Semi-Annual Water Quality Monitoring Report

Prepared for

Hertford County Closed Unlined MSWLF
Winton, North Carolina

June 2012
and
July 2012

Permit Number: 46-01
MESCO Project Number: G12012.0

Submitted on October 17, 2012

P.O. Box 97
Garner, NC 27529
License No. C-0281

Municipal Engineering Services Company, P.A.
Garner and Boone, North Carolina

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):

Municipal Engineering Services Co., PA

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

Name: Jonathan Pfohl Phone: (919)772-5393

E-mail: jpfohl@mesco.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Hertford County Closed Unlined MSWLF	227 Mount Moriah Road Winton, NC 27986	46-01	.0500	June 12, 2012 July 30, 2012(verification)

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

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

Certification

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

D. Mark Durway, L.G. Geologist (919) 772-5393

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

Signature Date 10/17/12

Affix NC Licensed Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 0875 GEOLOGIST D. MARK DURWAY

P.O. Box 97, Garner, NC 27529

Facility Representative Address

C-0281

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

Revised 6/2009

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CIVIL/SANITARY/ENVIRONMENTAL ENGINEERS
SOLID WASTE MANAGEMENT

Municipal Services
Engineering Company, P.A.

SITE PLANNING/SUBDIVISIONS
SUBSURFACE UTILITY ENGINEERING (SUE)

October 17, 2012

Mr. Ervin Lane
Solid Waste Section
NC DENR Division of Waste Management
1646 Mail Service Center
Raleigh, NC 27699-1646

Re: ***Semi-Annual Water Quality Monitoring Report***
Hertford County Closed Unlined Landfill
June 12, 2012 with verification on July 30, 2012
Permit No. 46-01
MESCO Project No. G11012.0

Dear Mr. Lane:

Introduction

The Hertford County Closed Unlined MSWLF located near Winton, North Carolina operated under permit 46-01 and is required to submit semi-annual compliance reports as a condition of rule 15A NCAC 13B .0500. This water quality monitoring event was reportedly performed by Environment 1 Incorporated (E1) personnel of Greenville NC on June 12, 2012 in accordance with the semi-annual monitoring schedule prescribed by the NC Solid Waste Section (SWS) rules/regulations. A verification sample was collected from surface water location SW-4 and analyzed for total metals by E1 on July 30, 2012. Laboratory analytical results indicate volatile organic compounds (VOCs) continue to persist within the surficial aquifer at the closed MSWLF, but natural attenuation processes appear to be occurring.

Water quality monitoring at this facility includes sampling at locations outlined in the approved site specific Sampling and Analysis Plan (SAP) submitted in the facility *Transition Plan* in November 1995. As required in SWS rules and the SWS Environmental Monitoring Report Form, this report contains sampling procedures, field and laboratory results, groundwater and surface water characterization, and findings. A detections compared to standards table, groundwater flow directions and rates table, groundwater potentiometric map, quality assurance/quality control data, and laboratory analytical data are also provided.

Sampling Procedures

During the June 2012 sampling event, water samples were collected from thirteen groundwater monitoring wells (MW-A through MW-M) and four surface water sample points (SW-1 through SW-4). Quality control measures were also implemented during this event which included submittal and subsequent quantification of an equipment blank (EB) and trip blank (TB). Monitoring locations are shown on **Figure1**.

Sampling was reported to be performed using methods outlined in the NCDENR *Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling* revised April 2008. Static water levels were measured, and a potentiometric map was constructed, as provided in **Figure 1**. Samples were transported under chain-of-custody (C-O-C) protocol within the specified hold times for each analysis.

PO Box 97, Garner, North Carolina 27529 (919) 772-5393 PO Box 349, Boone, NC 28607 (828) 262-1767

Field Parameter Data

Field parameters (pH, specific conductance and temperature) were recorded and are presented in the laboratory report in **Appendix A**. Field parameters appear generally consistent with historically reported data.

Laboratory Results

Groundwater samples and EB were analyzed for the Appendix I list of VOCs by method EPA 8260B, Appendix I total unfiltered metals and mercury via EPA 200.8. The surface waters were analyzed for the same parameters and methods except mercury was not a target analyte. Quality control sample TB was tested for Appendix I VOCs.

Water samples were reported to laboratory specific Method Detection Limits (MDL) which are quantifiable at or below current Solid Waste Section Limits (SWSL). **Table 1** summarizes constituents detected in water samples in concentrations exceeding the current SWSL, Groundwater Protection Standards (GWP), North Carolina Groundwater Standards (2L) or the North Carolina Surface Water Standards (2B) for Class C surface waters. Laboratory results and C-O-Cs are presented in **Appendix A**.

Quality Control Samples

Metals were detected in non-quantifiable concentrations in equipment blank EB; however, it appears that this laboratory/field induced artifact contamination had no effect on the validity of the data set.

Groundwater Samples

The only total metals detected above its 2L Standard were arsenic and cadmium in samples MW-B and MW-D respectively. One or more VOCs were detected in concentrations above their respective 2L Standards in MW-A, MW-B, MW-D, MW-E, MW-F, MW-G, MW-I, MW-J, and MW-L. Vinyl chloride, a common biodegradation byproduct of reductive dechlorination, continues to be the most prevalently detected contaminant.

