 10:57	
Acetone	5.6 U	100	5.6	1	10/22/13 10:57	
Acetonitrile	18 U	55	18	1	10/22/13 10:57	
Acrolein	28 U	53	28	1	10/22/13 10:57	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 10:57	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 10:57	
Benzene	0.21 U	1.0	0.21	1	10/22/13 10:57	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 10:57	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 10:57	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 10:57	
Bromomethane	0.23 U	10	0.23	1	10/22/13 10:57	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 10:57	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 10:57	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 10:57	
Chloroethane	0.52 U	10	0.52	1	10/22/13 10:57	
Chloroform	0.35 U	5.0	0.35	1	10/22/13 10:57	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 10:57	
Chloroprene	0.12 U	20	0.12	1	10/22/13 10:57	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 10:57	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 10:57	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 10:57	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 10:57	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 10:57	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW23	**Units:**	ug/L
Lab Code:	J1306153-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 10:57	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 10:57	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 10:57	
Iodomethane	2.7 U	10	2.7	1	10/22/13 10:57	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 10:57	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 10:57	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 10:57	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 10:57	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 10:57	
Naphthalene	0.38 U	10	0.38	1	10/22/13 10:57	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 10:57	
Propionitrile	3.9 U	150	3.9	1	10/22/13 10:57	
Styrene	0.29 U	1.0	0.29	1	10/22/13 10:57	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 10:57	
Toluene	0.19 U	1.0	0.19	1	10/22/13 10:57	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 10:57	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 10:57	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 10:57	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 10:57	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 10:57	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 10:57	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 10:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	72 - 121	10/22/13 10:57	
4-Bromofluorobenzene	106	86 - 113	10/22/13 10:57	
Dibromofluoromethane	99	86 - 112	10/22/13 10:57	
Toluene-d8	95	88 - 115	10/22/13 10:57	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW23	**Basis:**	NA
Lab Code:	J1306153-010		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 01:08	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:08	10/18/13	
Barium, Total Recoverable	6010C	**30**	**J**	ug/L	100	0.3	1	10/23/13 21:46	10/18/13	
Beryllium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.04	1	10/22/13 01:08	10/18/13	
Cadmium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.10	1	10/22/13 01:08	10/18/13	
Chromium, Total Recoverable	6020A	**3**	**J**	ug/L	10	0.2	1	10/30/13 17:32	10/18/13	
Cobalt, Total Recoverable	6020A	**0.7**	**J**	ug/L	10	0.03	1	10/22/13 01:08	10/18/13	
Copper, Total Recoverable	6020A	**4**	**J**	ug/L	10	0.3	1	10/22/13 01:08	10/18/13	
Lead, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.2	1	10/22/13 01:08	10/18/13	
Mercury, Total	7470A	**0.02**	**J**	ug/L	0.20	0.02	1	10/22/13 14:46	10/18/13	
Nickel, Total Recoverable	6020A	**2**	**J**	ug/L	50	0.5	1	10/22/13 01:08	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:08	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 21:46	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 01:08	10/18/13	
Vanadium, Total Recoverable	6010C	**5**	**J**	ug/L	25	2	1	10/23/13 21:46	10/18/13	
Zinc, Total Recoverable	6010C	**6**	**BJ**	ug/L	20	2	1	10/23/13 21:46	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:05
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW24	**Units:**	ug/L
Lab Code:	J1306153-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 11:25	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 11:25	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 11:25	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 11:25	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 11:25	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 11:25	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 11:25	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 11:25	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 11:25	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 11:25	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 11:25	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 11:25	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 11:25	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 11:25	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 11:25	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 11:25	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 11:25	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 11:25	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 11:25	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 11:25	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 11:25	
Acetone	5.6 U	100	5.6	1	10/22/13 11:25	
Acetonitrile	18 U	55	18	1	10/22/13 11:25	
Acrolein	28 U	53	28	1	10/22/13 11:25	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 11:25	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 11:25	
Benzene	0.21 U	1.0	0.21	1	10/22/13 11:25	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 11:25	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 11:25	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 11:25	
Bromomethane	0.23 U	10	0.23	1	10/22/13 11:25	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 11:25	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 11:25	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 11:25	
Chloroethane	0.52 U	10	0.52	1	10/22/13 11:25	
Chloroform	**7.9**	5.0	0.35	1	10/22/13 11:25	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 11:25	
Chloroprene	0.12 U	20	0.12	1	10/22/13 11:25	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 11:25	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 11:25	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 11:25	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 11:25	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 11:25	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:05
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW24	**Units:**	ug/L
Lab Code:	J1306153-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 11:25	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 11:25	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 11:25	
Iodomethane	2.7 U	10	2.7	1	10/22/13 11:25	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 11:25	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 11:25	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 11:25	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 11:25	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 11:25	
Naphthalene	0.38 U	10	0.38	1	10/22/13 11:25	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 11:25	
Propionitrile	3.9 U	150	3.9	1	10/22/13 11:25	
Styrene	0.29 U	1.0	0.29	1	10/22/13 11:25	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 11:25	
Toluene	0.19 U	1.0	0.19	1	10/22/13 11:25	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 11:25	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 11:25	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 11:25	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 11:25	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 11:25	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 11:25	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 11:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/22/13 11:25	
4-Bromofluorobenzene	108	86 - 113	10/22/13 11:25	
Dibromofluoromethane	98	86 - 112	10/22/13 11:25	
Toluene-d8	95	88 - 115	10/22/13 11:25	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 16:05
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW24	**Basis:**	NA
Lab Code:	J1306153-011		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 01:13	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:13	10/18/13	
Barium, Total Recoverable	6010C	**60**	**J**	ug/L	100	0.3	1	10/23/13 21:50	10/18/13	
Beryllium, Total Recoverable	6020A	**0.6**	**J**	ug/L	1.0	0.04	1	10/22/13 01:13	10/18/13	
Cadmium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.10	1	10/22/13 01:13	10/18/13	
Chromium, Total Recoverable	6020A	**4**	**J**	ug/L	10	0.2	1	10/30/13 17:37	10/18/13	
Cobalt, Total Recoverable	6020A	**0.9**	**J**	ug/L	10	0.03	1	10/22/13 01:13	10/18/13	
Copper, Total Recoverable	6020A	**5**	**J**	ug/L	10	0.3	1	10/22/13 01:13	10/18/13	
Lead, Total Recoverable	6020A	**7**	**J**	ug/L	10	0.2	1	10/22/13 01:13	10/18/13	
Mercury, Total	7470A	**0.09**	**J**	ug/L	0.20	0.02	1	10/22/13 14:47	10/18/13	
Nickel, Total Recoverable	6020A	**2**	**J**	ug/L	50	0.5	1	10/22/13 01:13	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:13	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 21:50	10/18/13	
Thallium, Total Recoverable	6020A	**0.2**	**J**	ug/L	5.5	0.05	1	10/22/13 01:13	10/18/13	
Vanadium, Total Recoverable	6010C	**8**	**J**	ug/L	25	2	1	10/23/13 21:50	10/18/13	
Zinc, Total Recoverable	6010C	**46**		ug/L	20	2	1	10/23/13 21:50	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 08:05
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW30	**Units:**	ug/L
Lab Code:	J1306153-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 11:52	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 11:52	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 11:52	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 11:52	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 11:52	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 11:52	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 11:52	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 11:52	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 11:52	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 11:52	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 11:52	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 11:52	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 11:52	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 11:52	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 11:52	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 11:52	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 11:52	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 11:52	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 11:52	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 11:52	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 11:52	
Acetone	5.6 U	100	5.6	1	10/22/13 11:52	
Acetonitrile	18 U	55	18	1	10/22/13 11:52	
Acrolein	28 U	53	28	1	10/22/13 11:52	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 11:52	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 11:52	
Benzene	0.21 U	1.0	0.21	1	10/22/13 11:52	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 11:52	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 11:52	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 11:52	
Bromomethane	0.23 U	10	0.23	1	10/22/13 11:52	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 11:52	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 11:52	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 11:52	
Chloroethane	0.52 U	10	0.52	1	10/22/13 11:52	
Chloroform	0.35 U	5.0	0.35	1	10/22/13 11:52	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 11:52	
Chloroprene	0.12 U	20	0.12	1	10/22/13 11:52	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 11:52	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 11:52	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 11:52	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 11:52	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 11:52	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 08:05
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW30	**Units:**	ug/L
Lab Code:	J1306153-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 11:52	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 11:52	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 11:52	
Iodomethane	2.7 U	10	2.7	1	10/22/13 11:52	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 11:52	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 11:52	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 11:52	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 11:52	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 11:52	
Naphthalene	0.38 U	10	0.38	1	10/22/13 11:52	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 11:52	
Propionitrile	3.9 U	150	3.9	1	10/22/13 11:52	
Styrene	0.29 U	1.0	0.29	1	10/22/13 11:52	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 11:52	
Toluene	0.19 U	1.0	0.19	1	10/22/13 11:52	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 11:52	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 11:52	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 11:52	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 11:52	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 11:52	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 11:52	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 11:52	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/22/13 11:52	
4-Bromofluorobenzene	104	86 - 113	10/22/13 11:52	
Dibromofluoromethane	96	86 - 112	10/22/13 11:52	
Toluene-d8	95	88 - 115	10/22/13 11:52	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 08:05
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW30	**Basis:**	NA
Lab Code:	J1306153-012		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 01:18	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:18	10/18/13	
Barium, Total Recoverable	6010C	**220**		ug/L	100	0.3	1	10/23/13 21:54	10/18/13	
Beryllium, Total Recoverable	6020A	**1.4**		ug/L	1.0	0.04	1	10/22/13 01:18	10/18/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 01:18	10/18/13	
Chromium, Total Recoverable	6020A	**49**		ug/L	20	0.4	2	10/31/13 16:11	10/18/13	
Cobalt, Total Recoverable	6020A	**9**	**J**	ug/L	10	0.03	1	10/22/13 01:18	10/18/13	
Copper, Total Recoverable	6020A	**63**		ug/L	10	0.3	1	10/22/13 01:18	10/18/13	
Lead, Total Recoverable	6020A	**6**	**J**	ug/L	10	0.2	1	10/22/13 01:18	10/18/13	
Mercury, Total	7470A	**0.03**	**J**	ug/L	0.20	0.02	1	10/22/13 14:48	10/18/13	
Nickel, Total Recoverable	6020A	**21**	**J**	ug/L	50	0.5	1	10/22/13 01:18	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:18	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 21:54	10/18/13	
Thallium, Total Recoverable	6020A	**0.3**	**J**	ug/L	5.5	0.05	1	10/22/13 01:18	10/18/13	
Vanadium, Total Recoverable	6010C	**50**		ug/L	25	2	1	10/23/13 21:54	10/18/13	
Zinc, Total Recoverable	6010C	**40**		ug/L	20	2	1	10/23/13 21:54	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW31	**Units:**	ug/L
Lab Code:	J1306153-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 12:20	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 12:20	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 12:20	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 12:20	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 12:20	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 12:20	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 12:20	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 12:20	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 12:20	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 12:20	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 12:20	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 12:20	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 12:20	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 12:20	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 12:20	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 12:20	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 12:20	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 12:20	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 12:20	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 12:20	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 12:20	
Acetone	5.6 U	100	5.6	1	10/22/13 12:20	
Acetonitrile	18 U	55	18	1	10/22/13 12:20	
Acrolein	28 U	53	28	1	10/22/13 12:20	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 12:20	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 12:20	
Benzene	0.21 U	1.0	0.21	1	10/22/13 12:20	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 12:20	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 12:20	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 12:20	
Bromomethane	0.23 U	10	0.23	1	10/22/13 12:20	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 12:20	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 12:20	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 12:20	
Chloroethane	0.52 U	10	0.52	1	10/22/13 12:20	
Chloroform	**1.4 J**	5.0	0.35	1	10/22/13 12:20	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 12:20	
Chloroprene	0.12 U	20	0.12	1	10/22/13 12:20	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 12:20	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 12:20	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 12:20	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 12:20	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 12:20	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW31	**Units:**	ug/L
Lab Code:	J1306153-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 12:20	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 12:20	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 12:20	
Iodomethane	2.7 U	10	2.7	1	10/22/13 12:20	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 12:20	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 12:20	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 12:20	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 12:20	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 12:20	
Naphthalene	0.38 U	10	0.38	1	10/22/13 12:20	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 12:20	
Propionitrile	3.9 U	150	3.9	1	10/22/13 12:20	
Styrene	0.29 U	1.0	0.29	1	10/22/13 12:20	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 12:20	
Toluene	0.19 U	1.0	0.19	1	10/22/13 12:20	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 12:20	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 12:20	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 12:20	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 12:20	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 12:20	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 12:20	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 12:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/22/13 12:20	
4-Bromofluorobenzene	104	86 - 113	10/22/13 12:20	
Dibromofluoromethane	98	86 - 112	10/22/13 12:20	
Toluene-d8	94	88 - 115	10/22/13 12:20	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW31	**Basis:**	NA
Lab Code:	J1306153-013		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 01:23	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:23	10/18/13	
Barium, Total Recoverable	6010C	**30**	**J**	ug/L	100	0.3	1	10/23/13 21:58	10/18/13	
Beryllium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.04	1	10/22/13 01:23	10/18/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 01:23	10/18/13	
Chromium, Total Recoverable	6020A	**11**		ug/L	10	0.2	1	10/30/13 17:47	10/18/13	
Cobalt, Total Recoverable	6020A	**0.4**	**J**	ug/L	10	0.03	1	10/22/13 01:23	10/18/13	
Copper, Total Recoverable	6020A	**5**	**J**	ug/L	10	0.3	1	10/22/13 01:23	10/18/13	
Lead, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.2	1	10/22/13 01:23	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:49	10/18/13	
Nickel, Total Recoverable	6020A	**5**	**J**	ug/L	50	0.5	1	10/22/13 01:23	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:23	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 21:58	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 01:23	10/18/13	
Vanadium, Total Recoverable	6010C	**5**	**J**	ug/L	25	2	1	10/23/13 21:58	10/18/13	
Zinc, Total Recoverable	6010C	**13**	**BJ**	ug/L	20	2	1	10/23/13 21:58	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 11:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW31d	**Units:**	ug/L
Lab Code:	J1306153-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 12:48	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 12:48	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 12:48	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 12:48	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 12:48	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 12:48	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 12:48	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 12:48	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 12:48	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 12:48	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 12:48	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 12:48	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 12:48	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 12:48	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 12:48	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 12:48	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 12:48	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 12:48	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 12:48	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 12:48	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 12:48	
Acetone	5.6 U	100	5.6	1	10/22/13 12:48	
Acetonitrile	18 U	55	18	1	10/22/13 12:48	
Acrolein	28 U	53	28	1	10/22/13 12:48	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 12:48	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 12:48	
Benzene	0.21 U	1.0	0.21	1	10/22/13 12:48	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 12:48	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 12:48	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 12:48	
Bromomethane	0.23 U	10	0.23	1	10/22/13 12:48	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 12:48	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 12:48	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 12:48	
Chloroethane	0.52 U	10	0.52	1	10/22/13 12:48	
Chloroform	**17**	5.0	0.35	1	10/22/13 12:48	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 12:48	
Chloroprene	0.12 U	20	0.12	1	10/22/13 12:48	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 12:48	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 12:48	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 12:48	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 12:48	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 12:48	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 11:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW31d	**Units:**	ug/L
Lab Code:	J1306153-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 12:48	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 12:48	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 12:48	
Iodomethane	2.7 U	10	2.7	1	10/22/13 12:48	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 12:48	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 12:48	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 12:48	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 12:48	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 12:48	
Naphthalene	0.38 U	10	0.38	1	10/22/13 12:48	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 12:48	
Propionitrile	3.9 U	150	3.9	1	10/22/13 12:48	
Styrene	0.29 U	1.0	0.29	1	10/22/13 12:48	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 12:48	
Toluene	0.19 U	1.0	0.19	1	10/22/13 12:48	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 12:48	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 12:48	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 12:48	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 12:48	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 12:48	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 12:48	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 12:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/22/13 12:48	
4-Bromofluorobenzene	107	86 - 113	10/22/13 12:48	
Dibromofluoromethane	97	86 - 112	10/22/13 12:48	
Toluene-d8	94	88 - 115	10/22/13 12:48	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 11:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW31d	**Basis:**	NA
Lab Code:	J1306153-014		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	**0.8**	**J**	ug/L	6.0	0.2	1	10/22/13 01:28	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:28	10/18/13	
Barium, Total Recoverable	6010C	**20**	**J**	ug/L	100	0.3	1	10/23/13 22:03	10/18/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 01:28	10/18/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 01:28	10/18/13	
Chromium, Total Recoverable	6020A	**6**	**J**	ug/L	10	0.2	1	10/30/13 17:52	10/18/13	
Cobalt, Total Recoverable	6020A	**0.06**	**J**	ug/L	10	0.03	1	10/22/13 01:28	10/18/13	
Copper, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.3	1	10/22/13 01:28	10/18/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 01:28	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:50	10/18/13	
Nickel, Total Recoverable	6020A	**0.8**	**J**	ug/L	50	0.5	1	10/22/13 01:28	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:28	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 22:03	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 01:28	10/18/13	
Vanadium, Total Recoverable	6010C	**5**	**J**	ug/L	25	2	1	10/23/13 22:03	10/18/13	
Zinc, Total Recoverable	6010C	**16**	**BJ**	ug/L	20	2	1	10/23/13 22:03	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:50
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW32	**Units:**	ug/L
Lab Code:	J1306153-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 13:16	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 13:16	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 13:16	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 13:16	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 13:16	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 13:16	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 13:16	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 13:16	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 13:16	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 13:16	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 13:16	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 13:16	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 13:16	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 13:16	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 13:16	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 13:16	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 13:16	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 13:16	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 13:16	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 13:16	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 13:16	
Acetone	5.6 U	100	5.6	1	10/22/13 13:16	
Acetonitrile	18 U	55	18	1	10/22/13 13:16	
Acrolein	28 U	53	28	1	10/22/13 13:16	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 13:16	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 13:16	
Benzene	0.21 U	1.0	0.21	1	10/22/13 13:16	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 13:16	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 13:16	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 13:16	
Bromomethane	0.23 U	10	0.23	1	10/22/13 13:16	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 13:16	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 13:16	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 13:16	
Chloroethane	0.52 U	10	0.52	1	10/22/13 13:16	
Chloroform	0.35 U	5.0	0.35	1	10/22/13 13:16	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 13:16	
Chloroprene	0.12 U	20	0.12	1	10/22/13 13:16	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 13:16	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 13:16	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 13:16	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 13:16	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 13:16	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:50
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW32	**Units:**	ug/L
Lab Code:	J1306153-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 13:16	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 13:16	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 13:16	
Iodomethane	2.7 U	10	2.7	1	10/22/13 13:16	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 13:16	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 13:16	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 13:16	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 13:16	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 13:16	
Naphthalene	0.38 U	10	0.38	1	10/22/13 13:16	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 13:16	
Propionitrile	3.9 U	150	3.9	1	10/22/13 13:16	
Styrene	0.29 U	1.0	0.29	1	10/22/13 13:16	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 13:16	
Toluene	0.19 U	1.0	0.19	1	10/22/13 13:16	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 13:16	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 13:16	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 13:16	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 13:16	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 13:16	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 13:16	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 13:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	10/22/13 13:16	
4-Bromofluorobenzene	104	86 - 113	10/22/13 13:16	
Dibromofluoromethane	96	86 - 112	10/22/13 13:16	
Toluene-d8	95	88 - 115	10/22/13 13:16	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:50
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW32	**Basis:**	NA
Lab Code:	J1306153-015		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 01:43	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:43	10/18/13	
Barium, Total Recoverable	6010C	**70**	**J**	ug/L	100	0.3	1	10/23/13 22:07	10/18/13	
Beryllium, Total Recoverable	6020A	**0.6**	**J**	ug/L	1.0	0.04	1	10/22/13 01:43	10/18/13	
Cadmium, Total Recoverable	6020A	**0.3**	**J**	ug/L	1.0	0.10	1	10/22/13 01:43	10/18/13	
Chromium, Total Recoverable	6020A	**11**		ug/L	10	0.2	1	10/30/13 17:57	10/18/13	
Cobalt, Total Recoverable	6020A	**6**	**J**	ug/L	10	0.03	1	10/22/13 01:43	10/18/13	
Copper, Total Recoverable	6020A	**50**		ug/L	10	0.3	1	10/22/13 01:43	10/18/13	
Lead, Total Recoverable	6020A	**0.9**	**J**	ug/L	10	0.2	1	10/22/13 01:43	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:51	10/18/13	
Nickel, Total Recoverable	6020A	**10**	**J**	ug/L	50	0.5	1	10/22/13 01:43	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:43	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 22:07	10/18/13	
Thallium, Total Recoverable	6020A	**0.1**	**J**	ug/L	5.5	0.05	1	10/22/13 01:43	10/18/13	
Vanadium, Total Recoverable	6010C	**32**		ug/L	25	2	1	10/23/13 22:07	10/18/13	
Zinc, Total Recoverable	6010C	**25**		ug/L	20	2	1	10/23/13 22:07	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:25
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-TB-1a	**Units:**	ug/L
Lab Code:	J1306153-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 13:43	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 13:43	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 13:43	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 13:43	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 13:43	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 13:43	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 13:43	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 13:43	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 13:43	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 13:43	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 13:43	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 13:43	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 13:43	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 13:43	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 13:43	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 13:43	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 13:43	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 13:43	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 13:43	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 13:43	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 13:43	
Acetone	5.6 U	100	5.6	1	10/22/13 13:43	
Acetonitrile	18 U	55	18	1	10/22/13 13:43	
Acrolein	28 U	53	28	1	10/22/13 13:43	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 13:43	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 13:43	
Benzene	0.21 U	1.0	0.21	1	10/22/13 13:43	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 13:43	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 13:43	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 13:43	
Bromomethane	0.23 U	10	0.23	1	10/22/13 13:43	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 13:43	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 13:43	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 13:43	
Chloroethane	0.52 U	10	0.52	1	10/22/13 13:43	
Chloroform	**0.35 J**	5.0	0.35	1	10/22/13 13:43	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 13:43	
Chloroprene	0.12 U	20	0.12	1	10/22/13 13:43	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 13:43	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 13:43	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 13:43	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 13:43	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 13:43	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:25
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-TB-1a	**Units:**	ug/L
Lab Code:	J1306153-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 13:43	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 13:43	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 13:43	
Iodomethane	2.7 U	10	2.7	1	10/22/13 13:43	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 13:43	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 13:43	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 13:43	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 13:43	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 13:43	
Naphthalene	0.38 U	10	0.38	1	10/22/13 13:43	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 13:43	
Propionitrile	3.9 U	150	3.9	1	10/22/13 13:43	
Styrene	0.29 U	1.0	0.29	1	10/22/13 13:43	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 13:43	
Toluene	0.19 U	1.0	0.19	1	10/22/13 13:43	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 13:43	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 13:43	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 13:43	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 13:43	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 13:43	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 13:43	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 13:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/22/13 13:43	
4-Bromofluorobenzene	105	86 - 113	10/22/13 13:43	
Dibromofluoromethane	98	86 - 112	10/22/13 13:43	
Toluene-d8	95	88 - 115	10/22/13 13:43	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 07:25
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-TB-1a	**Basis:**	NA
Lab Code:	J1306153-016		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 01:48	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:48	10/18/13	
Barium, Total Recoverable	6010C	**60**	**J**	ug/L	100	0.3	1	10/23/13 22:20	10/18/13	
Beryllium, Total Recoverable	6020A	**0.08**	**J**	ug/L	1.0	0.04	1	10/22/13 01:48	10/18/13	
Cadmium, Total Recoverable	6020A	**0.3**	**J**	ug/L	1.0	0.10	1	10/22/13 01:48	10/18/13	
Chromium, Total Recoverable	6020A	**6**	**J**	ug/L	20	0.4	2	10/31/13 16:16	10/18/13	
Cobalt, Total Recoverable	6020A	**10**		ug/L	10	0.03	1	10/22/13 01:48	10/18/13	
Copper, Total Recoverable	6020A	**35**		ug/L	10	0.3	1	10/22/13 01:48	10/18/13	
Lead, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/22/13 01:48	10/18/13	
Mercury, Total	7470A	**0.12**	**J**	ug/L	0.20	0.02	1	10/22/13 14:56	10/18/13	
Nickel, Total Recoverable	6020A	**9**	**J**	ug/L	50	0.5	1	10/22/13 01:48	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:48	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 22:19	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 01:48	10/18/13	
Vanadium, Total Recoverable	6010C	**14**	**J**	ug/L	25	2	1	10/23/13 22:20	10/18/13	
Zinc, Total Recoverable	6010C	**14**	**BJ**	ug/L	20	2	1	10/23/13 22:20	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 12:50
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-TB-1a deep	**Units:**	ug/L
Lab Code:	J1306153-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 14:11	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 14:11	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 14:11	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 14:11	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 14:11	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 14:11	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 14:11	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 14:11	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 14:11	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 14:11	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 14:11	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 14:11	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 14:11	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 14:11	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 14:11	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 14:11	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 14:11	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 14:11	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 14:11	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 14:11	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 14:11	
Acetone	5.6 U	100	5.6	1	10/22/13 14:11	
Acetonitrile	18 U	55	18	1	10/22/13 14:11	
Acrolein	28 U	53	28	1	10/22/13 14:11	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 14:11	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 14:11	
Benzene	0.21 U	1.0	0.21	1	10/22/13 14:11	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 14:11	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 14:11	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 14:11	
Bromomethane	0.23 U	10	0.23	1	10/22/13 14:11	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 14:11	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 14:11	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 14:11	
Chloroethane	0.52 U	10	0.52	1	10/22/13 14:11	
Chloroform	**16**	5.0	0.35	1	10/22/13 14:11	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 14:11	
Chloroprene	0.12 U	20	0.12	1	10/22/13 14:11	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 14:11	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 14:11	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 14:11	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 14:11	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 14:11	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 12:50
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-TB-1a deep	**Units:**	ug/L
Lab Code:	J1306153-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 14:11	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 14:11	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 14:11	
Iodomethane	2.7 U	10	2.7	1	10/22/13 14:11	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 14:11	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 14:11	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 14:11	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 14:11	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 14:11	
Naphthalene	0.38 U	10	0.38	1	10/22/13 14:11	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 14:11	
Propionitrile	3.9 U	150	3.9	1	10/22/13 14:11	
Styrene	0.29 U	1.0	0.29	1	10/22/13 14:11	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 14:11	
Toluene	0.19 U	1.0	0.19	1	10/22/13 14:11	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 14:11	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 14:11	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 14:11	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 14:11	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 14:11	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 14:11	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 14:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	72 - 121	10/22/13 14:11	
4-Bromofluorobenzene	105	86 - 113	10/22/13 14:11	
Dibromofluoromethane	95	86 - 112	10/22/13 14:11	
Toluene-d8	95	88 - 115	10/22/13 14:11	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/15/13 12:50
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-TB-1a deep	**Basis:**	NA
Lab Code:	J1306153-017		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	**2.2**	**J**	ug/L	6.0	0.2	1	10/22/13 01:53	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 01:53	10/18/13	
Barium, Total Recoverable	6010C	**20**	**J**	ug/L	100	0.3	1	10/23/13 22:25	10/18/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 01:53	10/18/13	
Cadmium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.10	1	10/22/13 01:53	10/18/13	
Chromium, Total Recoverable	6020A	**6**	**J**	ug/L	10	0.2	1	10/31/13 16:21	10/18/13	
Cobalt, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.03	1	10/22/13 01:53	10/18/13	
Copper, Total Recoverable	6020A	**6**	**J**	ug/L	10	0.3	1	10/22/13 01:53	10/18/13	
Lead, Total Recoverable	6020A	**5**	**J**	ug/L	10	0.2	1	10/22/13 01:53	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:57	10/18/13	
Nickel, Total Recoverable	6020A	**4**	**J**	ug/L	50	0.5	1	10/22/13 01:53	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:53	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 22:24	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 01:53	10/18/13	
Vanadium, Total Recoverable	6010C	**3**	**J**	ug/L	25	2	1	10/23/13 22:24	10/18/13	
Zinc, Total Recoverable	6010C	**9**	**BJ**	ug/L	20	2	1	10/23/13 22:25	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 10:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW36	**Units:**	ug/L
Lab Code:	J1306153-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 14:39	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 14:39	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 14:39	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 14:39	
1,1-Dichloroethane (1,1-DCA)	**3.8 J**	5.0	0.30	1	10/22/13 14:39	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 14:39	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 14:39	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 14:39	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 14:39	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 14:39	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 14:39	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 14:39	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 14:39	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 14:39	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 14:39	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 14:39	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 14:39	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 14:39	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 14:39	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 14:39	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 14:39	
Acetone	5.6 U	100	5.6	1	10/22/13 14:39	
Acetonitrile	18 U	55	18	1	10/22/13 14:39	
Acrolein	28 U	53	28	1	10/22/13 14:39	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 14:39	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 14:39	
Benzene	0.21 U	1.0	0.21	1	10/22/13 14:39	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 14:39	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 14:39	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 14:39	
Bromomethane	0.23 U	10	0.23	1	10/22/13 14:39	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 14:39	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 14:39	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 14:39	
Chloroethane	0.52 U	10	0.52	1	10/22/13 14:39	
Chloroform	0.35 U	5.0	0.35	1	10/22/13 14:39	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 14:39	
Chloroprene	0.12 U	20	0.12	1	10/22/13 14:39	
cis-1,2-Dichloroethene	**2.5 J**	5.0	0.36	1	10/22/13 14:39	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 14:39	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 14:39	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 14:39	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 14:39	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 10:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW36	**Units:**	ug/L
Lab Code:	J1306153-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 14:39	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 14:39	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 14:39	
Iodomethane	2.7 U	10	2.7	1	10/22/13 14:39	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 14:39	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 14:39	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 14:39	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 14:39	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 14:39	
Naphthalene	0.38 U	10	0.38	1	10/22/13 14:39	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 14:39	
Propionitrile	3.9 U	150	3.9	1	10/22/13 14:39	
Styrene	0.29 U	1.0	0.29	1	10/22/13 14:39	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 14:39	
Toluene	0.19 U	1.0	0.19	1	10/22/13 14:39	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 14:39	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 14:39	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 14:39	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 14:39	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 14:39	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 14:39	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 14:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	72 - 121	10/22/13 14:39	
4-Bromofluorobenzene	105	86 - 113	10/22/13 14:39	
Dibromofluoromethane	96	86 - 112	10/22/13 14:39	
Toluene-d8	94	88 - 115	10/22/13 14:39	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 10:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW36	**Units:**	mg/L
Lab Code:	J1306153-018	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/24/13 14:11	
Acetic Acid	0.50 U	1.0	0.50	1	10/24/13 14:11	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/24/13 14:11	
Lactic Acid	0.50 U	1.0	0.50	1	10/24/13 14:11	
Propionic Acid	0.50 U	1.0	0.50	1	10/24/13 14:11	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 10:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW36	**Basis:**	NA
Lab Code:	J1306153-018		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 01:58	10/18/13	
Arsenic, Total Recoverable	6020A	**0.6**	**J**	ug/L	10	0.5	1	10/22/13 01:58	10/18/13	
Barium, Total Recoverable	6010C	**60**	**J**	ug/L	100	0.3	1	10/23/13 22:29	10/18/13	
Beryllium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.04	1	10/22/13 01:58	10/18/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 01:58	10/18/13	
Chromium, Total Recoverable	6020A	**7**	**J**	ug/L	10	0.2	1	10/31/13 16:26	10/18/13	
Cobalt, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.03	1	10/22/13 01:58	10/18/13	
Copper, Total Recoverable	6020A	**8**	**J**	ug/L	10	0.3	1	10/22/13 01:58	10/18/13	
Lead, Total Recoverable	6020A	**0.6**	**J**	ug/L	10	0.2	1	10/22/13 01:58	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:58	10/18/13	
Nickel, Total Recoverable	6020A	**4**	**J**	ug/L	50	0.5	1	10/22/13 01:58	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 01:58	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 22:28	10/18/13	
Thallium, Total Recoverable	6020A	**0.05**	**J**	ug/L	5.5	0.05	1	10/22/13 01:58	10/18/13	
Vanadium, Total Recoverable	6010C	**10**	**J**	ug/L	25	2	1	10/23/13 22:28	10/18/13	
Zinc, Total Recoverable	6010C	**4**	**BJ**	ug/L	20	2	1	10/23/13 22:29	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 10:15
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-MW36	**Basis:**	NA
Lab Code:	J1306153-018		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	**59.2**	mg/L	5.0	5.0	1	10/24/13	NA	
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**59.2**	mg/L	5.0	5.0	1	10/24/13	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B	4.0 U	mg/L	4.0	4.0	2	10/18/13 07:00	NA	
Carbon, Total Organic (TOC)	SM 5310 B	**1.1**	mg/L	1.0	0.09	1	10/18/13	NA	
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0 U	mg/L	5.0	5.0	1	10/24/13	NA	
Chemical Oxygen Demand, Total	SM21 5220 D	**38**	mg/L	20	16	1	10/28/13	10/28/13	
Chloride	300.0	**5.50**	mg/L	0.50	0.11	1	10/18/13	NA	
Nitrate as Nitrogen	300.0	**0.73**	mg/L	0.20	0.03	1	10/18/13	NA	
Sulfate	300.0	**2.19**	mg/L	0.50	0.18	1	10/18/13	NA	
Sulfide, Total	SM 4500-S2- F	0.4 U	mg/L	2.0	0.4	1	10/23/13	NA	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 11:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-DUP	**Units:**	ug/L
Lab Code:	J1306153-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	5.0	0.19	1	10/22/13 15:07	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/22/13 15:07	
1,1,2,2-Tetrachloroethane	0.29	U	3.0	0.29	1	10/22/13 15:07	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/22/13 15:07	
1,1-Dichloroethane (1,1-DCA)	**3.0**	**J**	5.0	0.30	1	10/22/13 15:07	
1,1-Dichloroethene (1,1-DCE)	0.16	U	5.0	0.16	1	10/22/13 15:07	
1,1-Dichloropropene	0.32	U	5.0	0.32	1	10/22/13 15:07	
1,2,3-Trichloropropane	0.42	U	2.0	0.42	1	10/22/13 15:07	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/22/13 15:07	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	13	2.3	1	10/22/13 15:07	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/22/13 15:07	
1,2-Dichlorobenzene	0.48	U	5.0	0.48	1	10/22/13 15:07	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/22/13 15:07	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/22/13 15:07	
1,3-Dichlorobenzene	0.22	U	5.0	0.22	1	10/22/13 15:07	
1,3-Dichloropropane	0.18	U	1.0	0.18	1	10/22/13 15:07	
1,4-Dichlorobenzene	**0.54**	**J**	1.0	0.16	1	10/22/13 15:07	
2,2-Dichloropropane	0.46	U	15	0.46	1	10/22/13 15:07	
2-Butanone (MEK)	3.8	U	100	3.8	1	10/22/13 15:07	
2-Hexanone	2.2	U	50	2.2	1	10/22/13 15:07	
4-Methyl-2-pentanone (MIBK)	1.1	U	100	1.1	1	10/22/13 15:07	
Acetone	**8.2**	**J**	100	5.6	1	10/22/13 15:07	
Acetonitrile	18	U	55	18	1	10/22/13 15:07	
Acrolein	28	U	53	28	1	10/22/13 15:07	
Acrylonitrile	1.5	U	200	1.5	1	10/22/13 15:07	
Allyl Chloride	0.39	U	10	0.39	1	10/22/13 15:07	
Benzene	0.21	U	1.0	0.21	1	10/22/13 15:07	
Bromochloromethane	0.27	U	5.0	0.27	1	10/22/13 15:07	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/22/13 15:07	
Bromoform	0.42	U	3.0	0.42	1	10/22/13 15:07	
Bromomethane	0.23	U	10	0.23	1	10/22/13 15:07	
Carbon Disulfide	2.4	U	100	2.4	1	10/22/13 15:07	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/22/13 15:07	
Chlorobenzene	0.16	U	3.0	0.16	1	10/22/13 15:07	
Chloroethane	0.52	U	10	0.52	1	10/22/13 15:07	
Chloroform	0.35	U	5.0	0.35	1	10/22/13 15:07	
Chloromethane	0.36	U	1.0	0.36	1	10/22/13 15:07	
Chloroprene	0.12	U	20	0.12	1	10/22/13 15:07	
cis-1,2-Dichloroethene	**0.55**	**J**	5.0	0.36	1	10/22/13 15:07	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/22/13 15:07	
Dibromochloromethane	0.21	U	3.0	0.21	1	10/22/13 15:07	
Dibromomethane	0.36	U	10	0.36	1	10/22/13 15:07	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/22/13 15:07	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 11:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-DUP	**Units:**	ug/L
Lab Code:	J1306153-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 15:07	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 15:07	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 15:07	
Iodomethane	2.7 U	10	2.7	1	10/22/13 15:07	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 15:07	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 15:07	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 15:07	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 15:07	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 15:07	
Naphthalene	0.38 U	10	0.38	1	10/22/13 15:07	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 15:07	
Propionitrile	3.9 U	150	3.9	1	10/22/13 15:07	
Styrene	0.29 U	1.0	0.29	1	10/22/13 15:07	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 15:07	
Toluene	0.19 U	1.0	0.19	1	10/22/13 15:07	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 15:07	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 15:07	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 15:07	
Trichloroethene (TCE)	**0.54 J**	1.0	0.36	1	10/22/13 15:07	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 15:07	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 15:07	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 15:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/22/13 15:07	
4-Bromofluorobenzene	104	86 - 113	10/22/13 15:07	
Dibromofluoromethane	98	86 - 112	10/22/13 15:07	
Toluene-d8	96	88 - 115	10/22/13 15:07	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 11:00
Sample Matrix:	Ground Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-DUP	**Basis:**	NA
Lab Code:	J1306153-019		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 02:03	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 02:03	10/18/13	
Barium, Total Recoverable	6010C	**90**	**J**	ug/L	100	0.3	1	10/23/13 22:33	10/18/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 02:03	10/18/13	
Cadmium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.10	1	10/22/13 02:03	10/18/13	
Chromium, Total Recoverable	6020A	**0.6**	**J**	ug/L	10	0.2	1	10/31/13 16:31	10/18/13	
Cobalt, Total Recoverable	6020A	**35**		ug/L	10	0.03	1	10/22/13 02:03	10/18/13	
Copper, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.3	1	10/22/13 02:03	10/18/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 02:03	10/18/13	
Mercury, Total	7470A	**0.04**	**J**	ug/L	0.20	0.02	1	10/22/13 14:59	10/18/13	
Nickel, Total Recoverable	6020A	**6**	**J**	ug/L	50	0.5	1	10/22/13 02:03	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 02:03	10/18/13	
Silver, Total Recoverable	6010C	**2**	**J**	ug/L	10	2	1	10/23/13 22:32	10/18/13	
Thallium, Total Recoverable	6020A	**0.2**	**J**	ug/L	5.5	0.05	1	10/22/13 02:03	10/18/13	
Vanadium, Total Recoverable	6010C	**3**	**J**	ug/L	25	2	1	10/23/13 22:32	10/18/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/23/13 22:33	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 00:00
Sample Matrix:	Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-Trip Blank	**Units:**	ug/L
Lab Code:	J1306153-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 15:34	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 15:34	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 15:34	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 15:34	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 15:34	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 15:34	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 15:34	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 15:34	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 15:34	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 15:34	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 15:34	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 15:34	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 15:34	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 15:34	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 15:34	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 15:34	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 15:34	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 15:34	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 15:34	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 15:34	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 15:34	
Acetone	5.6 U	100	5.6	1	10/22/13 15:34	
Acetonitrile	18 U	55	18	1	10/22/13 15:34	
Acrolein	28 U	53	28	1	10/22/13 15:34	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 15:34	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 15:34	
Benzene	0.21 U	1.0	0.21	1	10/22/13 15:34	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 15:34	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 15:34	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 15:34	
Bromomethane	0.23 U	10	0.23	1	10/22/13 15:34	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 15:34	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 15:34	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 15:34	
Chloroethane	0.52 U	10	0.52	1	10/22/13 15:34	
Chloroform	0.35 U	5.0	0.35	1	10/22/13 15:34	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 15:34	
Chloroprene	0.12 U	20	0.12	1	10/22/13 15:34	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 15:34	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 15:34	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 15:34	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 15:34	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 15:34	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13 00:00
Sample Matrix:	Water	**Date Received:**	10/17/13 09:04
Sample Name:	9209-Trip Blank	**Units:**	ug/L
Lab Code:	J1306153-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 15:34	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 15:34	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 15:34	
Iodomethane	2.7 U	10	2.7	1	10/22/13 15:34	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 15:34	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 15:34	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 15:34	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 15:34	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 15:34	
Naphthalene	0.38 U	10	0.38	1	10/22/13 15:34	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 15:34	
Propionitrile	3.9 U	150	3.9	1	10/22/13 15:34	
Styrene	0.29 U	1.0	0.29	1	10/22/13 15:34	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 15:34	
Toluene	0.19 U	1.0	0.19	1	10/22/13 15:34	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 15:34	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 15:34	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 15:34	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 15:34	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 15:34	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 15:34	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 15:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	10/22/13 15:34	
4-Bromofluorobenzene	106	86 - 113	10/22/13 15:34	
Dibromofluoromethane	98	86 - 112	10/22/13 15:34	
Toluene-d8	94	88 - 115	10/22/13 15:34	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1307408-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/21/13 15:17	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/21/13 15:17	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/21/13 15:17	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/21/13 15:17	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/21/13 15:17	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/21/13 15:17	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/21/13 15:17	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/21/13 15:17	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/21/13 15:17	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/21/13 15:17	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/21/13 15:17	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/21/13 15:17	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/21/13 15:17	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/21/13 15:17	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/21/13 15:17	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/21/13 15:17	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/21/13 15:17	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/21/13 15:17	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/21/13 15:17	
2-Hexanone	2.2 U	50	2.2	1	10/21/13 15:17	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/21/13 15:17	
Acetone	5.6 U	100	5.6	1	10/21/13 15:17	
Acetonitrile	18 U	55	18	1	10/21/13 15:17	
Acrolein	28 U	53	28	1	10/21/13 15:17	
Acrylonitrile	1.5 U	200	1.5	1	10/21/13 15:17	
Allyl Chloride	0.39 U	10	0.39	1	10/21/13 15:17	
Benzene	0.21 U	1.0	0.21	1	10/21/13 15:17	
Bromochloromethane	0.27 U	5.0	0.27	1	10/21/13 15:17	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/21/13 15:17	
Bromoform	0.42 U	3.0	0.42	1	10/21/13 15:17	
Bromomethane	0.23 U	10	0.23	1	10/21/13 15:17	
Carbon Disulfide	2.4 U	100	2.4	1	10/21/13 15:17	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/21/13 15:17	
Chlorobenzene	0.16 U	3.0	0.16	1	10/21/13 15:17	
Chloroethane	0.52 U	10	0.52	1	10/21/13 15:17	
Chloroform	0.35 U	5.0	0.35	1	10/21/13 15:17	
Chloromethane	0.36 U	1.0	0.36	1	10/21/13 15:17	
Chloroprene	0.12 U	20	0.12	1	10/21/13 15:17	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/21/13 15:17	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/21/13 15:17	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/21/13 15:17	
Dibromomethane	0.36 U	10	0.36	1	10/21/13 15:17	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/21/13 15:17	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1307408-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/21/13 15:17	
Ethylbenzene	0.21 U	1.0	0.21	1	10/21/13 15:17	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/21/13 15:17	
Iodomethane	2.7 U	10	2.7	1	10/21/13 15:17	
Isobutyl Alcohol	43 U	100	43	1	10/21/13 15:17	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/21/13 15:17	
Methacrylonitrile	1.6 U	100	1.6	1	10/21/13 15:17	
Methyl Methacrylate	0.49 U	30	0.49	1	10/21/13 15:17	
Methylene Chloride	0.21 U	5.0	0.21	1	10/21/13 15:17	
Naphthalene	0.38 U	10	0.38	1	10/21/13 15:17	
o-Xylene	0.14 U	1.0	0.14	1	10/21/13 15:17	
Propionitrile	3.9 U	150	3.9	1	10/21/13 15:17	
Styrene	0.29 U	1.0	0.29	1	10/21/13 15:17	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/21/13 15:17	
Toluene	0.19 U	1.0	0.19	1	10/21/13 15:17	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/21/13 15:17	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/21/13 15:17	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/21/13 15:17	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/21/13 15:17	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/21/13 15:17	
Vinyl Acetate	1.9 U	50	1.9	1	10/21/13 15:17	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/21/13 15:17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	72 - 121	10/21/13 15:17	
4-Bromofluorobenzene	104	86 - 113	10/21/13 15:17	
Dibromofluoromethane	97	86 - 112	10/21/13 15:17	
Toluene-d8	96	88 - 115	10/21/13 15:17	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1307426-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 10:29	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 10:29	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 10:29	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 10:29	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 10:29	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 10:29	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 10:29	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 10:29	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 10:29	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 10:29	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 10:29	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 10:29	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 10:29	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 10:29	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 10:29	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 10:29	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 10:29	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 10:29	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 10:29	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 10:29	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 10:29	
Acetone	5.6 U	100	5.6	1	10/22/13 10:29	
Acetonitrile	18 U	55	18	1	10/22/13 10:29	
Acrolein	28 U	53	28	1	10/22/13 10:29	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 10:29	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 10:29	
Benzene	0.21 U	1.0	0.21	1	10/22/13 10:29	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 10:29	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 10:29	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 10:29	
Bromomethane	0.23 U	10	0.23	1	10/22/13 10:29	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 10:29	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 10:29	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 10:29	
Chloroethane	0.52 U	10	0.52	1	10/22/13 10:29	
Chloroform	0.35 U	5.0	0.35	1	10/22/13 10:29	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 10:29	
Chloroprene	0.12 U	20	0.12	1	10/22/13 10:29	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 10:29	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 10:29	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 10:29	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 10:29	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 10:29	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1307426-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 10:29	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 10:29	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 10:29	
Iodomethane	2.7 U	10	2.7	1	10/22/13 10:29	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 10:29	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 10:29	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 10:29	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 10:29	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 10:29	
Naphthalene	0.38 U	10	0.38	1	10/22/13 10:29	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 10:29	
Propionitrile	3.9 U	150	3.9	1	10/22/13 10:29	
Styrene	0.29 U	1.0	0.29	1	10/22/13 10:29	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 10:29	
Toluene	0.19 U	1.0	0.19	1	10/22/13 10:29	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 10:29	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 10:29	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 10:29	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 10:29	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 10:29	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 10:29	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 10:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	72 - 121	10/22/13 10:29	
4-Bromofluorobenzene	105	86 - 113	10/22/13 10:29	
Dibromofluoromethane	97	86 - 112	10/22/13 10:29	
Toluene-d8	96	88 - 115	10/22/13 10:29	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ1313287-01	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/23/13 13:10	
Acetic Acid	0.50 U	1.0	0.50	1	10/23/13 13:10	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/23/13 13:10	
Lactic Acid	0.50 U	1.0	0.50	1	10/23/13 13:10	
Propionic Acid	0.50 U	1.0	0.50	1	10/23/13 13:10	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ1313362-01	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method: Organic Acids