Surface Water Samples

Total arsenic, cobalt, chromium, lead, silver, vanadium and zinc were detected in SW-4 at concentrations exceeding the 2B Standard on June 12, 2012. However, these constituents were not detected in quantifiable concentrations in the verification sample collected 48 days later on July 30, 2012. VOCs were not detected in concentrations exceeding the applicable 2B Standards.

Groundwater and Surface Water Characterization

A potentiometric map constructed from groundwater elevation data obtained by E1 during the June 12, 2012 event is presented as **Figure 1**. Groundwater flow rates and directions were calculated and are included on **Table 2**. Groundwater in the surficial aquifer flows in a general north-northwestern direction towards Potecasi Creek. Groundwater flow rates range from about 1 ft/yr (MW-C) to 171 ft/yr (MW-H), and average 33 ft/yr. Flow directions and gradients are consistent with historical observations.

Findings

Results from the latest semi-annual sampling event indicate that VOCs continue to persist in the surficial aquifer. Landfill gas has previously been detected at the facility and may be a factor in the occurrence and migration of VOCs in groundwater, especially in MW-A, MW-B and MW-G which are located hydraulically upgradient of the waste boundary. The latest data indicates that the water quality has not degraded compared to past events as all constituents detected in exceedance of the 2L Standard have previously been detected at their respective locations and all concentrations remained within their own historically identified range with the exception of a “j qualified” detection of tetrachloroethene in MW-G.

Sample SW-4 collected from along Potecasi Creek on June 12, 2012 contained seven total metals in concentrations above the 2B Standard. No metals were detected in SW-4 at levels above the 2B Standard in the verification sample collected July 30, 2012. E1 reported that the SW-4 sample location was observed to be very low and stagnant during each of the last four events. E1 reported that during collection of the verification sample that more caution was taken to minimize introducing sediment into the sample container. The total metal concentrations detected in SW-4 in June, therefore, appears to be influenced by high sediment content in the sample. E1 indicated they plan to improve their sample collection protocols to obtain more representative samples which should potentially minimize future false positives.

The facility is located in a rural setting and the residents in closest proximity to the property boundary are connected to municipal water, limiting the potential of human exposure to groundwater.

Closing

Water quality monitoring at the facility will continue and the next event is tentatively scheduled for December 2012. If you have any questions or comments regarding this report, please contact us by phone at (919) 772-5393 or by email at jpfohl@mesco.com or mdurway@mesco.com.

Sincerely,
MUNICIPAL ENGINEERING SERVICES CO., P.A.