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Pyruvic Acid	0.25 U	0.50	0.25	1	10/24/13 11:52	
Acetic Acid	0.50 U	1.0	0.50	1	10/24/13 11:52	
Butanoic Acid (Butyric Acid)	1.0 U	2.0	1.0	1	10/24/13 11:52	
Lactic Acid	0.50 U	1.0	0.50	1	10/24/13 11:52	
Propionic Acid	0.50 U	1.0	0.50	1	10/24/13 11:52	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1306153-MB1		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/21/13 23:42	10/18/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/21/13 23:42	10/18/13	
Barium, Total Recoverable	6010C	**1**	**J**	ug/L	100	0.3	1	10/23/13 20:19	10/18/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/21/13 23:42	10/18/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/21/13 23:42	10/18/13	
Chromium, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/24/13 00:16	10/18/13	
Cobalt, Total Recoverable	6020A	0.03	U	ug/L	10	0.03	1	10/21/13 23:42	10/18/13	
Copper, Total Recoverable	6020A	0.3	U	ug/L	10	0.3	1	10/21/13 23:42	10/18/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/21/13 23:42	10/18/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/22/13 14:20	10/18/13	
Nickel, Total Recoverable	6020A	0.5	U	ug/L	50	0.5	1	10/21/13 23:42	10/18/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/21/13 23:42	10/18/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 20:18	10/18/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/21/13 23:42	10/18/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 20:18	10/18/13	
Zinc, Total Recoverable	6010C	**2**	**J**	ug/L	20	2	1	10/23/13 20:19	10/18/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1306153-MB2		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Barium, Total Recoverable	6010C	**1**	**J**	ug/L	100	0.3	1	10/29/13 01:13	10/25/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/29/13 01:13	10/25/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/29/13 01:13	10/25/13	
Zinc, Total Recoverable	6010C	**5**	**J**	ug/L	20	2	1	10/29/13 01:13	10/25/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1306153-MB1		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity as CaCO3, Total	SM 2320 B	5.0	U	mg/L	5.0	5.0	1	10/24/13	NA	
Bicarbonate Alkalinity as CaCO3	SM 2320 B	5.0	U	mg/L	5.0	5.0	1	10/24/13	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B	2.0	U	mg/L	2.0	2.0	1	10/18/13 07:00	NA	
Carbon, Total Organic (TOC)	SM 5310 B	0.09	U	mg/L	1.0	0.09	1	10/18/13	NA	
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0	U	mg/L	5.0	5.0	1	10/24/13	NA	
Chemical Oxygen Demand, Total	SM21 5220 D	16	U	mg/L	20	16	1	10/24/13	10/24/13	
Chloride	300.0	0.11	U	mg/L	0.50	0.11	1	10/18/13	NA	
Nitrate as Nitrogen	300.0	0.03	U	mg/L	0.20	0.03	1	10/18/13	NA	
Sulfate	300.0	0.18	U	mg/L	0.50	0.18	1	10/18/13	NA	
Sulfide, Total	SM 4500-S2- F	0.4	U	mg/L	2.0	0.4	1	10/23/13	NA	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1306153-MB2		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chemical Oxygen Demand, Total	SM21 5220 D	16	U	mg/L	20	16	1	10/28/13	10/28/13	