Jonathan Pfohl
Environmental Specialist

D. Mark Durway, L.G.
Geologist

NORTH CAROLINA LICENSED SEAL 0875 GEOLOGIST D. MARK DURWAY

Enclosures

cc: Mr. Mike Bradley
Hertford County

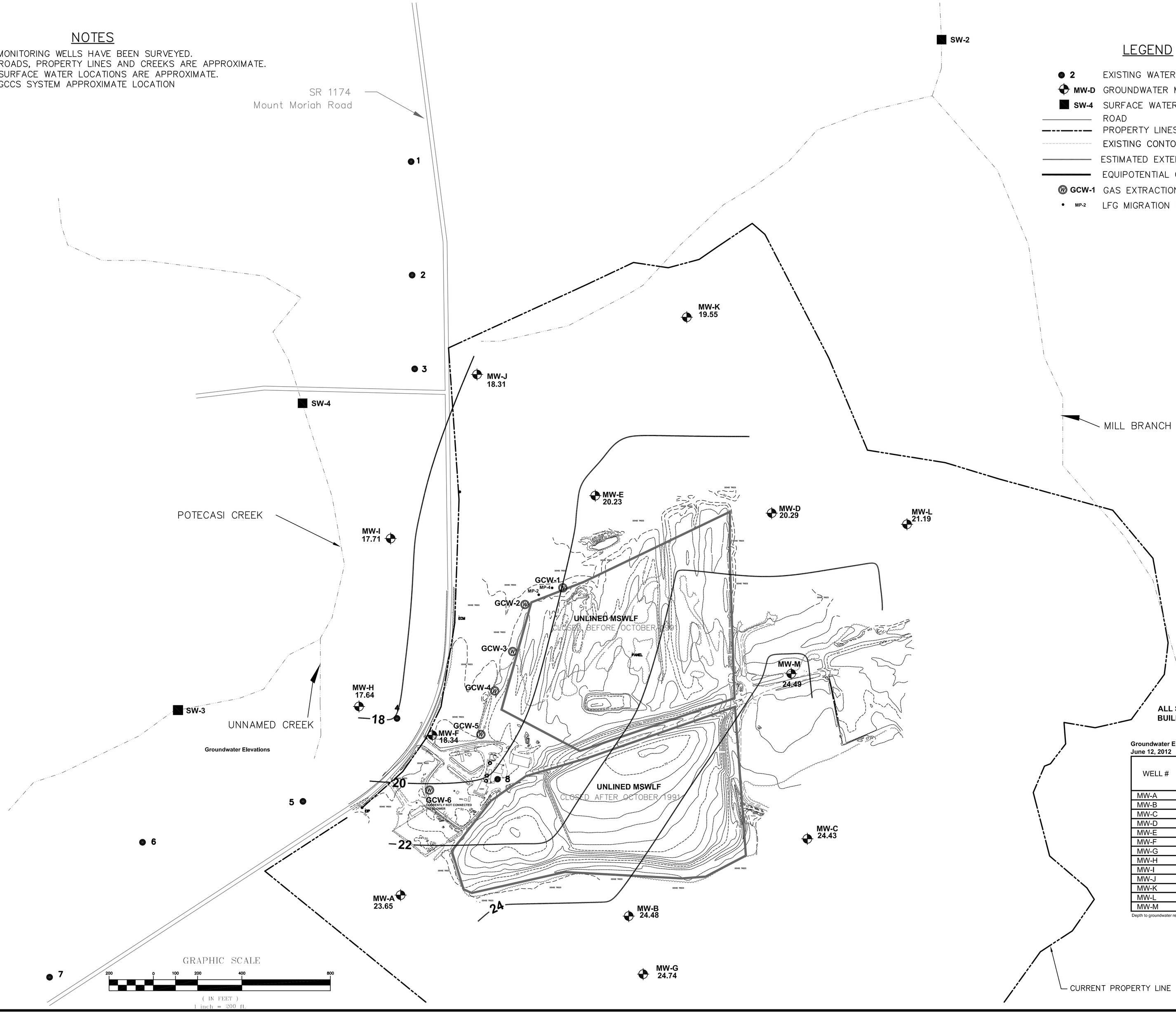
Figures

NOTES

1. MONITORING WELLS HAVE BEEN SURVEYED.
2. ROADS, PROPERTY LINES AND CREEKS ARE APPROXIMATE.
3. SURFACE WATER LOCATIONS ARE APPROXIMATE.
4. GCCS SYSTEM APPROXIMATE LOCATION

LEGEND

- 2 EXISTING WATER SUPPLY WELL
- MW-D GROUNDWATER MONITORING WELL
- SW-4 SURFACE WATER SAMPLING LOCATION
- ROAD
- PROPERTY LINES
- EXISTING CONTOUR
- ESTIMATED EXTENT OF WASTE
- EQUIPOTENTIAL GROUNDWATER CONTOURS
- GCW-1 GAS EXTRACTION WELLS
- MP-2 LFG MIGRATION MONITORING PROBES



Groundwater Elevations

WATER SUPPLY WELLS
1. Howard Godwin
2. John Eley
3. Hattie Casey
4. Mt. Moriah Church
5. Small Frame House
6. Arthur Williams
7. Armstead Sharp
8. Landfill

ALL SUPPLY WELLS REPORTEDLY NOT IN USE.
BUILDINGS NOW CONNECTED TO MUNICIPAL WATER.

Groundwater Elevations
June 12, 2012

WELL #	TOP OF CASING ELEVATION (FT AMSL)	DEPTH TO GROUNDWATER (FT BTOC)	GROUNDWATER POTENTIOMETRIC ELEVATION (FT AMSL)
MW-A	50.25	26.60	23.65
MW-B	49.77	25.29	24.48
MW-C	45.58	21.15	24.43
MW-D	48.31	28.02	20.29
MW-E	47.86	27.63	20.23
MW-F	49.49	31.15	18.34
MW-G	50.10	25.36	24.74
MW-H	45.46	27.82	17.64
MW-I	48.00	30.29	17.71
MW-J	46.26	27.95	18.31
MW-K	48.81	29.26	19.55
MW-L	46.41	25.22	21.19
MW-M	47.77	23.28	24.49

Depth to groundwater recorded by Environment 1 Incorporated personnel.

FIGURE 1

Municipal Engineering Services Company, P.A.
LICENSE #C-0281
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 27529 (704) 262-1767

CLOSED UNLINED MSW LANDFILL FACILITY
HERTFORD COUNTY
NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

SINGLE DAY POTENTIOMETRIC MAP
UPPERMOST AQUIFER

SCALE:	1" = 200'
DATE:	9/6/12
DRWN. BY:	J. PFOHL
CHKD. BY:	M. DURWAY
PROJECT NUMBER	G12012.0
DRAWING NO.	FIGURE 1
SHEET NO.	1 OF 1

Tables

Table 1
Detections in Water Samples that Attain or Exceed SWSL, GWP, 2L or 2B
June 12, 2012
July 30, 2012 (SW-4 Metal Verification Sample)