Client: Wake County Solid Waste Management **Service Request:** J1306153
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4	4-Bromofluorobenzene	Dibromofluoromethane
		72 - 121	86 - 113	86 - 112
9209-MW5R	J1306153-001	98	106	98
9209-MW6	J1306153-002	99	106	97
9209-MW7	J1306153-003	98	102	99
9209-MW8	J1306153-004	98	106	95
9209-MW9	J1306153-005	99	100	97
9209-MW10	J1306153-006	100	104	98
9209-MW10d	J1306153-007	100	105	96
9209-MW11	J1306153-008	100	103	97
9209-MW22	J1306153-009	101	103	101
9209-MW23	J1306153-010	101	106	99
9209-MW24	J1306153-011	98	108	98
9209-MW30	J1306153-012	98	104	96
9209-MW31	J1306153-013	98	104	98
9209-MW31d	J1306153-014	98	107	97
9209-MW32	J1306153-015	97	104	96
9209-TB-1a	J1306153-016	98	105	98
9209-TB-1a deep	J1306153-017	96	105	95
9209-MW36	J1306153-018	96	105	96
9209-DUP	J1306153-019	98	104	98
9209-Trip Blank	J1306153-020	98	106	98
Lab Control Sample	JQ1307408-01	101	93	99
Method Blank	JQ1307408-02	99	104	97
Lab Control Sample	JQ1307426-01	94	92	97
Method Blank	JQ1307426-02	96	105	97

Client: Wake County Solid Waste Management **Service Request:** J1306153
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
9209-MW5R	J1306153-001	93
9209-MW6	J1306153-002	95
9209-MW7	J1306153-003	95
9209-MW8	J1306153-004	94
9209-MW9	J1306153-005	95
9209-MW10	J1306153-006	96
9209-MW10d	J1306153-007	95
9209-MW11	J1306153-008	98
9209-MW22	J1306153-009	93
9209-MW23	J1306153-010	95
9209-MW24	J1306153-011	95
9209-MW30	J1306153-012	95
9209-MW31	J1306153-013	94
9209-MW31d	J1306153-014	94
9209-MW32	J1306153-015	95
9209-TB-1a	J1306153-016	95
9209-TB-1a deep	J1306153-017	95
9209-MW36	J1306153-018	94
9209-DUP	J1306153-019	96
9209-Trip Blank	J1306153-020	94
Lab Control Sample	JQ1307408-01	94
Method Blank	JQ1307408-02	96
Lab Control Sample	JQ1307426-01	95
Method Blank	JQ1307426-02	96

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/21/13
Sample Matrix:	Ground Water		

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	364388

Lab Control Sample
JQ1307408-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	19.7	20.0	98	77-118
1,1,1-Trichloroethane (TCA)	21.7	20.0	109	70-122
1,1,2,2-Tetrachloroethane	20.5	20.0	102	66-135
1,1,2-Trichloroethane	20.0	20.0	100	75-122
1,1-Dichloroethane (1,1-DCA)	21.0	20.0	105	79-117
1,1-Dichloroethene (1,1-DCE)	22.0	20.0	110	72-128
1,1-Dichloropropene	21.6	20.0	108	77-120
1,2,3-Trichloropropane	20.0	20.0	100	70-123
1,2,4-Trichlorobenzene	18.4	20.0	92	66-127
1,2-Dibromo-3-chloropropane (DBCP)	19.7	20.0	98	60-122
1,2-Dibromoethane (EDB)	19.3	20.0	96	76-118
1,2-Dichlorobenzene	19.2	20.0	96	81-115
1,2-Dichloroethane	21.1	20.0	105	70-117
1,2-Dichloropropane	21.0	20.0	105	79-117
1,3-Dichlorobenzene	20.1	20.0	100	82-116
1,3-Dichloropropane	20.0	20.0	100	77-120
1,4-Dichlorobenzene	19.0	20.0	95	82-115
2,2-Dichloropropane	21.4	20.0	107	58-137
2-Butanone (MEK)	103	100	103	62-138
2-Hexanone	98.2	100	98	74-127
4-Methyl-2-pentanone (MIBK)	97.9	100	98	77-120
Acetone	99.4	100	99	42-161
Acetonitrile	101	100	100	42-149
Acrolein	42.7	100	43	10-135
Acrylonitrile	105	100	105	63-132
Allyl Chloride	20.8	20.0	104	68-125
Benzene	20.7	20.0	104	80-117
Bromochloromethane	21.1	20.0	105	78-118
Bromodichloromethane	21.2	20.0	106	75-118
Bromoform	20.1	20.0	101	63-121
Bromomethane	21.2	20.0	106	31-153
Carbon Disulfide	104	100	104	72-128
Carbon Tetrachloride	21.2	20.0	106	67-124
Chlorobenzene	19.9	20.0	99	83-118
Chloroethane	20.6	20.0	103	68-132
Chloroform	20.9	20.0	104	77-116
Chloromethane	20.7	20.0	103	60-128
Chloroprene	20.8	20.0	104	70-123
cis-1,2-Dichloroethene	21.1	20.0	105	78-117
cis-1,3-Dichloropropene	20.0	20.0	100	80-119
Dibromochloromethane	19.3	20.0	96	74-121

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/21/13
Sample Matrix:	Ground Water		

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	364388

Lab Control Sample
JQ1307408-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Dibromomethane	21.5	20.0	108	76-117
Dichlorodifluoromethane	20.2	20.0	101	49-132
Ethyl Methacrylate	20.0	20.0	100	72-126
Ethylbenzene	20.3	20.0	101	82-119
Hexachlorobutadiene	19.5	20.0	97	65-132
Iodomethane	104	100	104	51-137
Isobutyl Alcohol	395	400	99	32-145
m,p-Xylenes	38.0	40.0	95	79-122
Methacrylonitrile	20.6	20.0	103	68-129
Methyl Methacrylate	20.3	20.0	101	73-128
Methylene Chloride	21.6	20.0	108	75-123
Naphthalene	18.5	20.0	93	53-146
o-Xylene	19.6	20.0	98	80-119
Propionitrile	104	100	104	59-134
Styrene	20.0	20.0	100	80-121
Tetrachloroethene (PCE)	19.6	20.0	98	75-126
Toluene	20.2	20.0	101	52-152
trans-1,2-Dichloroethene	20.9	20.0	104	75-121
trans-1,3-Dichloropropene	19.7	20.0	98	76-118
trans-1,4-Dichloro-2-butene	9.27	20.0	46	10-198
Trichloroethene (TCE)	21.1	20.0	105	78-122
Trichlorofluoromethane	22.5	20.0	112	58-134
Vinyl Acetate	104	100	104	36-169
Vinyl Chloride	21.8	20.0	109	69-138