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	Exceedance	Preliminary Cause [7]
MW-A	**Benzene**	**06/12/2012**	**1.2**	**ug/l**	**0.24**	**1**	**1**			**0.2**	**L &/or LFG**
MW-A	**Vinyl Chloride**	**06/12/2012**	**0.8**	**ug/l**	**0.63**	**1**	**0.03**			**0.77**	**L &/or LFG**
MW-A	Barium, total	06/12/2012	136	ug/l	0.07	100	700				
MW-A	Cobalt, total	06/12/2012	166	ug/l	0.02	10					
MW-A	Zinc, total	06/12/2012	35	ug/l	0.48	10	1050				
MW-A	Chlorobenzene	06/12/2012	3.4	ug/l	0.3	3	50				
MW-A	Vanadium, total	06/12/2012	7.2	ug/l	0.1	25					
MW-B	Cis-1,2-Dichloroethene	06/12/2012	14.9	ug/l	0.25	5	70				
MW-B	**Arsenic, total**	**06/12/2012**	**12**	**ug/l**	**0.13**	**10**	**10**			**2**	**N**
MW-B	**Tetrachloroethene**	**06/12/2012**	**2.3**	**ug/l**	**0.17**	**1**	**0.7**			**1.6**	**L &/or LFG**
MW-B	Cobalt, total	06/12/2012	81	ug/l	0.02	10					
MW-B	**Vinyl Chloride**	**06/12/2012**	**6.3**	**ug/l**	**0.63**	**1**	**0.03**			**6.27**	**L &/or LFG**
MW-B	**Trichloroethene**	**06/12/2012**	**5.5**	**ug/l**	**0.23**	**1**	**3**			**2.5**	**L &/or LFG**
MW-B	Barium, total	06/12/2012	126	ug/l	0.07	100	700				
MW-B	Zinc, total	06/12/2012	42	ug/l	0.48	10	1050				
MW-B	Vanadium, total	06/12/2012	10.2	ug/l	0.1	25					
MW-C	Beryllium, total	06/12/2012	2	ug/l	0.07	1					
MW-C	Barium, total	06/12/2012	127	ug/l	0.07	100	700				
MW-C	Cobalt, total	06/12/2012	12	ug/l	0.02	10					
MW-C	Vanadium, total	06/12/2012	5.3	ug/l	0.1	25					
MW-C	Zinc, total	06/12/2012	53	ug/l	0.48	10	1050				
MW-D	Zinc, total	06/12/2012	56	ug/l	0.48	10	1050				
MW-D	**Cadmium, total**	**06/12/2012**	**2**	**ug/l**	**0.03**	**1**	**1.75**			**0.25**	**N**
MW-D	Barium, total	06/12/2012	124	ug/l	0.07	100	700				
MW-D	Vanadium, total	06/12/2012	7.1	ug/l	0.1	25					
MW-D	Cobalt, total	06/12/2012	53	ug/l	0.02	10					
MW-D	**Vinyl Chloride**	**06/12/2012**	**1.2**	**ug/l**	**0.63**	**1**	**0.03**			**1.17**	**L &/or LFG**
MW-E	1,4-Dichlorobenzene	06/12/2012	5	ug/l	0.39	1	6				
MW-E	Cobalt, total	06/12/2012	42	ug/l	0.02	10					
MW-E	**Vinyl Chloride**	**06/12/2012**	**0.9 j**	**ug/l**	**0.63**	**1**	**0.03**			**0.87**	**L &/or LFG**
MW-E	Barium, total	06/12/2012	114	ug/l	0.07	100	700				
MW-E	Zinc, total	06/12/2012	13	ug/l	0.48	10	1050				
MW-E	Chlorobenzene	06/12/2012	22.2	ug/l	0.3	3	50				
MW-E	**Benzene**	**06/12/2012**	**2.8**	**ug/l**	**0.24**	**1**	**1**			**1.8**	**L &/or LFG**