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/22/13
Sample Matrix:	Water		

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	364508

Lab Control Sample
JQ1307426-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	19.9	20.0	100	77-118
1,1,1-Trichloroethane (TCA)	22.3	20.0	112	70-122
1,1,2,2-Tetrachloroethane	20.4	20.0	102	66-135
1,1,2-Trichloroethane	19.7	20.0	98	75-122
1,1-Dichloroethane (1,1-DCA)	21.7	20.0	108	79-117
1,1-Dichloroethene (1,1-DCE)	23.5	20.0	117	72-128
1,1-Dichloropropene	22.2	20.0	111	77-120
1,2,3-Trichloropropane	19.7	20.0	99	70-123
1,2,4-Trichlorobenzene	19.0	20.0	95	66-127
1,2-Dibromo-3-chloropropane (DBCP)	19.0	20.0	95	60-122
1,2-Dibromoethane (EDB)	19.3	20.0	97	76-118
1,2-Dichlorobenzene	19.7	20.0	98	81-115
1,2-Dichloroethane	20.8	20.0	104	70-117
1,2-Dichloropropane	21.8	20.0	109	79-117
1,3-Dichlorobenzene	19.8	20.0	99	82-116
1,3-Dichloropropane	19.8	20.0	99	77-120
1,4-Dichlorobenzene	19.0	20.0	95	82-115
2,2-Dichloropropane	22.3	20.0	112	58-137
2-Butanone (MEK)	101	100	101	62-138
2-Hexanone	98.6	100	99	74-127
4-Methyl-2-pentanone (MIBK)	95.9	100	96	77-120
Acetone	105	100	105	42-161
Acetonitrile	116	100	116	42-149
Acrolein	38.5	40.0	96	10-135
Acrylonitrile	109	100	109	63-132
Allyl Chloride	21.9	20.0	110	68-125
Benzene	21.6	20.0	108	80-117
Bromochloromethane	21.9	20.0	110	78-118
Bromodichloromethane	21.4	20.0	107	75-118
Bromoform	19.7	20.0	98	63-121
Bromomethane	21.9	20.0	110	31-153
Carbon Disulfide	110	100	110	72-128
Carbon Tetrachloride	22.0	20.0	110	67-124
Chlorobenzene	20.4	20.0	102	83-118
Chloroethane	22.2	20.0	111	68-132
Chloroform	21.2	20.0	106	77-116
Chloromethane	21.5	20.0	107	60-128
Chloroprene	22.3	20.0	111	70-123
cis-1,2-Dichloroethene	21.5	20.0	108	78-117
cis-1,3-Dichloropropene	19.9	20.0	99	80-119
Dibromochloromethane	19.2	20.0	96	74-121

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/22/13
Sample Matrix:	Water		

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	364508

Lab Control Sample
JQ1307426-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Dibromomethane	21.5	20.0	107	76-117
Dichlorodifluoromethane	21.1	20.0	105	49-132
Ethyl Methacrylate	19.9	20.0	99	72-126
Ethylbenzene	20.7	20.0	103	82-119
Hexachlorobutadiene	19.1	20.0	95	65-132
Iodomethane	108	100	108	51-137
Isobutyl Alcohol	416	400	104	32-145
m,p-Xylenes	39.1	40.0	98	79-122
Methacrylonitrile	21.0	20.0	105	68-129
Methyl Methacrylate	19.7	20.0	99	73-128
Methylene Chloride	22.1	20.0	110	75-123
Naphthalene	19.7	20.0	98	53-146
o-Xylene	20.0	20.0	100	80-119
Propionitrile	105	100	105	59-134
Styrene	20.1	20.0	101	80-121
Tetrachloroethene (PCE)	20.3	20.0	102	75-126
Toluene	20.5	20.0	103	52-152
trans-1,2-Dichloroethene	21.7	20.0	108	75-121
trans-1,3-Dichloropropene	19.9	20.0	99	76-118
trans-1,4-Dichloro-2-butene	11.3	20.0	57	10-198
Trichloroethene (TCE)	21.9	20.0	109	78-122
Trichlorofluoromethane	23.0	20.0	115	58-134
Vinyl Acetate	101	100	101	36-169
Vinyl Chloride	22.6	20.0	113	69-138

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/23/13
Sample Matrix:	Ground Water		

Duplicate Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method:	Organic Acids	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	364820

	Lab Control Sample RQ1313287-02			Duplicate Lab Control Sample RQ1313287-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Acetic Acid	9.39	9.98	94	9.40	9.98	94	70-135	<1	30
Butanoic Acid (Butyric Acid)	10.0	10.0	100	9.92	10.0	99	78-113	1	30
Lactic Acid	9.64	10.0	96	9.67	10.0	97	70-117	<1	30
Propionic Acid	9.31	10.1	92	9.50	10.1	94	80-125	2	30
Pyruvic Acid	1.02	1.00	102	1.01	1.00	101	70-130	<1	30

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/24/13
Sample Matrix:	Ground Water		

Duplicate Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analysis Method:	Organic Acids	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	365069

	Lab Control Sample RQ1313362-02			Duplicate Lab Control Sample RQ1313362-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Acetic Acid	9.37	9.98	94	9.32	9.98	93	70-135	<1	30
Butanoic Acid (Butyric Acid)	9.68	10.0	97	9.39	10.0	94	78-113	3	30
Lactic Acid	9.68	10.0	97	9.68	10.0	97	70-117	<1	30
Propionic Acid	9.43	10.1	94	9.72	10.1	97	80-125	3	30
Pyruvic Acid	1.00	1.00	100	1.06	1.00	106	70-130	6	30

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QA/QC Report

Client: Wake County Solid Waste Management
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

Service Request:J1306153
Date Collected:10/16/13
Date Received:10/17/13
Date Analyzed:10/22/13 - 10/23/13

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name: 9209-MW10d
Lab Code: J1306153-007

Units:ug/L
Basis:NA

			Matrix Spike J1306153-007MS			Duplicate Matrix Spike J1306153-007DMS					
Analyte Name	**Method**	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Barium, Total Recoverable	6010C	3	510	500	101	520	500	102	75-125	<1	20
Mercury, Total	7470A	0.02	1.3	1.25	106	1.3	1.25	102	75-125	3	20
Silver, Total Recoverable	6010C	7	505	500	101	500	500	100	75-125	<1	20
Vanadium, Total Recoverable	6010C	8	990	1000	98	990	1000	98	75-125	<1	20
Zinc, Total Recoverable	6010C	7	1020	1000	102	1020	1000	102	75-125	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13
Sample Matrix:	Ground Water	**Date Received:**	10/17/13
		Date Analyzed:	10/22/13 - 10/24/13
		Date Extracted:	10/18/13

Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name:	9209-MW10	**Units:**	ug/L
Lab Code:	J1306153-006	**Basis:**	NA
Analysis Method:	6020A		
Prep Method:	EPA 3005A		

		Matrix Spike J1306153-006MS			**Duplicate Matrix Spike** J1306153-006DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Antimony, Total Recoverable	ND	48.5	50.0	97	47.8	50.0	96	75-125	1	20
Arsenic, Total Recoverable	ND	50	50	100	51	50	102	75-125	2	20
Beryllium, Total Recoverable	0.3	24.5	25.0	97	24.1	25.0	95	75-125	2	20
Cadmium, Total Recoverable	0.2	20.0	20.0	99	20.7	20.0	103	75-125	3	20
Chromium, Total Recoverable	0.4	52	50	103	53	50	105	75-125	1	20
Cobalt, Total Recoverable	2	50	50	96	52	50	99	75-125	3	20
Copper, Total Recoverable	2	52	50	99	53	50	101	75-125	2	20
Lead, Total Recoverable	1	26	25	98	26	25	100	75-125	2	20
Nickel, Total Recoverable	3	102	100	100	105	100	102	75-125	3	20
Selenium, Total Recoverable	ND	99	100	99	100	100	100	75-125	<1	20
Thallium, Total Recoverable	0.05	10.0	10.0	100	10.2	10.0	101	75-125	2	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Wake County Solid Waste Management
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

Service Request:J1306153
Date Analyzed:10/21/13 - 10/24/13

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
J1306153-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony, Total Recoverable	6020A	51.4	50.0	103	80-120
Arsenic, Total Recoverable	6020A	50.4	50	101	80-120
Barium, Total Recoverable	6010C	511	500	102	80-120
Beryllium, Total Recoverable	6020A	24.2	25.0	97	80-120
Cadmium, Total Recoverable	6020A	20.3	20.0	102	80-120
Chromium, Total Recoverable	6020A	52.0	50	104	80-120
Cobalt, Total Recoverable	6020A	52.3	50	105	80-120
Copper, Total Recoverable	6020A	51.9	50	104	80-120
Lead, Total Recoverable	6020A	25.8	25	103	80-120
Mercury, Total	7470A	1.27	1.25	101	80-120
Nickel, Total Recoverable	6020A	104	100	104	80-120
Selenium, Total Recoverable	6020A	101	100	101	80-120
Silver, Total Recoverable	6010C	513	500	103	80-120
Thallium, Total Recoverable	6020A	10.2	10.0	102	80-120
Vanadium, Total Recoverable	6010C	993	1000	99	80-120
Zinc, Total Recoverable	6010C	1040	1000	104	80-120

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/29/13
Sample Matrix:	Ground Water	**Date Extracted:**	10/25/13

Lab Control Sample Summary
Inorganic Parameters

Analysis Method:	6010C	**Units:**	ug/L
Prep Method:	EPA 3005A	**Basis:**	NA
		Analysis Lot:	365325

Lab Control Sample
J1306153-LCS2

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Barium, Total Recoverable	509	500	102	80-120
Silver, Total Recoverable	511	500	102	80-120
Vanadium, Total Recoverable	1010	1000	101	80-120
Zinc, Total Recoverable	1030	1000	103	80-120

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project	North Wake Unlined Landfill	**Date Collected:**	10/16/13
Sample Matrix:	Ground Water	**Date Received:**	10/17/13
		Date Analyzed:	10/18/13 - 10/24/13

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	9209-MW5R	**Units:**	mg/L
Lab Code:	J1306153-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample J1306153-001DUP Result	Average	RPD	RPD Limit
Chemical Oxygen Demand, Total	SM21 5220 D	20	16	16	16	NC	NC	5
Chloride	300.0	0.50	0.11	1.70	1.66	1.68	2	20
Nitrate as Nitrogen	300.0	0.20	0.03	9.90	9.87	9.88	<1	20
Sulfate	300.0	0.50	0.18	2.98	2.96	2.97	<1	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project	North Wake Unlined Landfill	**Date Collected:**	10/16/13
Sample Matrix:	Ground Water	**Date Received:**	10/17/13
		Date Analyzed:	10/24/13

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	9209-MW36	**Units:**	mg/L
Lab Code:	J1306153-018	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample J1306153-018DUP Result	Average	RPD	RPD Limit
Alkalinity as CaCO3, Total	SM 2320 B	5.0	5.0	59.2	59.5	59.4	<1	20
Bicarbonate Alkalinity as CaCO3	SM 2320 B	5.0	5.0	59.2	59.5	59.4	<1	20
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0	5.0	5.0	5.0	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project	North Wake Unlined Landfill	**Date Collected:**	10/16/13
Sample Matrix:	Ground Water	**Date Received:**	10/17/13
		Date Analyzed:	10/18/13

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	9209-MW10	**Units:**	mg/L
Lab Code:	J1306153-006	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample J1306153-006DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic (TOC)	SM 5310 B	1.0	0.09	0.9	1.0	0.935	10	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project	North Wake Unlined Landfill	**Date Collected:**	10/16/13
Sample Matrix:	Ground Water	**Date Received:**	10/17/13
		Date Analyzed:	10/28/13

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	9209-MW8	**Units:**	mg/L
Lab Code:	J1306153-004	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample J1306153-004DUP Result	Average	RPD	RPD Limit
Chemical Oxygen Demand, Total	SM21 5220 D	20	16	16	16	NC	NC	5

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13
Sample Matrix:	Ground Water	**Date Received:**	10/17/13
		Date Analyzed:	10/18/13 - 10/24/13

Matrix Spike Summary
Chemical Oxygen Demand, Total

Sample Name:	9209-MW5R	**Units:**	mg/L
Lab Code:	J1306153-001	**Basis:**	NA

Matrix Spike
J1306153-001MS

Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chemical Oxygen Demand, Total	SM21 5220 D	16	534	500	107	90-110
Chloride	300.0	1.70	52.0	50.0	101	90-110
Nitrate as Nitrogen	300.0	9.90	14.4	5.00	90	90-110
Sulfate	300.0	2.98	54.7	50.0	104	90-110

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13
Sample Matrix:	Ground Water	**Date Received:**	10/17/13
		Date Analyzed:	10/18/13

Matrix Spike Summary
Carbon, Total Organic (TOC)

Sample Name:	9209-MW10	**Units:**	mg/L
Lab Code:	J1306153-006	**Basis:**	NA
Analysis Method:	SM 5310 B		

Matrix Spike
J1306153-006MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	0.9	49.5	50.0	97	90-110

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Collected:**	10/16/13
Sample Matrix:	Ground Water	**Date Received:**	10/17/13
		Date Analyzed:	10/28/13
		Date Extracted:	10/28/13

Matrix Spike Summary
Chemical Oxygen Demand, Total

Sample Name:	9209-MW8	**Units:**	mg/L
Lab Code:	J1306153-004	**Basis:**	NA
Analysis Method:	SM21 5220 D		
Prep Method:	Method		

Matrix Spike
J1306153-004MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chemical Oxygen Demand, Total	ND	542	500	108	90-110

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Wake County Solid Waste Management
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

Service Request:J1306153
Date Analyzed:10/18/13 - 10/24/13

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
J1306153-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity as CaCO3, Total	SM 2320 B	248	250	99	85-115
Biochemical Oxygen Demand (BOD)	SM 5210 B	185	198	93	84.5-115.4
Carbon, Total Organic (TOC)	SM 5310 B	48.9	50.0	98	90-110
Chemical Oxygen Demand, Total	SM21 5220 D	518	500	104	95-105
Chloride	300.0	51.8	50.0	104	90-110
Nitrate as Nitrogen	300.0	5.17	5.00	103	90-110
Sulfate	300.0	52.3	50.0	105	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/28/13
Sample Matrix:	Ground Water	**Date Extracted:**	10/28/13

Lab Control Sample Summary
Chemical Oxygen Demand, Total

Analysis Method:	SM21 5220 D	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	365415

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	J1306153-LCS2	511	500	102	95-105

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306153
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/23/13
Sample Matrix:	Ground Water		

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	SM 4500-S2- F	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	364675

	Lab Control Sample J1306153-LCS3			Duplicate Lab Control Sample J1306153-DLCS3					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Sulfide, Total	18.1	20.0	90	18.2	20.0	91	85-115	<1	20

ALS Environmental

Cooler Receipt Form

Client: CDM SMITH Service Request #: J1306153

Project: North Wake LF

Cooler received on 10/17/13 and opened on 10/17/13 by BW

COURIER: ALS UPS FEDEX Client Other _____ Airbill # 8037 4395 5688

1	Were custody seals on outside of cooler?	Yes	No			
	If yes, how many and where?	#:___ on lid	other			
2	Were seals intact and signature and date correct?	Yes	No	N/A		
3	Were custody papers properly filled out?	Yes	No	N/A		
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	2.3	2.9			
5	Thermometer ID	T81				
6	Temperature Blank Present?	Yes	No			
7	Were Ice or Ice Packs present	Ice	Ice Packs	No		
8	Did all bottles arrive in good condition (unbroken, etc....)?	Yes	No	N/A		
9	Type of packing material present	Netting	Vial Holder	Bubble Wrap		
		Paper	Styrofoam	Other	N/A	
10	Were all bottle labels complete (sample ID, preservation, etc....)?	Yes	No	N/A		
11	Did all bottle labels and tags agree with custody papers?	Yes	No	N/A		
12	Were the correct bottles used for the tests indicated?	Yes	No	N/A		
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	N/A		
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2					
	Preservative additions noted below					
14	Were all samples received within analysis holding times?	Yes	No	N/A		
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No	N/A		
16	Where did the bottles originate?	ALS	Client			

Sample ID	Reagent	Lot #	ml added	Initials Date/Time
MW5R	HNO3	Met 13 46L	1 mL	BW 10/17/13 1205
MW 7	↓	↓	↓	↓

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: BW Date: 10/17/13

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Ph(904) 739-2277 / FAX (904) 739-2011

SR # 5130453
ALS Contact

Page 1 of 3

Project Name: North Wake Unlined Landfill	Project Number:
Report To: Aaron Weispfenning	Report CC:
Company/Address: CDM Smith, 5400 Glenwood Ave, Suite 300, Raleigh, NC 27612	
Phone #: 919-325-3532	FAX #:
Sampler's Signature: [signature]	Sampler's Printed Name: Aaron Weisofenning

ANALYSIS REQUESTED (Include Method Numb

J1306153 5
CDM Smith, Inc.
North Wake Unlined Landfill

Preservative: 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. NaHSO4; 8. Other

	CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS		Appendix II VOCs	Appendix I Metals+Hg	Appendix II SVOC-B2EHP Only	MNA Parameters	Dissolved Hydrogen	REMARKS
1	9209-MW5R		10-16-13	1420	GW	19		X	X		X	X	
2	9209-MW6		10-16-13	1300	GW	19		X	X		X	X	
3	9209-MW6d				GW	4		X	X				
4	9209-MW7		10-16-13	1555	GW	4		X	X				
5	9209-MW8		10-16-13	1525	GW	19		X	X		X	X	
6	9209-MW8d				GW	4		X	X				
7	9209-MW9		10-16-13	930	GW	18		X	X		X		
8	9209-MW10		10-16-13	1200	GW	18		X	X		X		
9	9209-MW10d		10-16-13	1210	GW	4		X	X				
10	9209-MW11		10-16-13	900	GW	18		X	X		X		

Special Instructions/Comments:
- report according to SWS Limits, provide edd, report "J" values 2.9 2.3 °C
- Send results to weisofenning@cdmsmith.com
MNA Parameters: BOD, COD, Alkalinity, chloride, sulfate, sulfide, nitrate, TOC, COD, MEE, volatile fatty acids

TURNAROUND REQUIREMENTS
- ___ RUSH (SURCHARGES APPLY)
- X STANDARD
- REQUESTED FAX DATE
- REQUESTED REPORT DATE

REPORT REQUIREMENTS
- I. Results Only
- X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
- III. Results + QC and Calibration Summaries
- IV. Data Validation Report with Raw Data
- Edata X Yes ___ No

INVOICE INFORMATION
- P.O. #
- Bill to: Wake County

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Aaron Weispfenning	Printed Name: Brian Weigel	Printed Name	Printed Name	Printed Name	Printed Name
Firm: CDM Smith	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 10/16/13 1700	Date/Time: 10/17/13 904	Date/Time	Date/Time	Date/Time	Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Ph(904) 739-2277 / FAX (904) 739-2011

SR #: J1306153
ALS Contact

Project Name: North Wake Unlined Landfill	Project Number:
Report To: Aaron Weispfenning	Report CC:
Company/Address: CDM Smith, 5400 Glenwood Ave, Suite 300, Raleigh, NC 27612	
Phone #: 919-325-3532	FAX #:
Sampler's Signature: [signature]	Sampler's Printed Name: Aaron Weispfenning

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

J1306153 5
CDM Smith, Inc.
North Wake Unlined Landfill

Preservative: 3. H2SO4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. NaHSO4; 8. Other

	CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS	Appendix II VOCs	Appendix I Metals+Hg	Appendix II SVOC-B2EHP Only	MNA Parameters	Dissolved Hydrogen	REMARKS
11	9209-MW11d				GW	4	X	X				
12	9209-MW22		10-16-13	1630	GW	4	X	X				
13	9209-MW23		10-16-13	1615	GW	4	X	X				
14	9209-MW23d				GW	4	X	X				
15	9209-MW24		10-16-13	1605	GW	4	X	X				
16	9209-MW29d				GW	6	X	X				NO SVOC sample
17	9209-MW30		10-16-13	8:05	GW	4	X	X				
18	9209-MW31		10-16-13	700	GW	4	X	X				
19	9209-MW31d		10-15-13	1115	GW	4	X	X				
20	9209-MW32		10-16-13	750	GW	4	X	X				

Special Instructions/Comments: See page 1

TURNAROUND REQUIREMENTS
- ___ RUSH (SURCHARGES APPLY)
- X STANDARD
- REQUESTED FAX DATE
- REQUESTED REPORT DATE

REPORT REQUIREMENTS
- I. Results Only
- X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
- III. Results + QC and Calibration Summaries
- IV. Data Validation Report with Raw Data
- Edata: X Yes ___ No

INVOICE INFORMATION
- P.O. #
- Bill to: Wake County

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Aaron Weispfenning	Printed Name: Brian Weigel	Printed Name	Printed Name	Printed Name	Printed Name
Firm: CDM Smith	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 10-16-13 1700	Date/Time: 10/17/13 904	Date/Time	Date/Time	Date/Time	Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Ph(904) 739-2277 / FAX (904) 739-2011

SR.# J1306153
ALS Contact

Page 3 of 5

J1306153 5
CDM Smith, Inc.
North Wake Unlined Landfill

Project Name: North Wake Unlined Landfill	Project Number:
Report To: Aaron Weispfenning	Report CC:
Company/Address: CDM Smith, 5400 Glenwood Ave, Suite 300, Raleigh, NC 27612	
Phone #: 919-325-3532	FAX #:
Sampler's Signature: AW	Sampler's Printed Name: Aaron Weispfenning

ANALYSIS REQUESTED (Include Method Numb

Preservative: 2. HNO3, 3. H2SO4, 4. NaOH, 5. Zn. Acetate, 6. MeOH, 7. NaHSO4, 8. Other

	CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS	Appendix II VOCs	Appendix I Metals+Hg	Appendix II SVOC-B2EHP Only	MNA Parameters	Dissolved Hydrogen	REMARKS
21	9209-TB-1a		10-16-13	705	GW	4	X	X				
22	9209-TB-1a deep		10-15-13	1250	GW	4	X	X				
23	~~9209-MW33~~	Not Collected			GW	4	X	X				
24	9209-MW36		10-16-13	1015	GW	18	X	X		X		
25	9209-MW36d				GW	4	X	X				
26	9209-DUP		10-16-13	1100	GW	4	X	X				
27	9209-EQ Blank				GW	4	X	X				
28	9209-Trip Blank		—	—	GW	3	X					

Special Instructions/Comments: See page 1

TURNAROUND REQUIREMENTS
- ___ RUSH (SURCHARGES APPLY)
- X STANDARD
- REQUESTED FAX DATE
- REQUESTED REPORT DATE

REPORT REQUIREMENTS
- I. Results Only
- X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
- III. Results + QC and Calibration Summaries
- IV. Data Validation Report with Raw Data
- Edata X Yes ___ No

INVOICE INFORMATION
- P.O. #
- Bill to: Wake County

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: AW	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Aaron Weispfenning	Printed Name: Brian Weigel	Printed Name	Printed Name	Printed Name	Printed Name
Firm: CDM Smith	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 10-16-13 1700	Date/Time: 10/17/13 0900	Date/Time	Date/Time	Date/Time	Date/Time

ALS Environmental Services
9143 Philips Highway, Suite 200
Jacksonville, FL 32256
Tel 904-739-2277
Fax 904-739-2011

Appendix A

Subcontracted Analytical Results

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

October 29, 2013

Elliott Cornell
Wake County Solid Waste Management
9025 Deponie Drive
Raleigh, NC 27614

RE: North Wake Unlined Landfill

Dear Elliott:

Enclosed are the results of the samples submitted to our laboratory on October 17, 2013. For your reference, these analyses have been assigned our service request number J1306153.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Aguilera

By Kate Aguilera at 3:42 pm, Oct 29, 2013

Kate Aguilera
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: Wake County Solid Waste Management
Project: North Wake Unlined Landfill

Service Request No: J1306153

CASE NARRATIVE

The samples were received intact under chain of custody on October 17, 2013 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This analyte is not included on the laboratory's NELAP, DoD-ELAP, or AIHA-LAP scope of accreditation.

Methane, Ethene and Ethane Analysis

The samples were also analyzed for methane, ethene and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is not included on the laboratory's NELAP or AIHA-LAP scope of accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

ALS Environmental – Simi Valley

Certifications, Accreditations, and Registrations

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L11-203
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2012039
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	581572
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	CA200007
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-13-4
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272013-3
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

[redacted] Chain of Custody

[redacted]

ALS Contact: Craig Myers

[redacted]

[redacted]	[redacted]	# of Cont.	Matrix	Sample Date	Sample Time	Received	Sample Site	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	Ground Water	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
J1306153-004	[redacted]	[redacted]	Ground Water	10/1[redacted]13	15[redacted]5	10/17/13	S[redacted]IVALLEY	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]/13	[redacted]	II	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]W11	[redacted]	[redacted]	10/16/13	[redacted]	10/17/13	[redacted]Y	[redacted]	[redacted]
J1306153-018	[redacted]W56	[redacted]	Ground Water	[redacted]	1015	[redacted]/13	[redacted]	II	[redacted]

[redacted]

[redacted] - [redacted] 1 [redacted]6 J1306153-001,2,4,5,6,8,18 MEE Only

Special Instructions/Comments	[redacted]	[redacted]	Invoice Information
	[redacted] ___ [redacted] (Surcharge Apply) [redacted] 1 2 3 4 5 ✓ STANDARD Requested FAX Date: ___ Requested Report Date: 10/31/13	___ I. [redacted] ✓ II. [redacted] + [redacted] ___ III. Results + QC and Calibration Summaries ___ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD Y	[redacted] PO# J1306153 Bill to

Relinquished By: [redacted] 10/17/13 [redacted] Received By: [redacted] Airbill Number: ___

Page 1

ALS Environmental
Sample Acceptance Check Form

Client: Wake County Solid Waste Management Work order: J1306153
Project: North Wake Unlined Landfill
Sample(s) received on: 10/18/13 Date opened: 10/18/13 by: MZAMORA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by ALS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: 2° C Blank Temperature: ° C **Wet Ice**			
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☒	☐	☐
	Location of seal(s)? Top[of cooler down the front. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☒	☐	☐
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

J1306153-001.13	40ml VOA HCL		1		A	wh 10/21/13
J1306153-001.14	40ml VOA HCL				P	
J1306153-001.15	40ml VOA HCL				A	
J1306153-001.16	40mL VOA NP		7		A	wh 10/22/13
J1306153-001.17	40mL VOA NP				A	
J1306153-001.18	40mL VOA NP				A	
J1306153-002.13	40ml VOA HCL		1		A	wh 10/21/13
J1306153-002.14	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: Wake County Solid Waste Management Work order: J1306153
Project: North Wake Unlined Landfill
Sample(s) received on: 10/18/13 Date opened: 10/18/13 by: MZAMORA

J1306153-002.15	40ml VOA HCL				A	
J1306153-002.16	40mL VOA NP		7		A	wh 10/22/13
J1306153-002.17	40mL VOA NP				A	
J1306153-002.18	40mL VOA NP				A	
J1306153-004.13	40ml VOA HCL				P	
J1306153-004.14	40ml VOA HCL		1		A	wh 10/21/13
J1306153-004.15	40ml VOA HCL				A	
J1306153-004.16	40mL VOA NP		7		A	wh 10/22/13
J1306153-004.17	40mL VOA NP				A	
J1306153-004.18	40mL VOA NP				A	
J1306153-005.13	40ml VOA HCL		1		A	wh 10/21/13
J1306153-005.14	40ml VOA HCL				A	
J1306153-005.15	40ml VOA HCL				A	
J1306153-005.16	40mL VOA NP		7		A	wh 10/22/13
J1306153-005.17	40mL VOA NP				A	
J1306153-005.18	40mL VOA NP				A	
J1306153-006.13	40ml VOA HCL				P	
J1306153-006.14	40ml VOA HCL		1		A	wh 10/21/13
J1306153-006.15	40ml VOA HCL				A	
J1306153-006.16	40mL VOA NP		7		A	wh 10/22/13
J1306153-006.17	40mL VOA NP				A	
J1306153-006.18	40mL VOA NP				A	
J1306153-008.13	40ml VOA HCL		1		A	wh 10/21/13
J1306153-008.14	40ml VOA HCL				A	
J1306153-008.15	40ml VOA HCL				A	
J1306153-008.16	40mL VOA NP		7		P	wh 10/22/13
J1306153-008.17	40mL VOA NP				A	
J1306153-008.18	40mL VOA NP				A	
J1306153-018.13	40ml VOA HCL		1		A	wh 10/21/13
J1306153-018.14	40ml VOA HCL				A	
J1306153-018.15	40ml VOA HCL				A	
J1306153-018.16	40mL VOA NP		7		A	wh 10/22/13
J1306153-018.17	40mL VOA NP				A	
J1306153-018.18	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date(s) Collected: 10/16/13
Date Received: 10/17/13
Date Analyzed: 10/22/13

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
9209-MW5R	J1306153-001	0.10	**210,000**	1,000	370	**B**
9209-MW6	J1306153-002	0.10	**95,000**	1,000	370	**B**
9209-MW8	J1306153-004	0.10	**200,000**	1,000	370	**B**
9209-MW9	J1306153-005	0.10	**27,000**	1,000	370	**B**
9209-MW10	J1306153-006	0.10	**300,000**	1,000	370	**B**
9209-MW11	J1306153-008	0.10	**82,000**	1,000	370	**B**
9209-MW36	J1306153-018	0.10	**81,000**	1,000	370	**B**
Method Control Sample	P131022-MB	0.10	**410**	1,000	370	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **Wake County Solid Waste Management**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: J1306153
Client Project ID: **North Wake Unlined Landfill** ALS Sample ID: P131022-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Wade Henton Date Analyzed: 10/22/13
Matrix: Water Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result[1] LCS ug/L	Result[1] DLCS ug/L	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	22,800	22,200	**100**	**97**	61-119	3	27	

[1] = The concentration shown includes a substration of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Sample ID: **9209-MW5R**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: J1306153-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: 10/16/13
Date Received: 10/17/13
Date Analyzed: 10/21/13
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**2.3**	1.3	0.30	
74-85-1	Ethene	ND	1.0	0.069	
74-84-0	Ethane	ND	0.60	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Sample ID: **9209-MW6**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: J1306153-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: 10/16/13
Date Received: 10/17/13
Date Analyzed: 10/21/13
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**45**	1.3	0.30	
74-85-1	Ethene	ND	1.0	0.069	
74-84-0	Ethane	ND	0.60	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Sample ID: **9209-MW8**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: J1306153-004

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: 10/16/13
Date Received: 10/17/13
Date Analyzed: 10/21/13
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**430**	1.3	0.30	
74-85-1	Ethene	ND	1.0	0.069	
74-84-0	Ethane	**0.11**	0.60	0.061	J

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Sample ID: **9209-MW9**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: J1306153-005

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: 10/16/13
Date Received: 10/17/13
Date Analyzed: 10/21/13
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**0.53**	1.3	0.30	**J**
74-85-1	Ethene	ND	1.0	0.069	
74-84-0	Ethane	ND	0.60	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Sample ID: **9209-MW10**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: J1306153-006

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: 10/16/13
Date Received: 10/17/13
Date Analyzed: 10/21/13
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**3,100**	1.3	0.30	
74-85-1	Ethene	ND	1.0	0.069	
74-84-0	Ethane	ND	0.60	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Sample ID: **9209-MW11**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: J1306153-008

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: 10/16/13
Date Received: 10/17/13
Date Analyzed: 10/21/13
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	ND	1.3	0.30	
74-85-1	Ethene	ND	1.0	0.069	
74-84-0	Ethane	ND	0.60	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Sample ID: **9209-MW36**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: J1306153-018

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: 10/16/13
Date Received: 10/17/13
Date Analyzed: 10/21/13
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	**9.8**	1.3	0.30	
74-85-1	Ethene	ND	1.0	0.069	
74-84-0	Ethane	ND	0.60	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Wake County Solid Waste Management**
Client Sample ID: **Method Control Sample**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: P131021-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 10/21/13
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	MRL µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	ND	1.3	0.30	
74-85-1	Ethene	ND	1.0	0.069	
74-84-0	Ethane	ND	0.60	0.061	

The Method Control Sample is laboratory water carried through the entire analytical process.
ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **Wake County Solid Waste Management**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **North Wake Unlined Landfill**

ALS Project ID: J1306153
ALS Sample ID: P131021-LCS
P131021-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Jennifer Young
Sample Type: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 10/21/13
Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result[1] LCS µg/L	Result[1] DLCS µg/L	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.53	2.67	2.58	**106**	**102**	73-118	4	11	
74-85-1	Ethene	4.40	5.19	5.05	**118**	**115**	89-131	3	11	
74-84-0	Ethane	4.75	5.25	5.20	**111**	**109**	93-121	2	10	

[1] = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

November 01, 2013 Service Request No:J1306214

Aaron Weispfenning
CDM Smith, Inc.
5400 Glenwood Ave
Suite 300
Raleigh, NC 27612

Laboratory Results for: North Wake Unlined Landfill

Dear Aaron,

Enclosed are the results of the sample(s) submitted to our laboratory October 18, 2013
For your reference, these analyses have been assigned our service request number **J1306214.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW6d	Lab ID: J1306214-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	80	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	3	J	2	25	ug/L	6010C
Zinc, Total Recoverable	7	BJ	2	20	ug/L	6010C
Antimony, Total Recoverable	6.9		0.2	6.0	ug/L	6020A
Beryllium, Total Recoverable	0.1	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.5	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	4	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	1	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	4	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	0.6	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	3	J	0.5	50	ug/L	6020A
Mercury, Total	0.03	J	0.02	0.20	ug/L	7470A
1,1-Dichloroethane (1,1-DCA)	3.3	J	0.30	5.0	ug/L	8260B
Chloroform	0.75	J	0.35	5.0	ug/L	8260B
cis-1,2-Dichloroethene	0.65	J	0.36	5.0	ug/L	8260B
Dichlorodifluoromethane	1.8	J	0.23	20	ug/L	8260B
Trichloroethene (TCE)	0.53	J	0.36	1.0	ug/L	8260B

CLIENT ID: 9209-MW8d	Lab ID: J1306214-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	40	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	7	J	2	25	ug/L	6010C
Beryllium, Total Recoverable	0.2	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.3	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	6	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	1	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	6	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	1	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	2	J	0.5	50	ug/L	6020A
Mercury, Total	0.03	J	0.02	0.20	ug/L	7470A
Chloroform	0.43	J	0.35	5.0	ug/L	8260B

CLIENT ID: 9209-MW11d	Lab ID: J1306214-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	50	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	2	J	2	25	ug/L	6010C
Zinc, Total Recoverable	2	BJ	2	20	ug/L	6010C
Antimony, Total Recoverable	0.6	J	0.2	6.0	ug/L	6020A
Arsenic, Total Recoverable	0.6	J	0.5	10	ug/L	6020A
Cadmium, Total Recoverable	0.3	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	1	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.2	J	0.03	10	ug/L	6020A

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW11d	Lab ID: J1306214-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Copper, Total Recoverable	1	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	0.6	J	0.5	50	ug/L	6020A
Mercury, Total	0.02	J	0.02	0.20	ug/L	7470A

CLIENT ID: 9209-MW23d	Lab ID: J1306214-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	40	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	3	J	2	25	ug/L	6010C
Zinc, Total Recoverable	3	BJ	2	20	ug/L	6010C
Antimony, Total Recoverable	1.7	J	0.2	6.0	ug/L	6020A
Beryllium, Total Recoverable	0.05	J	0.04	1.0	ug/L	6020A
Cadmium, Total Recoverable	0.7	J	0.10	1.0	ug/L	6020A
Chromium, Total Recoverable	2	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.3	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	3	J	0.3	10	ug/L	6020A
Lead, Total Recoverable	0.3	J	0.2	10	ug/L	6020A
Nickel, Total Recoverable	1.0	J	0.5	50	ug/L	6020A
Mercury, Total	0.02	J	0.02	0.20	ug/L	7470A

CLIENT ID: 9209-MW29d	Lab ID: J1306214-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	40	J	0.3	100	ug/L	6010C
Beryllium, Total Recoverable	0.1	J	0.04	1.0	ug/L	6020A
Chromium, Total Recoverable	4	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.2	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	3	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	1.0	J	0.5	50	ug/L	6020A