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	Exceedance	Preliminary Cause [7]
MW-F	Cobalt, total	06/12/2012	161	ug/l	0.02	10					
MW-F	Cis-1,2-Dichloroethene	06/12/2012	29.7	ug/l	0.25	5	70				
MW-F	Barium, total	06/12/2012	489	ug/l	0.07	100	700				
MW-F	Beryllium, total	06/12/2012	1	ug/l	0.07	1					
MW-F	Chlorobenzene	06/12/2012	16.1	ug/l	0.3	3	50				
MW-F	Vanadium, total	06/12/2012	12	ug/l	0.1	25					
MW-F	Trichloroethene	06/12/2012	1.5	ug/l	0.23	1	3				
MW-F	**Benzene**	**06/12/2012**	**3.2**	**ug/l**	**0.24**	**1**	**1**			**2.2**	**L &/or LFG**
MW-F	Cadmium, total	06/12/2012	1	ug/l	0.03	1	1.75				
MW-F	1,4-Dichlorobenzene	06/12/2012	5	ug/l	0.39	1	6				
MW-F	Zinc, total	06/12/2012	308	ug/l	0.48	10	1050				
MW-F	**Vinyl Chloride**	**06/12/2012**	**14.2**	**ug/l**	**0.63**	**1**	**0.03**			**14.17**	**L &/or LFG**
MW-G	Zinc, total	06/12/2012	27	ug/l	0.48	10	1050				
MW-G	Barium, total	06/12/2012	121	ug/l	0.07	100	700				
MW-G	**Tetrachloroethene**	**06/12/2012**	**0.9 j**	**ug/l**	**0.17**	**1**	**0.7**			**0.2**	**L &/or LFG**
MW-G	Cobalt, total	06/12/2012	10	ug/l	0.02	10					
MW-G	**Vinyl Chloride**	**06/12/2012**	**1.7**	**ug/l**	**0.63**	**1**	**0.03**			**1.67**	**L &/or LFG**
MW-H	Nickel, total	06/12/2012	98	ug/l	0.06	50	100				
MW-H	Zinc, total	06/12/2012	34	ug/l	0.48	10	1050				
MW-H	Barium, total	06/12/2012	296	ug/l	0.07	100	700				
MW-H	Cobalt, total	06/12/2012	197	ug/l	0.02	10					
MW-H	Thallium	06/12/2012	8	ug/l	0.07	5.5					
MW-I	**Benzene**	**06/12/2012**	**3.6**	**ug/l**	**0.24**	**1**	**1**			**2.6**	**L &/or LFG**
MW-I	Cobalt, total	06/12/2012	53	ug/l	0.02	10					
MW-I	Barium, total	06/12/2012	217	ug/l	0.07	100	700				
MW-I	1,4-Dichlorobenzene	06/12/2012	6	ug/l	0.39	1	6				
MW-I	**Vinyl Chloride**	**06/12/2012**	**10.1**	**ug/l**	**0.63**	**1**	**0.03**			**10.07**	**L &/or LFG**
MW-I	Chlorobenzene	06/12/2012	19.2	ug/l	0.3	3	50				
MW-I	Zinc, total	06/12/2012	31	ug/l	0.48	10	1050				
MW-J	**Vinyl Chloride**	**06/12/2012**	**1.5**	**ug/l**	**0.63**	**1**	**0.03**			**1.47**	**L &/or LFG**
MW-J	Zinc, total	06/12/2012	13	ug/l	0.48	10	1050				
MW-L	**Vinyl Chloride**	**06/12/2012**	**1.2**	**ug/l**	**0.63**	**1**	**0.03**			**1.17**	
MW-L	Cobalt, total	06/12/2012	48	ug/l	0.02	10					
MW-L	Zinc, total	06/12/2012	23	ug/l	0.48	10	1050				
SW-1	Cobalt, total	07/30/2012	27	ug/l	0.02	10		270			
SW-1	Vanadium, total	06/12/2012	5.5 j	ug/l	0.1	25		NE			
SW-2	Vanadium, total	06/12/2012	1.8 j	ug/l	0.1	25		NE			
SW-2	Zinc, total	06/12/2012	26	ug/l	0.48	10		50			

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	Exceedance	Preliminary Cause [7]
SW-3	Vanadium, total	06/12/2012	2.4 j	ug/l	0.1	25		NE			
SW-3	Zinc, total	06/12/2012	15	ug/l	0.48	10		50			
SW-3	Barium, total	06/12/2012	134	ug/l	0.07	100		200000			
SW-4	**Arsenic, total**	**06/12/2012**	**21**	**ug/l**	**0.13**	**10**		**10**		**11**	
SW-4	Arsenic, total	07/30/2012	0.53 j	ug/l	0.13	10		10			
SW-4	Barium, total	06/12/2012	958	ug/l	0.07	100		200000			
SW-4	Barium, total	07/30/2012	160	ug/l	0.07	100		200000			
SW-4	Beryllium, total	06/12/2012	3	ug/l	0.07	1		6.5			
SW-4	Beryllium, total	07/30/2012	ND	ug/l	0.07	1		6.5			
SW-4	Cadmium, total	06/12/2012	2	ug/l	0.03	1		2			
SW-4	Cadmium, total	07/30/2012	ND	ug/l	0.03	1		2			
SW-4	**Cobalt, total**	**06/12/2012**	**872**	**ug/l**	**0.02**	**10**		**270**		**602**	**N &/or A**
SW-4	Cobalt, total	07/30/2012	4.3 j	ug/l	0.02	10		270			
SW-4	**Copper**	**06/12/2012**	**35**	**ug/l**	**0.06**	**10**		**7**		**28**	**N &/or A**
SW-4	Copper	07/30/2012	0.53 j	ug/l	0.06	10		7			
SW-4	**Lead, total**	**06/12/2012**	**41**	**ug/l**	**0.08**	**10**		**25**		**16**	**N &/or A**
SW-4	Lead, total	07/30/2012	0.13 j	ug/l	0.08	10		25			
SW-4	Nickel, total	06/12/2012	71	ug/l	0.06	50		88			
SW-4	Nickel, total	07/30/2012	1.2 j	ug/l	0.06	50		88			
SW-4	**Silver, total**	**06/12/2012**	**0.18 j**	**ug/l**	**0.1**	**10**		**0.06**		**0.12**	**N &/or A**
SW-4	Silver, total	07/30/2012	ND	ug/l	0.1	10		0.06			
SW-4	**Thallium**	**06/12/2012**	**0.93 j**	**ug/l**	**0.07**	**5.5**		**0.47**		**0.46**	**N &/or A**
SW-4	Thallium	07/30/2012	ND	ug/l	0.07	5.5		0.47			
SW-4	Chromium, total	06/12/2012	22	ug/l	0.18	10		50			
SW-4	Chromium, total	07/30/2012	0.21 j	ug/l	0.18	10		50			
SW-4	Vanadium, total	06/12/2012	50	ug/l	0.1	25		NE			
SW-4	Vanadium, total	07/30/2012	0.18 j	ug/l	0.1	25		NE			
SW-4	**Zinc, total**	**06/12/2012**	**405**	**ug/l**	**0.48**	**10**		**50**		**355**	**N &/or A**
SW-4	Zinc, total	07/30/2012	2.8 j	ug/l	0.48	10		50			