CLIENT ID: 9209-MW36d	Lab ID: J1306214-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Barium, Total Recoverable	60	J	0.3	100	ug/L	6010C
Vanadium, Total Recoverable	3	J	2	25	ug/L	6010C
Beryllium, Total Recoverable	0.04	J	0.04	1.0	ug/L	6020A
Chromium, Total Recoverable	3	J	0.2	10	ug/L	6020A
Cobalt, Total Recoverable	0.5	J	0.03	10	ug/L	6020A
Copper, Total Recoverable	10	J	0.3	10	ug/L	6020A
Nickel, Total Recoverable	3	J	0.5	50	ug/L	6020A
Mercury, Total	0.03	J	0.02	0.20	ug/L	7470A
1,1-Dichloroethane (1,1-DCA)	7.9		0.30	5.0	ug/L	8260B
1,4-Dichlorobenzene	0.63	J	0.16	1.0	ug/L	8260B
Benzene	0.26	J	0.21	1.0	ug/L	8260B
cis-1,2-Dichloroethene	5.5		0.36	5.0	ug/L	8260B
Dichlorodifluoromethane	1.7	J	0.23	20	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: 9209-MW36d	Lab ID: J1306214-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Tetrachloroethene (PCE)	0.63	J	0.22	1.0	ug/L	8260B
Trichloroethene (TCE)	1.1		0.36	1.0	ug/L	8260B

CLIENT ID: 9209-EQ Blank	Lab ID: J1306214-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Zinc, Total Recoverable	2	BJ	2	20	ug/L	6010C
Copper, Total Recoverable	0.6	J	0.3	10	ug/L	6020A

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2014
North Carolina Department of Environment and Natural Resources	527	12/31/2013
Virginia Environmental Accreditation Program	460191	12/14/2013
Louisiana Department of Environmental Quality	02086	6/30/2014
Georgia Department of Natural Resources	958	6/30/2014
Kentucky Division of Waste Management	63	6/30/2014
South Carolina Department of Health and Environmental Control	96021001	6/30/2014
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2014
Maine Department of Health and Human Services	2011006	2/3/2015
Department of Defense	66206	5/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2014

Data Qualifiers

CAS Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

CAS Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Wake County Solid Waste Management **Service Request:**J1306214
Project: North Wake Unlined Landfill

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1306214-001	9209-MW6d	10/17/2013	0930
J1306214-002	9209-MW8d	10/17/2013	1030
J1306214-003	9209-MW11d	10/17/2013	0725
J1306214-004	9209-MW23d	10/17/2013	0800
J1306214-005	9209-MW29d	10/17/2013	1105
J1306214-006	9209-MW36d	10/17/2013	0835
J1306214-007	9209-EQ Blank	10/17/2013	1140
J1306214-008	Trip Blank	10/17/2013	0000

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 09:30
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW6d	**Units:**	ug/L
Lab Code:	J1306214-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	5.0	0.19	1	10/23/13 02:39	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/23/13 02:39	
1,1,2,2-Tetrachloroethane	0.29	U	3.0	0.29	1	10/23/13 02:39	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/23/13 02:39	
1,1-Dichloroethane (1,1-DCA)	**3.3**	**J**	5.0	0.30	1	10/23/13 02:39	
1,1-Dichloroethene (1,1-DCE)	0.16	U	5.0	0.16	1	10/23/13 02:39	
1,1-Dichloropropene	0.32	U	5.0	0.32	1	10/23/13 02:39	
1,2,3-Trichloropropane	0.42	U	2.0	0.42	1	10/23/13 02:39	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/23/13 02:39	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	13	2.3	1	10/23/13 02:39	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/23/13 02:39	
1,2-Dichlorobenzene	0.48	U	5.0	0.48	1	10/23/13 02:39	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/23/13 02:39	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/23/13 02:39	
1,3-Dichlorobenzene	0.22	U	5.0	0.22	1	10/23/13 02:39	
1,3-Dichloropropane	0.18	U	1.0	0.18	1	10/23/13 02:39	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/23/13 02:39	
2,2-Dichloropropane	0.46	U	15	0.46	1	10/23/13 02:39	
2-Butanone (MEK)	3.8	U	100	3.8	1	10/23/13 02:39	
2-Hexanone	2.2	U	50	2.2	1	10/23/13 02:39	
4-Methyl-2-pentanone (MIBK)	1.1	U	100	1.1	1	10/23/13 02:39	
Acetone	5.6	U	100	5.6	1	10/23/13 02:39	
Acetonitrile	18	U	55	18	1	10/23/13 02:39	
Acrolein	28	U	53	28	1	10/23/13 02:39	
Acrylonitrile	1.5	U	200	1.5	1	10/23/13 02:39	
Allyl Chloride	0.39	U	10	0.39	1	10/23/13 02:39	
Benzene	0.21	U	1.0	0.21	1	10/23/13 02:39	
Bromochloromethane	0.27	U	5.0	0.27	1	10/23/13 02:39	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/23/13 02:39	
Bromoform	0.42	U	3.0	0.42	1	10/23/13 02:39	
Bromomethane	0.23	U	10	0.23	1	10/23/13 02:39	
Carbon Disulfide	2.4	U	100	2.4	1	10/23/13 02:39	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/23/13 02:39	
Chlorobenzene	0.16	U	3.0	0.16	1	10/23/13 02:39	
Chloroethane	0.52	U	10	0.52	1	10/23/13 02:39	
Chloroform	**0.75**	**J**	5.0	0.35	1	10/23/13 02:39	
Chloromethane	0.36	U	1.0	0.36	1	10/23/13 02:39	
Chloroprene	0.12	U	20	0.12	1	10/23/13 02:39	
cis-1,2-Dichloroethene	**0.65**	**J**	5.0	0.36	1	10/23/13 02:39	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/23/13 02:39	
Dibromochloromethane	0.21	U	3.0	0.21	1	10/23/13 02:39	
Dibromomethane	0.36	U	10	0.36	1	10/23/13 02:39	
Dichlorodifluoromethane	**1.8**	**J**	20	0.23	1	10/23/13 02:39	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 09:30
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW6d	**Units:**	ug/L
Lab Code:	J1306214-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/23/13 02:39	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 02:39	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/23/13 02:39	
Iodomethane	2.7 U	10	2.7	1	10/23/13 02:39	
Isobutyl Alcohol	43 U	100	43	1	10/23/13 02:39	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 02:39	
Methacrylonitrile	1.6 U	100	1.6	1	10/23/13 02:39	
Methyl Methacrylate	0.49 U	30	0.49	1	10/23/13 02:39	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 02:39	
Naphthalene	0.38 U	10	0.38	1	10/23/13 02:39	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 02:39	
Propionitrile	3.9 U	150	3.9	1	10/23/13 02:39	
Styrene	0.29 U	1.0	0.29	1	10/23/13 02:39	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 02:39	
Toluene	0.19 U	1.0	0.19	1	10/23/13 02:39	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 02:39	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 02:39	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 02:39	
Trichloroethene (TCE)	**0.53 J**	1.0	0.36	1	10/23/13 02:39	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 02:39	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 02:39	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 02:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	72 - 121	10/23/13 02:39	
4-Bromofluorobenzene	104	86 - 113	10/23/13 02:39	
Dibromofluoromethane	97	86 - 112	10/23/13 02:39	
Toluene-d8	94	88 - 115	10/23/13 02:39	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 09:30
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW6d	**Basis:**	NA
Lab Code:	J1306214-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	**6.9**		ug/L	6.0	0.2	1	10/22/13 04:50	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 04:50	10/21/13	
Barium, Total Recoverable	6010C	**80**	**J**	ug/L	100	0.3	1	10/23/13 23:42	10/21/13	
Beryllium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.04	1	10/22/13 04:50	10/21/13	
Cadmium, Total Recoverable	6020A	**0.5**	**J**	ug/L	1.0	0.10	1	10/22/13 04:50	10/21/13	
Chromium, Total Recoverable	6020A	**4**	**J**	ug/L	10	0.2	1	10/22/13 04:50	10/21/13	
Cobalt, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.03	1	10/22/13 04:50	10/21/13	
Copper, Total Recoverable	6020A	**4**	**J**	ug/L	10	0.3	1	10/22/13 04:50	10/21/13	
Lead, Total Recoverable	6020A	**0.6**	**J**	ug/L	10	0.2	1	10/22/13 04:50	10/21/13	
Mercury, Total	7470A	**0.03**	**J**	ug/L	0.20	0.02	1	10/29/13 16:49	10/26/13	
Nickel, Total Recoverable	6020A	**3**	**J**	ug/L	50	0.5	1	10/22/13 04:50	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 04:50	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 23:41	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 04:50	10/21/13	
Vanadium, Total Recoverable	6010C	**3**	**J**	ug/L	25	2	1	10/23/13 23:41	10/21/13	
Zinc, Total Recoverable	6010C	**7**	**BJ**	ug/L	20	2	1	10/23/13 23:42	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 10:30
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW8d	**Units:**	ug/L
Lab Code:	J1306214-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 03:07	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 03:07	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 03:07	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 03:07	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 03:07	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 03:07	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/23/13 03:07	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 03:07	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/23/13 03:07	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 03:07	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 03:07	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 03:07	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 03:07	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 03:07	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/23/13 03:07	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/23/13 03:07	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 03:07	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/23/13 03:07	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 03:07	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 03:07	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 03:07	
Acetone	5.6 U	100	5.6	1	10/23/13 03:07	
Acetonitrile	18 U	55	18	1	10/23/13 03:07	
Acrolein	28 U	53	28	1	10/23/13 03:07	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 03:07	
Allyl Chloride	0.39 U	10	0.39	1	10/23/13 03:07	
Benzene	0.21 U	1.0	0.21	1	10/23/13 03:07	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 03:07	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 03:07	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 03:07	
Bromomethane	0.23 U	10	0.23	1	10/23/13 03:07	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 03:07	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 03:07	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 03:07	
Chloroethane	0.52 U	10	0.52	1	10/23/13 03:07	
Chloroform	**0.43 J**	5.0	0.35	1	10/23/13 03:07	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 03:07	
Chloroprene	0.12 U	20	0.12	1	10/23/13 03:07	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 03:07	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 03:07	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 03:07	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 03:07	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/23/13 03:07	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 10:30
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW8d	**Units:**	ug/L
Lab Code:	J1306214-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/23/13 03:07	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 03:07	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/23/13 03:07	
Iodomethane	2.7 U	10	2.7	1	10/23/13 03:07	
Isobutyl Alcohol	43 U	100	43	1	10/23/13 03:07	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 03:07	
Methacrylonitrile	1.6 U	100	1.6	1	10/23/13 03:07	
Methyl Methacrylate	0.49 U	30	0.49	1	10/23/13 03:07	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 03:07	
Naphthalene	0.38 U	10	0.38	1	10/23/13 03:07	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 03:07	
Propionitrile	3.9 U	150	3.9	1	10/23/13 03:07	
Styrene	0.29 U	1.0	0.29	1	10/23/13 03:07	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 03:07	
Toluene	0.19 U	1.0	0.19	1	10/23/13 03:07	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 03:07	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 03:07	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 03:07	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 03:07	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 03:07	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 03:07	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 03:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	72 - 121	10/23/13 03:07	
4-Bromofluorobenzene	107	86 - 113	10/23/13 03:07	
Dibromofluoromethane	97	86 - 112	10/23/13 03:07	
Toluene-d8	93	88 - 115	10/23/13 03:07	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 10:30
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW8d	**Basis:**	NA
Lab Code:	J1306214-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 04:55	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 04:55	10/21/13	
Barium, Total Recoverable	6010C	**40**	**J**	ug/L	100	0.3	1	10/23/13 23:46	10/21/13	
Beryllium, Total Recoverable	6020A	**0.2**	**J**	ug/L	1.0	0.04	1	10/22/13 04:55	10/21/13	
Cadmium, Total Recoverable	6020A	**0.3**	**J**	ug/L	1.0	0.10	1	10/22/13 04:55	10/21/13	
Chromium, Total Recoverable	6020A	**6**	**J**	ug/L	10	0.2	1	10/22/13 04:55	10/21/13	
Cobalt, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.03	1	10/22/13 04:55	10/21/13	
Copper, Total Recoverable	6020A	**6**	**J**	ug/L	10	0.3	1	10/22/13 04:55	10/21/13	
Lead, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/22/13 04:55	10/21/13	
Mercury, Total	7470A	**0.03**	**J**	ug/L	0.20	0.02	1	10/29/13 16:50	10/26/13	
Nickel, Total Recoverable	6020A	**2**	**J**	ug/L	50	0.5	1	10/22/13 04:55	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 04:55	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 23:45	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 04:55	10/21/13	
Vanadium, Total Recoverable	6010C	**7**	**J**	ug/L	25	2	1	10/23/13 23:45	10/21/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/23/13 23:46	10/21/13	