[1] Table contains constituents detected at or above SWSL, GWP, 2L, or 2B

[2] MDL = Method Detection Limit

[3] SWSL = Solid Waste Section Reporting Limit

[4] 2L = North Carolina 15A NCAC 2L Groundwater Quality Standard

[5] 2B = North Carolina 15 NCAC 2B Surface Water Quality Standard for this Specific Stream Classification

[6] GWP = Groundwater Protection Standard

j =The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable

[7] Preliminary Cause = Refers to a preliminary analysis of the cause and/or source of a detection over the respective 2L/2B Standard. A definitive source of the detection was not determined as part of this report.

NE = Not Established

ND = Not Detected above MDL

A = Artifact contamination. Laboratory &/ or field induced as not detected in verification resample

L = Leachate

LFG = Landfill Gas

N = Natural from erosion of natural deposits

BOLD = Concentration > 2L, or 2B Standard

Table 2
Hydrologic Properties at Monitoring Well Locations
June 12, 2012

Monitoring Location	Hydraulic Conductivity (cm/second)	Effective Porosity (%)	Hydraulic Gradient (feet/feet)	Groundwater Average Linear Velocity Rate (feet/year)	Flow Direction	Depth to Groundwater (ft btoc)	Groundwater Potentiometric Elevation (ft amsl)	Screened Interval Lithology	Direction in Relation to MSWLF Boundary
MW-A	7.30E-04	20	0.0072	27	N01E	26.60	23.65	Sand	Crossgradient
MW-B	6.90E-04	20	0.0046	16	N40W	25.29	24.48	Sand	Upgradient
MW-C	1.10E-04	20	0.0011	1	N53W	21.15	24.43	Clayey Sand	Upgradient
MW-D	4.40E-04	20	0.0060	14	N01W	28.02	20.29	Clayey Silt	Downgradient
MW-E	3.10E-03	20	0.0031	49	N71W	27.63	20.23	Sand	Downgradient
MW-F	3.10E-03	20	0.0018	29	N60W	31.15	18.34	Clayey Sand	Downgradient
MW-G	1.80E-03	20	0.0020	19	N25W	25.36	24.74	Sand	Upgradient
MW-H	4.60E-03	20	0.0072	171	N04W	27.82	17.64	Sand	Downgradient
MW-I	1.10E-03	20	0.0026	15	N82W	30.29	17.71	Sand	Downgradient
MW-J	1.20E-03	20	0.0069	43	N67W	27.95	18.31	Sand	Downgradient
MW-K	3.50E-03	20	0.0008	15	N00W	29.26	19.55	Sand	Downgradient
MW-L	1.60E-04	20	0.0036	3	N37W	25.22	21.19	Sand	Downgradient
MW-M	1.20E-03	20	0.0055	34	N05W	23.28	24.49	Sand	Crossgradient
Minimum	1.10E-04	20	0.0008	1	-	21.15	17.64	-	-
Average	1.67E-03	20	0.0040	33	-	26.85	21.16	-	-
Maximum	7.30E-04	20	0.0072	171	-	31.15	24.74	-	-

NOTE: Values for effective porosity & hydraulic conductivity obtained from GAI Consultants' *Assessment Report* (Feb. 1996).
Hydrologic Gradient from groundwater elevations recorded on June 12, 2012.
Average linear velocity rate (Q) is defined by modified Darcy's equation:

where

$$Q = -\frac{K}{n_e} \cdot \frac{dh}{dl}$$

K = hydraulic conductivity
n_e = effective porosity
dh = head difference
dl = horizontal distance