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 07:25
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW11d	**Units:**	ug/L
Lab Code:	J1306214-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 03:33	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 03:33	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 03:33	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 03:33	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 03:33	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 03:33	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/23/13 03:33	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 03:33	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/23/13 03:33	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 03:33	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 03:33	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 03:33	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 03:33	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 03:33	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/23/13 03:33	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/23/13 03:33	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 03:33	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/23/13 03:33	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 03:33	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 03:33	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 03:33	
Acetone	5.6 U	100	5.6	1	10/23/13 03:33	
Acetonitrile	18 U	55	18	1	10/23/13 03:33	
Acrolein	28 U	53	28	1	10/23/13 03:33	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 03:33	
Allyl Chloride	0.39 U	10	0.39	1	10/23/13 03:33	
Benzene	0.21 U	1.0	0.21	1	10/23/13 03:33	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 03:33	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 03:33	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 03:33	
Bromomethane	0.23 U	10	0.23	1	10/23/13 03:33	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 03:33	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 03:33	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 03:33	
Chloroethane	0.52 U	10	0.52	1	10/23/13 03:33	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 03:33	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 03:33	
Chloroprene	0.12 U	20	0.12	1	10/23/13 03:33	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 03:33	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 03:33	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 03:33	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 03:33	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/23/13 03:33	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 07:25
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW11d	**Units:**	ug/L
Lab Code:	J1306214-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/23/13 03:33	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 03:33	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/23/13 03:33	
Iodomethane	2.7 U	10	2.7	1	10/23/13 03:33	
Isobutyl Alcohol	43 U	100	43	1	10/23/13 03:33	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 03:33	
Methacrylonitrile	1.6 U	100	1.6	1	10/23/13 03:33	
Methyl Methacrylate	0.49 U	30	0.49	1	10/23/13 03:33	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 03:33	
Naphthalene	0.38 U	10	0.38	1	10/23/13 03:33	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 03:33	
Propionitrile	3.9 U	150	3.9	1	10/23/13 03:33	
Styrene	0.29 U	1.0	0.29	1	10/23/13 03:33	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 03:33	
Toluene	0.19 U	1.0	0.19	1	10/23/13 03:33	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 03:33	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 03:33	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 03:33	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 03:33	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 03:33	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 03:33	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 03:33	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	72 - 121	10/23/13 03:33	
4-Bromofluorobenzene	106	86 - 113	10/23/13 03:33	
Dibromofluoromethane	96	86 - 112	10/23/13 03:33	
Toluene-d8	95	88 - 115	10/23/13 03:33	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 07:25
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW11d	**Basis:**	NA
Lab Code:	J1306214-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	**0.6**	**J**	ug/L	6.0	0.2	1	10/22/13 05:00	10/21/13	
Arsenic, Total Recoverable	6020A	**0.6**	**J**	ug/L	10	0.5	1	10/22/13 05:00	10/21/13	
Barium, Total Recoverable	6010C	**50**	**J**	ug/L	100	0.3	1	10/23/13 23:51	10/21/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 05:00	10/21/13	
Cadmium, Total Recoverable	6020A	**0.3**	**J**	ug/L	1.0	0.10	1	10/22/13 05:00	10/21/13	
Chromium, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.2	1	10/22/13 05:00	10/21/13	
Cobalt, Total Recoverable	6020A	**0.2**	**J**	ug/L	10	0.03	1	10/22/13 05:00	10/21/13	
Copper, Total Recoverable	6020A	**1**	**J**	ug/L	10	0.3	1	10/22/13 05:00	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 05:00	10/21/13	
Mercury, Total	7470A	**0.02**	**J**	ug/L	0.20	0.02	1	10/29/13 16:51	10/26/13	
Nickel, Total Recoverable	6020A	**0.6**	**J**	ug/L	50	0.5	1	10/22/13 05:00	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 05:00	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 23:50	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 05:00	10/21/13	
Vanadium, Total Recoverable	6010C	**2**	**J**	ug/L	25	2	1	10/23/13 23:50	10/21/13	
Zinc, Total Recoverable	6010C	**2**	**BJ**	ug/L	20	2	1	10/23/13 23:51	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:00
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW23d	**Units:**	ug/L
Lab Code:	J1306214-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 04:01	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 04:01	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 04:01	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 04:01	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 04:01	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 04:01	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/23/13 04:01	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 04:01	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/23/13 04:01	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 04:01	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 04:01	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 04:01	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 04:01	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 04:01	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/23/13 04:01	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/23/13 04:01	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 04:01	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/23/13 04:01	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 04:01	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 04:01	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 04:01	
Acetone	5.6 U	100	5.6	1	10/23/13 04:01	
Acetonitrile	18 U	55	18	1	10/23/13 04:01	
Acrolein	28 U	53	28	1	10/23/13 04:01	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 04:01	
Allyl Chloride	0.39 U	10	0.39	1	10/23/13 04:01	
Benzene	0.21 U	1.0	0.21	1	10/23/13 04:01	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 04:01	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 04:01	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 04:01	
Bromomethane	0.23 U	10	0.23	1	10/23/13 04:01	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 04:01	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 04:01	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 04:01	
Chloroethane	0.52 U	10	0.52	1	10/23/13 04:01	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 04:01	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 04:01	
Chloroprene	0.12 U	20	0.12	1	10/23/13 04:01	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 04:01	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 04:01	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 04:01	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 04:01	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/23/13 04:01	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:00
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW23d	**Units:**	ug/L
Lab Code:	J1306214-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/23/13 04:01	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 04:01	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/23/13 04:01	
Iodomethane	2.7 U	10	2.7	1	10/23/13 04:01	
Isobutyl Alcohol	43 U	100	43	1	10/23/13 04:01	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 04:01	
Methacrylonitrile	1.6 U	100	1.6	1	10/23/13 04:01	
Methyl Methacrylate	0.49 U	30	0.49	1	10/23/13 04:01	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 04:01	
Naphthalene	0.38 U	10	0.38	1	10/23/13 04:01	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 04:01	
Propionitrile	3.9 U	150	3.9	1	10/23/13 04:01	
Styrene	0.29 U	1.0	0.29	1	10/23/13 04:01	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 04:01	
Toluene	0.19 U	1.0	0.19	1	10/23/13 04:01	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 04:01	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 04:01	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 04:01	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 04:01	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 04:01	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 04:01	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 04:01	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	93	72 - 121	10/23/13 04:01	
4-Bromofluorobenzene	107	86 - 113	10/23/13 04:01	
Dibromofluoromethane	96	86 - 112	10/23/13 04:01	
Toluene-d8	95	88 - 115	10/23/13 04:01	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:00
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW23d	**Basis:**	NA
Lab Code:	J1306214-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	**1.7**	**J**	ug/L	6.0	0.2	1	10/22/13 05:05	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 05:05	10/21/13	
Barium, Total Recoverable	6010C	**40**	**J**	ug/L	100	0.3	1	10/23/13 23:55	10/21/13	
Beryllium, Total Recoverable	6020A	**0.05**	**J**	ug/L	1.0	0.04	1	10/22/13 05:05	10/21/13	
Cadmium, Total Recoverable	6020A	**0.7**	**J**	ug/L	1.0	0.10	1	10/22/13 05:05	10/21/13	
Chromium, Total Recoverable	6020A	**2**	**J**	ug/L	10	0.2	1	10/22/13 05:05	10/21/13	
Cobalt, Total Recoverable	6020A	**0.3**	**J**	ug/L	10	0.03	1	10/22/13 05:05	10/21/13	
Copper, Total Recoverable	6020A	**3**	**J**	ug/L	10	0.3	1	10/22/13 05:05	10/21/13	
Lead, Total Recoverable	6020A	**0.3**	**J**	ug/L	10	0.2	1	10/22/13 05:05	10/21/13	
Mercury, Total	7470A	**0.02**	**J**	ug/L	0.20	0.02	1	10/29/13 16:53	10/26/13	
Nickel, Total Recoverable	6020A	**1.0**	**J**	ug/L	50	0.5	1	10/22/13 05:05	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 05:05	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 23:55	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 05:05	10/21/13	
Vanadium, Total Recoverable	6010C	**3**	**J**	ug/L	25	2	1	10/23/13 23:55	10/21/13	
Zinc, Total Recoverable	6010C	**3**	**BJ**	ug/L	20	2	1	10/23/13 23:55	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:05
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW29d	**Units:**	ug/L
Lab Code:	J1306214-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 04:29	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 04:29	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 04:29	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 04:29	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 04:29	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 04:29	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/23/13 04:29	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 04:29	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/23/13 04:29	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 04:29	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 04:29	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 04:29	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 04:29	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 04:29	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/23/13 04:29	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/23/13 04:29	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 04:29	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/23/13 04:29	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 04:29	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 04:29	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 04:29	
Acetone	5.6 U	100	5.6	1	10/23/13 04:29	
Acetonitrile	18 U	55	18	1	10/23/13 04:29	
Acrolein	28 U	53	28	1	10/23/13 04:29	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 04:29	
Allyl Chloride	0.39 U	10	0.39	1	10/23/13 04:29	
Benzene	0.21 U	1.0	0.21	1	10/23/13 04:29	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 04:29	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 04:29	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 04:29	
Bromomethane	0.23 U	10	0.23	1	10/23/13 04:29	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 04:29	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 04:29	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 04:29	
Chloroethane	0.52 U	10	0.52	1	10/23/13 04:29	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 04:29	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 04:29	
Chloroprene	0.12 U	20	0.12	1	10/23/13 04:29	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 04:29	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 04:29	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 04:29	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 04:29	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/23/13 04:29	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:05
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW29d	**Units:**	ug/L
Lab Code:	J1306214-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/23/13 04:29	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 04:29	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/23/13 04:29	
Iodomethane	2.7 U	10	2.7	1	10/23/13 04:29	
Isobutyl Alcohol	43 U	100	43	1	10/23/13 04:29	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 04:29	
Methacrylonitrile	1.6 U	100	1.6	1	10/23/13 04:29	
Methyl Methacrylate	0.49 U	30	0.49	1	10/23/13 04:29	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 04:29	
Naphthalene	0.38 U	10	0.38	1	10/23/13 04:29	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 04:29	
Propionitrile	3.9 U	150	3.9	1	10/23/13 04:29	
Styrene	0.29 U	1.0	0.29	1	10/23/13 04:29	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 04:29	
Toluene	0.19 U	1.0	0.19	1	10/23/13 04:29	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 04:29	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 04:29	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 04:29	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 04:29	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 04:29	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 04:29	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 04:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	91	72 - 121	10/23/13 04:29	
4-Bromofluorobenzene	103	86 - 113	10/23/13 04:29	
Dibromofluoromethane	94	86 - 112	10/23/13 04:29	
Toluene-d8	97	88 - 115	10/23/13 04:29	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:05
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW29d	**Basis:**	NA
Lab Code:	J1306214-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 05:10	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 05:10	10/21/13	
Barium, Total Recoverable	6010C	**40**	**J**	ug/L	100	0.3	1	10/24/13 00:00	10/21/13	
Beryllium, Total Recoverable	6020A	**0.1**	**J**	ug/L	1.0	0.04	1	10/22/13 05:10	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 05:10	10/21/13	
Chromium, Total Recoverable	6020A	**4**	**J**	ug/L	10	0.2	1	10/22/13 05:10	10/21/13	
Cobalt, Total Recoverable	6020A	**0.2**	**J**	ug/L	10	0.03	1	10/22/13 05:10	10/21/13	
Copper, Total Recoverable	6020A	**3**	**J**	ug/L	10	0.3	1	10/22/13 05:10	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 05:10	10/21/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/29/13 16:58	10/26/13	
Nickel, Total Recoverable	6020A	**1.0**	**J**	ug/L	50	0.5	1	10/22/13 05:10	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 05:10	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/24/13 00:00	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 05:10	10/21/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/24/13 00:00	10/21/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/24/13 00:00	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:35
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW36d	**Units:**	ug/L
Lab Code:	J1306214-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 04:56	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 04:56	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 04:56	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 04:56	
1,1-Dichloroethane (1,1-DCA)	**7.9**	5.0	0.30	1	10/23/13 04:56	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 04:56	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/23/13 04:56	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 04:56	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/23/13 04:56	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 04:56	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 04:56	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 04:56	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 04:56	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 04:56	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/23/13 04:56	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/23/13 04:56	
1,4-Dichlorobenzene	**0.63 J**	1.0	0.16	1	10/23/13 04:56	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/23/13 04:56	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 04:56	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 04:56	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 04:56	
Acetone	5.6 U	100	5.6	1	10/23/13 04:56	
Acetonitrile	18 U	55	18	1	10/23/13 04:56	
Acrolein	28 U	53	28	1	10/23/13 04:56	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 04:56	
Allyl Chloride	0.39 U	10	0.39	1	10/23/13 04:56	
Benzene	**0.26 J**	1.0	0.21	1	10/23/13 04:56	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 04:56	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 04:56	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 04:56	
Bromomethane	0.23 U	10	0.23	1	10/23/13 04:56	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 04:56	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 04:56	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 04:56	
Chloroethane	0.52 U	10	0.52	1	10/23/13 04:56	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 04:56	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 04:56	
Chloroprene	0.12 U	20	0.12	1	10/23/13 04:56	
cis-1,2-Dichloroethene	**5.5**	5.0	0.36	1	10/23/13 04:56	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 04:56	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 04:56	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 04:56	
Dichlorodifluoromethane	**1.7 J**	20	0.23	1	10/23/13 04:56	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:35
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW36d	**Units:**	ug/L
Lab Code:	J1306214-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/23/13 04:56	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 04:56	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/23/13 04:56	
Iodomethane	2.7 U	10	2.7	1	10/23/13 04:56	
Isobutyl Alcohol	43 U	100	43	1	10/23/13 04:56	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 04:56	
Methacrylonitrile	1.6 U	100	1.6	1	10/23/13 04:56	
Methyl Methacrylate	0.49 U	30	0.49	1	10/23/13 04:56	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 04:56	
Naphthalene	0.38 U	10	0.38	1	10/23/13 04:56	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 04:56	
Propionitrile	3.9 U	150	3.9	1	10/23/13 04:56	
Styrene	0.29 U	1.0	0.29	1	10/23/13 04:56	
Tetrachloroethene (PCE)	**0.63 J**	1.0	0.22	1	10/23/13 04:56	
Toluene	0.19 U	1.0	0.19	1	10/23/13 04:56	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 04:56	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 04:56	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 04:56	
Trichloroethene (TCE)	**1.1**	1.0	0.36	1	10/23/13 04:56	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 04:56	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 04:56	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 04:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	91	72 - 121	10/23/13 04:56	
4-Bromofluorobenzene	106	86 - 113	10/23/13 04:56	
Dibromofluoromethane	95	86 - 112	10/23/13 04:56	
Toluene-d8	94	88 - 115	10/23/13 04:56	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 08:35
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-MW36d	**Basis:**	NA
Lab Code:	J1306214-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 05:15	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 05:15	10/21/13	
Barium, Total Recoverable	6010C	**60**	**J**	ug/L	100	0.3	1	10/24/13 00:14	10/21/13	
Beryllium, Total Recoverable	6020A	**0.04**	**J**	ug/L	1.0	0.04	1	10/22/13 05:15	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 05:15	10/21/13	
Chromium, Total Recoverable	6020A	**3**	**J**	ug/L	10	0.2	1	10/22/13 05:15	10/21/13	
Cobalt, Total Recoverable	6020A	**0.5**	**J**	ug/L	10	0.03	1	10/22/13 05:15	10/21/13	
Copper, Total Recoverable	6020A	**10**	**J**	ug/L	10	0.3	1	10/22/13 05:15	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 05:15	10/21/13	
Mercury, Total	7470A	**0.03**	**J**	ug/L	0.20	0.02	1	10/29/13 16:59	10/26/13	
Nickel, Total Recoverable	6020A	**3**	**J**	ug/L	50	0.5	1	10/22/13 05:15	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 05:15	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/24/13 00:14	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 05:15	10/21/13	
Vanadium, Total Recoverable	6010C	**3**	**J**	ug/L	25	2	1	10/24/13 00:14	10/21/13	
Zinc, Total Recoverable	6010C	2	U	ug/L	20	2	1	10/24/13 00:14	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:40
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-EQ Blank	**Units:**	ug/L
Lab Code:	J1306214-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 05:24	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 05:24	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 05:24	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 05:24	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 05:24	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 05:24	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/23/13 05:24	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 05:24	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/23/13 05:24	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 05:24	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 05:24	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 05:24	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 05:24	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 05:24	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/23/13 05:24	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/23/13 05:24	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 05:24	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/23/13 05:24	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 05:24	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 05:24	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 05:24	
Acetone	5.6 U	100	5.6	1	10/23/13 05:24	
Acetonitrile	18 U	55	18	1	10/23/13 05:24	
Acrolein	28 U	53	28	1	10/23/13 05:24	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 05:24	
Allyl Chloride	0.39 U	10	0.39	1	10/23/13 05:24	
Benzene	0.21 U	1.0	0.21	1	10/23/13 05:24	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 05:24	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 05:24	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 05:24	
Bromomethane	0.23 U	10	0.23	1	10/23/13 05:24	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 05:24	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 05:24	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 05:24	
Chloroethane	0.52 U	10	0.52	1	10/23/13 05:24	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 05:24	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 05:24	
Chloroprene	0.12 U	20	0.12	1	10/23/13 05:24	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 05:24	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 05:24	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 05:24	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 05:24	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/23/13 05:24	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:40
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-EQ Blank	**Units:**	ug/L
Lab Code:	J1306214-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/23/13 05:24	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 05:24	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/23/13 05:24	
Iodomethane	2.7 U	10	2.7	1	10/23/13 05:24	
Isobutyl Alcohol	43 U	100	43	1	10/23/13 05:24	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 05:24	
Methacrylonitrile	1.6 U	100	1.6	1	10/23/13 05:24	
Methyl Methacrylate	0.49 U	30	0.49	1	10/23/13 05:24	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 05:24	
Naphthalene	0.38 U	10	0.38	1	10/23/13 05:24	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 05:24	
Propionitrile	3.9 U	150	3.9	1	10/23/13 05:24	
Styrene	0.29 U	1.0	0.29	1	10/23/13 05:24	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 05:24	
Toluene	0.19 U	1.0	0.19	1	10/23/13 05:24	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 05:24	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 05:24	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 05:24	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 05:24	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 05:24	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 05:24	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 05:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	91	72 - 121	10/23/13 05:24	
4-Bromofluorobenzene	103	86 - 113	10/23/13 05:24	
Dibromofluoromethane	96	86 - 112	10/23/13 05:24	
Toluene-d8	96	88 - 115	10/23/13 05:24	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 11:40
Sample Matrix:	Ground Water	**Date Received:**	10/18/13 09:55
Sample Name:	9209-EQ Blank	**Basis:**	NA
Lab Code:	J1306214-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 05:20	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 05:20	10/21/13	
Barium, Total Recoverable	6010C	0.3	U	ug/L	100	0.3	1	10/24/13 00:19	10/21/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 05:20	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 05:20	10/21/13	
Chromium, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 05:20	10/21/13	
Cobalt, Total Recoverable	6020A	0.03	U	ug/L	10	0.03	1	10/22/13 05:20	10/21/13	
Copper, Total Recoverable	6020A	**0.6**	**J**	ug/L	10	0.3	1	10/22/13 05:20	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 05:20	10/21/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/29/13 17:00	10/26/13	
Nickel, Total Recoverable	6020A	0.5	U	ug/L	50	0.5	1	10/22/13 05:20	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 05:20	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/24/13 00:19	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 05:20	10/21/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/24/13 00:19	10/21/13	
Zinc, Total Recoverable	6010C	**2**	**BJ**	ug/L	20	2	1	10/24/13 00:19	10/21/13	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 00:00
Sample Matrix:	Water	**Date Received:**	10/18/13 09:55
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1306214-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/23/13 05:51	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/23/13 05:51	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/23/13 05:51	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/23/13 05:51	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/23/13 05:51	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/23/13 05:51	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/23/13 05:51	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/23/13 05:51	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/23/13 05:51	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/23/13 05:51	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/23/13 05:51	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/23/13 05:51	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/23/13 05:51	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/23/13 05:51	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/23/13 05:51	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/23/13 05:51	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/23/13 05:51	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/23/13 05:51	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/23/13 05:51	
2-Hexanone	2.2 U	50	2.2	1	10/23/13 05:51	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/23/13 05:51	
Acetone	5.6 U	100	5.6	1	10/23/13 05:51	
Acetonitrile	18 U	55	18	1	10/23/13 05:51	
Acrolein	28 U	53	28	1	10/23/13 05:51	
Acrylonitrile	1.5 U	200	1.5	1	10/23/13 05:51	
Allyl Chloride	0.39 U	10	0.39	1	10/23/13 05:51	
Benzene	0.21 U	1.0	0.21	1	10/23/13 05:51	
Bromochloromethane	0.27 U	5.0	0.27	1	10/23/13 05:51	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/23/13 05:51	
Bromoform	0.42 U	3.0	0.42	1	10/23/13 05:51	
Bromomethane	0.23 U	10	0.23	1	10/23/13 05:51	
Carbon Disulfide	2.4 U	100	2.4	1	10/23/13 05:51	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/23/13 05:51	
Chlorobenzene	0.16 U	3.0	0.16	1	10/23/13 05:51	
Chloroethane	0.52 U	10	0.52	1	10/23/13 05:51	
Chloroform	0.35 U	5.0	0.35	1	10/23/13 05:51	
Chloromethane	0.36 U	1.0	0.36	1	10/23/13 05:51	
Chloroprene	0.12 U	20	0.12	1	10/23/13 05:51	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/23/13 05:51	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/23/13 05:51	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/23/13 05:51	
Dibromomethane	0.36 U	10	0.36	1	10/23/13 05:51	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/23/13 05:51	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	10/17/13 00:00
Sample Matrix:	Water	**Date Received:**	10/18/13 09:55
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1306214-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/23/13 05:51	
Ethylbenzene	0.21 U	1.0	0.21	1	10/23/13 05:51	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/23/13 05:51	
Iodomethane	2.7 U	10	2.7	1	10/23/13 05:51	
Isobutyl Alcohol	43 U	100	43	1	10/23/13 05:51	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/23/13 05:51	
Methacrylonitrile	1.6 U	100	1.6	1	10/23/13 05:51	
Methyl Methacrylate	0.49 U	30	0.49	1	10/23/13 05:51	
Methylene Chloride	0.21 U	5.0	0.21	1	10/23/13 05:51	
Naphthalene	0.38 U	10	0.38	1	10/23/13 05:51	
o-Xylene	0.14 U	1.0	0.14	1	10/23/13 05:51	
Propionitrile	3.9 U	150	3.9	1	10/23/13 05:51	
Styrene	0.29 U	1.0	0.29	1	10/23/13 05:51	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/23/13 05:51	
Toluene	0.19 U	1.0	0.19	1	10/23/13 05:51	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/23/13 05:51	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/23/13 05:51	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/23/13 05:51	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/23/13 05:51	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/23/13 05:51	
Vinyl Acetate	1.9 U	50	1.9	1	10/23/13 05:51	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/23/13 05:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	72 - 121	10/23/13 05:51	
4-Bromofluorobenzene	106	86 - 113	10/23/13 05:51	
Dibromofluoromethane	96	86 - 112	10/23/13 05:51	
Toluene-d8	94	88 - 115	10/23/13 05:51	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1307463-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	5.0	0.19	1	10/22/13 23:53	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/22/13 23:53	
1,1,2,2-Tetrachloroethane	0.29 U	3.0	0.29	1	10/22/13 23:53	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/22/13 23:53	
1,1-Dichloroethane (1,1-DCA)	0.30 U	5.0	0.30	1	10/22/13 23:53	
1,1-Dichloroethene (1,1-DCE)	0.16 U	5.0	0.16	1	10/22/13 23:53	
1,1-Dichloropropene	0.32 U	5.0	0.32	1	10/22/13 23:53	
1,2,3-Trichloropropane	0.42 U	2.0	0.42	1	10/22/13 23:53	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/22/13 23:53	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	13	2.3	1	10/22/13 23:53	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/22/13 23:53	
1,2-Dichlorobenzene	0.48 U	5.0	0.48	1	10/22/13 23:53	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/22/13 23:53	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/22/13 23:53	
1,3-Dichlorobenzene	0.22 U	5.0	0.22	1	10/22/13 23:53	
1,3-Dichloropropane	0.18 U	1.0	0.18	1	10/22/13 23:53	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/22/13 23:53	
2,2-Dichloropropane	0.46 U	15	0.46	1	10/22/13 23:53	
2-Butanone (MEK)	3.8 U	100	3.8	1	10/22/13 23:53	
2-Hexanone	2.2 U	50	2.2	1	10/22/13 23:53	
4-Methyl-2-pentanone (MIBK)	1.1 U	100	1.1	1	10/22/13 23:53	
Acetone	5.6 U	100	5.6	1	10/22/13 23:53	
Acetonitrile	18 U	55	18	1	10/22/13 23:53	
Acrolein	28 U	53	28	1	10/22/13 23:53	
Acrylonitrile	1.5 U	200	1.5	1	10/22/13 23:53	
Allyl Chloride	0.39 U	10	0.39	1	10/22/13 23:53	
Benzene	0.21 U	1.0	0.21	1	10/22/13 23:53	
Bromochloromethane	0.27 U	5.0	0.27	1	10/22/13 23:53	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/22/13 23:53	
Bromoform	0.42 U	3.0	0.42	1	10/22/13 23:53	
Bromomethane	0.23 U	10	0.23	1	10/22/13 23:53	
Carbon Disulfide	2.4 U	100	2.4	1	10/22/13 23:53	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/22/13 23:53	
Chlorobenzene	0.16 U	3.0	0.16	1	10/22/13 23:53	
Chloroethane	0.52 U	10	0.52	1	10/22/13 23:53	
Chloroform	0.35 U	5.0	0.35	1	10/22/13 23:53	
Chloromethane	0.36 U	1.0	0.36	1	10/22/13 23:53	
Chloroprene	0.12 U	20	0.12	1	10/22/13 23:53	
cis-1,2-Dichloroethene	0.36 U	5.0	0.36	1	10/22/13 23:53	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/22/13 23:53	
Dibromochloromethane	0.21 U	3.0	0.21	1	10/22/13 23:53	
Dibromomethane	0.36 U	10	0.36	1	10/22/13 23:53	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/22/13 23:53	