Appendix A
Laboratory Analysis Reports
Chains of Custody

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

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ID#: 6025

HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER ,NC 27529

DATE COLLECTED: 06/12/12
DATE REPORTED : 07/06/12

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-A	MW-B	MW-C	MW-D	MW-E	Analysis Date	Analyst	Method Code
PH (field measurement), Units			6.1	5.7	5.0	5.7	5.9	06/12/12	RJH	SM4500HB
Antimony, ug/l	0.02	6.0	0.11 J	--- U	0.05 J	0.57 J	0.13 J	06/15/12	LFJ	EPA200.8
Arsenic, ug/l	0.13	10.0	9 J	12	0.53 J	2.1 J	5.8 J	06/15/12	LFJ	EPA200.8
Barium, ug/l	0.07	100.0	136	126	127	124	114	06/15/12	LFJ	EPA200.8
Beryllium, ug/l	0.07	1.0	0.25 J	0.31 J	2	0.34 J	--- U	06/15/12	LFJ	EPA200.8
Cadmium, ug/l	0.03	1.0	0.81 J	0.30 J	0.19 J	2	0.06 J	06/15/12	LFJ	EPA200.8
Cobalt, ug/l	0.02	10.0	166	81	12	53	42	06/15/12	LFJ	EPA200.8
Copper, ug/l	0.06	10.0	5.9 J	3.0 J	2.3 J	3.4 J	1.2 J	06/15/12	LFJ	EPA200.8
Total Chromium, ug/l	0.18	10.0	3.4 J	8.0 J	2.6 J	4.7 J	0.28 J	06/15/12	LFJ	EPA200.8
Lead, ug/l	0.08	10.0	2.9 J	2.7 J	1.5 J	1.4 J	0.22 J	06/15/12	LFJ	EPA200.8
Mercury, ug/l	0.02	0.20	0.18 J	0.04 J	--- U	0.02 J	--- U	06/15/12	LFJ	EPA200.8
Nickel, ug/l	0.06	50.0	4.6 J	14.1 J	9.9 J	7.9 J	4.0 J	06/15/12	LFJ	EPA200.8
Selenium, ug/l	0.17	10.0	2.0 J	0.82 J	1.5 J	0.38 J	0.34 J	06/15/12	LFJ	EPA200.8
Silver, ug/l	0.10	10.0	--- U	--- U	--- U	--- U	--- U	06/15/12	LFJ	EPA200.8
Thallium, ug/l	0.07	5.5	0.11 J	--- U	--- U	0.10 J	0.07 J	06/15/12	LFJ	EPA200.8
Vanadium, ug/l	0.10	25.0	7.2 J	10.2 J	5.3 J	7.1 J	1.1 J	06/15/12	LFJ	EPA200.8
Zinc, ug/l	0.48	10.0	35	42	53	56	13	06/15/12	LFJ	EPA200.8
Conductivity (at 25c), uMhos/cm	1.0	1.0	516	98	359	463	1008	06/12/12	RJH	SM2510B
Temperature, °C			18	17	16	17	19	06/12/12	RJH	SM2550B
Static Water Level, feet			26.60	25.29	21.15	28.02	27.63	06/12/12	RJH	
Well Depth, feet			30.41	28.85	25.20	35.49	35.39	06/12/12	RJH	

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
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P.O. BOX 7085, 114 OAKMONT DRIVE
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HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER ,NC 27529

DATE COLLECTED: 06/12/12
DATE REPORTED : 07/06/12

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-F	MW-G	MW-H	MW-I	MW-J	Analysis Date	Analyst	Method Code
PH (field measurement), Units			6.2	6.0	6.3	5.9	5.8	06/12/12	RJH	SM4500HB
Antimony, ug/l	0.02	6.0	0.39 J	0.41 J	0.10 J	0.03 J	0.40 J	06/15/12	LFJ	EPA200.8
Arsenic, ug/l	0.13	10.0	5.6 J	1.3 J	4.0 J	2.7 J	0.25 J	06/15/12	LFJ	EPA200.8
Barium, ug/l	0.07	100.0	489	121	296	217	91.1 J	06/15/12	LFJ	EPA200.8
Beryllium, ug/l	0.07	1.0	1	0.12 J	0.13 J	0.12 J	0.16 J	06/15/12	LFJ	EPA200.8
Cadmium, ug/l	0.03	1.0	1	0.06 J	0.04 J	0.18 J	0.17 J	06/15/12	LFJ	EPA200.8
Cobalt, ug/l	0.02	10.0	161	10	197	53	9.8 J	06/15/12	LFJ	EPA200.8
Copper, ug/l	0.06	10.0	4.4 J	0.79 J	0.36 J	0.59 J	0.65 J	06/15/12	LFJ	EPA200.8
Total Chromium, ug/l	0.18	10.0	6.6 J	0.66 J	--- U	0.20 J	1.2 J	06/15/12	LFJ	EPA200.8
Lead, ug/l	0.08	10.0	4.6 J	0.58 J	--- U	0.45 J	0.40 J	06/15/12	LFJ	EPA200.8
Mercury, ug/l	0.02	0.20	0.36	--- U	--- U	0.16 J	0.04 J	06/15/12	LFJ	EPA200.8
Nickel, ug/l	0.06	50.0	13.3 J	8.0 J	98	6.4 J	5.5 J	06/15/12	LFJ	EPA200.8
Selenium, ug/l	0.17	10.0	0.96 J	0.40 J	0.49 J	0.54 J	0.76 J	06/15/12	LFJ	EPA200.8
Silver, ug/l	0.10	10.0	--- U	--- U	--- U	--- U	--- U	06/15/12	LFJ	EPA200.8
Thallium, ug/l	0.07	5.5	0.74 J	--- U	8	0.11 J	--- U	06/15/12	LFJ	EPA200.8
Vanadium, ug/l	0.10	25.0	12.0 J	2.0 J	0.21 J	0.71 J	1.6 J	06/15/12	LFJ	EPA200.8
Zinc, ug/l	0.48	10.0	308	27	34	31	13	06/15/12	LFJ	EPA200.8
Conductivity (at 25c), uMhos/cm	1.0	1.0	1008	367	284	582	270	06/12/12	RJH	SM2510B
Temperature, °C			19	17	17	17	17	06/12/12	RJH	SM2550B
Static Water Level, feet			31.15	25.36	27.82	30.29	27.95	06/12/12	RJH	
Well Depth, feet			35.28	39.65	37.11	36.47	38.45	06/12/12	RJH	

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
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GARNER ,NC 27529