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Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1307463-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Ethyl Methacrylate	0.35 U	10	0.35	1	10/22/13 23:53	
Ethylbenzene	0.21 U	1.0	0.21	1	10/22/13 23:53	
Hexachlorobutadiene	0.60 U	10	0.60	1	10/22/13 23:53	
Iodomethane	2.7 U	10	2.7	1	10/22/13 23:53	
Isobutyl Alcohol	43 U	100	43	1	10/22/13 23:53	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/22/13 23:53	
Methacrylonitrile	1.6 U	100	1.6	1	10/22/13 23:53	
Methyl Methacrylate	0.49 U	30	0.49	1	10/22/13 23:53	
Methylene Chloride	0.21 U	5.0	0.21	1	10/22/13 23:53	
Naphthalene	0.38 U	10	0.38	1	10/22/13 23:53	
o-Xylene	0.14 U	1.0	0.14	1	10/22/13 23:53	
Propionitrile	3.9 U	150	3.9	1	10/22/13 23:53	
Styrene	0.29 U	1.0	0.29	1	10/22/13 23:53	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/22/13 23:53	
Toluene	0.19 U	1.0	0.19	1	10/22/13 23:53	
trans-1,2-Dichloroethene	0.19 U	5.0	0.19	1	10/22/13 23:53	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/22/13 23:53	
trans-1,4-Dichloro-2-butene	2.2 U	100	2.2	1	10/22/13 23:53	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/22/13 23:53	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/22/13 23:53	
Vinyl Acetate	1.9 U	50	1.9	1	10/22/13 23:53	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/22/13 23:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	72 - 121	10/22/13 23:53	
4-Bromofluorobenzene	105	86 - 113	10/22/13 23:53	
Dibromofluoromethane	95	86 - 112	10/22/13 23:53	
Toluene-d8	95	88 - 115	10/22/13 23:53	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1306214-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total Recoverable	6020A	0.2	U	ug/L	6.0	0.2	1	10/22/13 03:34	10/21/13	
Arsenic, Total Recoverable	6020A	0.5	U	ug/L	10	0.5	1	10/22/13 03:34	10/21/13	
Barium, Total Recoverable	6010C	**1**	**J**	ug/L	100	0.3	1	10/23/13 22:38	10/21/13	
Beryllium, Total Recoverable	6020A	0.04	U	ug/L	1.0	0.04	1	10/22/13 03:34	10/21/13	
Cadmium, Total Recoverable	6020A	0.10	U	ug/L	1.0	0.10	1	10/22/13 03:34	10/21/13	
Chromium, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 03:34	10/21/13	
Cobalt, Total Recoverable	6020A	0.03	U	ug/L	10	0.03	1	10/22/13 03:34	10/21/13	
Copper, Total Recoverable	6020A	0.3	U	ug/L	10	0.3	1	10/22/13 03:34	10/21/13	
Lead, Total Recoverable	6020A	0.2	U	ug/L	10	0.2	1	10/22/13 03:34	10/21/13	
Mercury, Total	7470A	0.02	U	ug/L	0.20	0.02	1	10/29/13 16:46	10/26/13	
Nickel, Total Recoverable	6020A	0.5	U	ug/L	50	0.5	1	10/22/13 03:34	10/21/13	
Selenium, Total Recoverable	6020A	2	U	ug/L	10	2	1	10/22/13 03:34	10/21/13	
Silver, Total Recoverable	6010C	2	U	ug/L	10	2	1	10/23/13 22:37	10/21/13	
Thallium, Total Recoverable	6020A	0.05	U	ug/L	5.5	0.05	1	10/22/13 03:34	10/21/13	
Vanadium, Total Recoverable	6010C	2	U	ug/L	25	2	1	10/23/13 22:37	10/21/13	
Zinc, Total Recoverable	6010C	**3**	**J**	ug/L	20	2	1	10/23/13 22:38	10/21/13	

Client: Wake County Solid Waste Management **Service Request:** J1306214
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4	4-Bromofluorobenzene	Dibromofluoromethane
		72 - 121	86 - 113	86 - 112
9209-MW6d	J1306214-001	96	104	97
9209-MW8d	J1306214-002	96	107	97
9209-MW11d	J1306214-003	92	106	96
9209-MW23d	J1306214-004	93	107	96
9209-MW29d	J1306214-005	91	103	94
9209-MW36d	J1306214-006	91	106	95
9209-EQ Blank	J1306214-007	91	103	96
Trip Blank	J1306214-008	94	106	96
Lab Control Sample	JQ1307463-01	93	94	96
Method Blank	JQ1307463-02	95	105	95

Client: Wake County Solid Waste Management **Service Request:** J1306214
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
9209-MW6d	J1306214-001	94
9209-MW8d	J1306214-002	93
9209-MW11d	J1306214-003	95
9209-MW23d	J1306214-004	95
9209-MW29d	J1306214-005	97
9209-MW36d	J1306214-006	94
9209-EQ Blank	J1306214-007	96
Trip Blank	J1306214-008	94
Lab Control Sample	JQ1307463-01	93
Method Blank	JQ1307463-02	95

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/22/13
Sample Matrix:	Water		

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	364589

Lab Control Sample
JQ1307463-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	18.1	20.0	91	77-118
1,1,1-Trichloroethane (TCA)	20.8	20.0	104	70-122
1,1,2,2-Tetrachloroethane	18.1	20.0	91	66-135
1,1,2-Trichloroethane	18.0	20.0	90	75-122
1,1-Dichloroethane (1,1-DCA)	20.2	20.0	101	79-117
1,1-Dichloroethene (1,1-DCE)	20.7	20.0	103	72-128
1,1-Dichloropropene	20.5	20.0	102	77-120
1,2,3-Trichloropropane	17.9	20.0	89	70-123
1,2,4-Trichlorobenzene	18.7	20.0	93	66-127
1,2-Dibromo-3-chloropropane (DBCP)	18.1	20.0	91	60-122
1,2-Dibromoethane (EDB)	17.8	20.0	89	76-118
1,2-Dichlorobenzene	18.0	20.0	90	81-115
1,2-Dichloroethane	20.0	20.0	100	70-117
1,2-Dichloropropane	20.2	20.0	101	79-117
1,3-Dichlorobenzene	19.3	20.0	96	82-116
1,3-Dichloropropane	18.3	20.0	92	77-120
1,4-Dichlorobenzene	18.5	20.0	92	82-115
2,2-Dichloropropane	20.1	20.0	101	58-137
2-Butanone (MEK)	96.0	100	96	62-138
2-Hexanone	87.2	100	87	74-127
4-Methyl-2-pentanone (MIBK)	89.7	100	90	77-120
Acetone	101	100	101	42-161
Acetonitrile	105	100	105	42-149
Acrolein	30.7	40.0	77	10-135
Acrylonitrile	98.9	100	99	63-132
Allyl Chloride	20.3	20.0	102	68-125
Benzene	20.2	20.0	101	80-117
Bromochloromethane	19.0	20.0	95	78-118
Bromodichloromethane	19.8	20.0	99	75-118
Bromoform	17.1	20.0	85	63-121
Bromomethane	20.0	20.0	100	31-153
Carbon Disulfide	98.9	100	99	72-128
Carbon Tetrachloride	20.2	20.0	101	67-124
Chlorobenzene	18.1	20.0	91	83-118
Chloroethane	20.0	20.0	100	68-132
Chloroform	20.1	20.0	101	77-116
Chloromethane	19.8	20.0	99	60-128
Chloroprene	20.5	20.0	102	70-123
cis-1,2-Dichloroethene	19.9	20.0	100	78-117
cis-1,3-Dichloropropene	18.0	20.0	90	80-119
Dibromochloromethane	17.4	20.0	87	74-121

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Wake County Solid Waste Management	**Service Request:**	J1306214
Project:	North Wake Unlined Landfill	**Date Analyzed:**	10/22/13
Sample Matrix:	Water		

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	364589

Lab Control Sample
JQ1307463-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Dibromomethane	19.7	20.0	98	76-117
Dichlorodifluoromethane	18.3	20.0	91	49-132
Ethyl Methacrylate	18.2	20.0	91	72-126
Ethylbenzene	19.4	20.0	97	82-119
Hexachlorobutadiene	20.3	20.0	102	65-132
Iodomethane	98.1	100	98	51-137
Isobutyl Alcohol	380	400	95	32-145
m,p-Xylenes	37.1	40.0	93	79-122
Methacrylonitrile	18.8	20.0	94	68-129
Methyl Methacrylate	18.3	20.0	92	73-128
Methylene Chloride	20.2	20.0	101	75-123
Naphthalene	18.9	20.0	95	53-146
o-Xylene	18.6	20.0	93	80-119
Propionitrile	93.5	100	93	59-134
Styrene	18.8	20.0	94	80-121
Tetrachloroethene (PCE)	18.4	20.0	92	75-126
Toluene	19.0	20.0	95	52-152
trans-1,2-Dichloroethene	19.9	20.0	100	75-121
trans-1,3-Dichloropropene	17.1	20.0	85	76-118
trans-1,4-Dichloro-2-butene	11.3	20.0	57	10-198
Trichloroethene (TCE)	20.2	20.0	101	78-122
Trichlorofluoromethane	20.9	20.0	104	58-134
Vinyl Acetate	92.2	100	92	36-169
Vinyl Chloride	20.0	20.0	100	69-138

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Wake County Solid Waste Management
Project: North Wake Unlined Landfill
Sample Matrix: Ground Water

Service Request:J1306214
Date Analyzed:10/22/13 - 10/29/13

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
J1306214-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony, Total Recoverable	6020A	52.1	50.0	104	80-120
Arsenic, Total Recoverable	6020A	51.4	50	103	80-120
Barium, Total Recoverable	6010C	514	500	103	80-120
Beryllium, Total Recoverable	6020A	24.4	25.0	98	80-120
Cadmium, Total Recoverable	6020A	20.7	20.0	103	80-120
Chromium, Total Recoverable	6020A	51.5	50	103	80-120
Cobalt, Total Recoverable	6020A	52.0	50	104	80-120
Copper, Total Recoverable	6020A	51.2	50	102	80-120
Lead, Total Recoverable	6020A	25.9	25	104	80-120
Mercury, Total	7470A	1.27	1.25	101	80-120
Nickel, Total Recoverable	6020A	104	100	104	80-120
Selenium, Total Recoverable	6020A	103	100	103	80-120
Silver, Total Recoverable	6010C	515	500	103	80-120
Thallium, Total Recoverable	6020A	10.2	10.0	102	80-120
Vanadium, Total Recoverable	6010C	984	1000	98	80-120
Zinc, Total Recoverable	6010C	1030	1000	103	80-120

ALS Environmental

Cooler Receipt Form

Client: CDM Smith Service Request #: J1306214

Project: N. Wake Unlined LF

Cooler received on 10.18.13 and opened on 10.18.13 GB

COURIER: ALS UPS FEDEX Client Other _____ Airbill # 803743955655

1	Were custody seals on outside of cooler?	Yes	No			
	If yes, how many and where?	#:___ on lid		other		
2	Were seals intact and signature and date correct?	Yes	No	N/A		
3	Were custody papers properly filled out?	Yes	No	N/A		
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	2.7				
5	Thermometer ID	T81				
6	Temperature Blank Present?	Yes	No			
7	Were Ice or Ice Packs present	Ice	Ice Packs	No		
8	Did all bottles arrive in good condition (unbroken, etc....)?	Yes	No	N/A		
9	Type of packing material present	Netting	Vial Holder	Bubble Wrap		
		Paper	Styrofoam	Other	N/A	
10	Were all bottle labels complete (sample ID, preservation, etc....)?	Yes	No	N/A		
11	Did all bottle labels and tags agree with custody papers?	Yes	No	N/A		
12	Were the correct bottles used for the tests indicated?	Yes	No	N/A		
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	N/A		
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2					
	Preservative additions noted below					
14	Were all samples received within analysis holding times?	Yes	No	N/A		
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No	N/A		
16	Where did the bottles originate?	ALS	Client			

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above: Trip Blank included

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Ph(904) 739-2277 / FAX (904) 739-2011

SR # J1306214
ALS Contact

Page 1 of 3

J1306214 5
CDM Smith, Inc.
North Wake Unlined Landfill

Project Name: North Wake Unlined Landfill	Project Number:
Report To: Aaron Weispfenning	Report CC:
Company/Address: CDM Smith, 5400 Glenwood Ave, Suite 300, Raleigh, NC 27612	
Phone #: 919-325-3532	FAX #:
Sampler's Signature: AW	Sampler's Printed Name: Aaron Weispfenning

ANALYSIS REQUESTED (Include Method Number a

Preservative: 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. NaHSO4; 8. Other

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS	Appendix III VOCs	Appendix I Metals+Hg	Appendix II SVOC-B2EHP Only	MNA Parameters	Dissolved Hydrogen	REMARKS
9209-MW5R				GW	19	X	X		X	X	
9209-MW6				GW	19	X	X		X	X	
9209-MW6d		10.17.13	930	GW	4	X	X				
9209-MW7				GW	4	X	X				
9209-MW8				GW	19	X	X		X	X	
9209-MW8d		10.17.13	1030	GW	4	X	X				
9209-MW9				GW	18	X	X		X		
9209-MW10				GW	18	X	X		X		
9209-MW10d				GW	4	X	X				
9209-MW11				GW	18	X	X		X		

Special Instructions/Comments:
report according to SWS guidelines, provide edd, report "J" values
- send results to weispfenningam@cdmsmith.com
2.7°C

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
Edata X Yes ___ No

INVOICE INFORMATION
P.O. #
Bill to: Wake County

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: AW	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Aaron Weispfenning	Printed Name:	Printed Name:	Printed Name: Shaver	Printed Name:	Printed Name:
Firm: CDM Smith	Firm: FedEx	Firm: FedEx	Firm: ALS	Firm:	Firm:
Date/Time: 10.17.13 1300	Date/Time:	Date/Time:	Date/Time: 10.18.13 0955	Date/Time:	Date/Time:

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Ph(904) 739-2277 / FAX (904) 739-2011

SR # J1306214
ALS Contact

J1306214 5
CDM Smith, Inc.
North Wake Unlined Landfill

Project Name: North Wake Unlined Landfill	Project Number:
Report To: Aaron Weispfenning	Report CC:
Company/Address: CDM Smith, 5400 Glenwood Ave, Suite 300, Raleigh, NC 27612	
Phone #: 919-325-3532	FAX #:
Sampler's Signature: [signature]	Sampler's Printed Name: Aaron Weispfenning

ANALYSIS REQUESTED (Include Method Numb

Preservative: 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. NaHSO4; 8. Other

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS		Appendix II VOCs	Appendix I Metals+Hg	Appendix II SVOC-B2EHP Only	MNA Parameters	Dissolved Hydrogen	REMARKS
9209-MW11d		10-17-13	725	GW	4		X	X				
9209-MW22				GW	4		X	X				
9209-MW23				GW	4		X	X				
9209-MW23d		10-17-13	800	GW	4		X	X				
9209-MW24				GW	4		X	X				
9209-MW29d		10-17-13	1105	GW	6		X	X				NO SVOC SAMPLE
9209-MW30				GW	4		X	X				
9209-MW31				GW	4		X	X				
9209-MW31d				GW	4		X	X				
9209-MW32				GW	4		X	X				

Special Instructions/Comments: See page 1

2.7°C

TURNAROUND REQUIREMENTS
- ___ RUSH (SURCHARGES APPLY)
- X STANDARD
- REQUESTED FAX DATE
- REQUESTED REPORT DATE

REPORT REQUIREMENTS
- ___ I. Results Only
- X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
- ___ III. Results + QC and Calibration Summaries
- ___ IV. Data Validation Report with Raw Data
- Edata: X Yes ___ No

INVOICE INFORMATION
- P.O. #
- Bill to: Wake County

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: [signature]	Signature	Signature	Signature: [signature]	Signature	Signature
Printed Name: Aaron Weispfenning	Printed Name	Printed Name	Printed Name: [signature]	Printed Name	Printed Name
Firm: CDM Smith	Firm: FedEx	Firm: FedEx	Firm: ALS	Firm	Firm
Date/Time: 10-17-13 1300	Date/Time	Date/Time	Date/Time: 10-18-13 0955	Date/Time	Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Ph(904) 739-2277 / FAX (904) 739-2011

SR # J1306214

ALS Contact

Page 3 of 3

Project Name: North Wake Unlined Landfill	Project Number:
Report To: Aaron Weispfenning	Report CC:
Company/Address: CDM Smith, 5400 Glenwood Ave, Suite 300, Raleigh, NC 27612	
Phone #: 919-325-3532	FAX #:
Sampler's Signature: AW	Sampler's Printed Name: Aaron Weispfenning

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

J1306214 5
CDM Smith, Inc.
North Wake Unlined Landfill

2. HNO3
3. H2SO4
4. NaOH
5. Zn. Acetate
6. MeOH
7. NaHSO4
8. Other

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS		Appendix II VOCs	Appendix I Metals+Hg	Appendix II SVOC-B2EHP Only	MNA Parameters	Dissolved Hydrogen	REMARKS
9209-TB-1a				GW	4		X	X				
9209-TB-1a deep				GW	4		X	X				
~~9209-MW35~~	Not collected			GW	4		X	X				
9209-MW36				GW	18		X	X		X		
9209-MW36d		10-17-13	835	GW	4		X	X				
9209-DUP				GW	4		X	X				
9209-EQ Blank		10-17-13	1140	GW	4		X	X				
9209-Trip Blank		—	—	GW	3		X					

Special Instructions/Comments:

See page 1

2.7°C

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
Edata X Yes ___ No

INVOICE INFORMATION
P.O. #
Bill to: Wake County

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: AW	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Aaron Weispfenning	Printed Name:	Printed Name:	Printed Name: Beaver	Printed Name:	Printed Name:
Firm: CDM Smith	Firm: FedEx	Firm: FedEx	Firm: ALS	Firm:	Firm:
Date/Time: 10-17-13 1300	Date/Time:	Date/Time:	Date/Time: 10.18.13 0955	Date/Time:	Date/Time:

CDM Smith

cdmsmith.com