DATE COLLECTED: 06/12/12
DATE REPORTED : 07/06/12

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-K	MW-L	MW-M	Equipment Blank	Trip Blank	Analysis Date	Analyst	Method Code
PH (field measurement), Units			5.9	5.6	5.5			06/12/12	RJH	SM4500HB
Antimony, ug/l	0.02	6.0	0.16 J	0.15 J	0.04 J			06/27/12	MEL	EPA200.8
Antimony, ug/l	0.02	6.0				--- U		06/15/12	LFJ	EPA200.8
Arsenic, ug/l	0.13	10.0	--- U	0.53 J	--- U			06/27/12	MEL	EPA200.8
Arsenic, ug/l	0.13	10.0				--- U		06/15/12	LFJ	EPA200.8
Barium, ug/l	0.07	100.0	52.3 J	95.0 J	63.2 J			06/27/12	MEL	EPA200.8
Barium, ug/l	0.07	100.0				0.19 J		06/15/12	LFJ	EPA200.8
Beryllium, ug/l	0.07	1.0	--- U	0.19 J	0.20 J			06/27/12	MEL	EPA200.8
Beryllium, ug/l	0.07	1.0				--- U		06/15/12	LFJ	EPA200.8
Cadmium, ug/l	0.03	1.0	--- U	0.08 J	0.04 J			06/27/12	MEL	EPA200.8
Cadmium, ug/l	0.03	1.0				--- U		06/15/12	LFJ	EPA200.8
Cobalt, ug/l	0.02	10.0	0.05 J	48	3.9 J			06/27/12	MEL	EPA200.8
Cobalt, ug/l	0.02	10.0				--- U		06/15/12	LFJ	EPA200.8
Copper, ug/l	0.06	10.0	--- U	0.06 J	1.0 J			06/27/12	MEL	EPA200.8
Copper, ug/l	0.06	10.0				0.26 J		06/15/12	LFJ	EPA200.8
Total Chromium, ug/l	0.18	10.0	2.5 J	--- U	1.1 J			06/27/12	MEL	EPA200.8
Total Chromium, ug/l	0.18	10.0				--- U		06/15/12	LFJ	EPA200.8
Lead, ug/l	0.08	10.0	--- U	0.15 J	0.43 J			06/27/12	MEL	EPA200.8
Lead, ug/l	0.08	10.0				0.11 J		06/15/12	LFJ	EPA200.8
Mercury, ug/l	0.02	0.20	--- U	0.04 J	--- U			07/03/12	LFJ	EPA200.8
Mercury, ug/l	0.02	0.20				--- U		06/15/12	LFJ	EPA200.8
Nickel, ug/l	0.06	50.0	2.2 J	5.2 J	1.4 J			06/27/12	MEL	EPA200.8
Nickel, ug/l	0.06	50.0				0.13 J		06/15/12	LFJ	EPA200.8
Selenium, ug/l	0.17	10.0	0.17 J	- - U	0.86 J			06/27/12	MEL	EPA200.8
Selenium, ug/l	0.17	10.0				--- U		06/15/12	LFJ	EPA200.8
Silver, ug/l	0.10	10.0	--- U	- - U	--- U			06/27/12	MEL	EPA200.8
Silver, ug/l	0.10	10.0				--- U		06/15/12	LFJ	EPA200.8
Thallium, ug/l	0.07	5.5	0.12 J	0.14 J	--- U			06/27/12	MEL	EPA200.8
Thallium, ug/l	0.07	5.5				--- U		06/15/12	LFJ	EPA200.8
Vanadium, ug/l	0.10	25.0	0.37 J	0.78 J	1.1 J			06/27/12	MEL	EPA200.8
Vanadium, ug/l	0.10	25.0				--- U		06/15/12	LFJ	EPA200.8
Zinc, ug/l	0.48	10.0	4.1 J	23	9.2 J			06/27/12	MEL	EPA200.8
Zinc, ug/l	0.48	10.0				2.1 J		06/15/12	LFJ	EPA200.8
Conductivity (at 25c), uMhos/cm	1.0	1.0	182	192	93			06/12/12	RJH	SM2510B
Temperature, °C			17	17	19			06/12/12	RJH	SM2550B
Static Water Level, feet			29.26	25.22	23.28			06/12/12	RJH	
Well Depth, feet			42.92	35.19	39.83			06/12/12	RJH	

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
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C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER, NC 27529

CLIENT ID: 6025

ANALYST: MAO
DATE COLLECTED: 06/12/12
DATE REPORTED: 07/06/12

Page: 1

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VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Date Analyzed: 06/13/12 MW-A	06/13/12 MW-B	06/13/12 MW-C	06/13/12 MW-D	06/13/12 MW-E
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	0.80 J	6.30	--- U	1.20	0.90 J
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	--- U	--- U	--- U	--- U	0.90 J
5. Trichlorofluoromethane	0.24	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	9.06	100.0	--- U	--- U	--- U	--- U	--- U
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.64	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	0.30 J	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	0.50 J	1.60 J	--- U	0.40 J	0.70 J
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	0.50 J	14.90	--- U	2.20 J	0.40 J
15. 2-Butanone	2.21	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.27	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.25	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.24	1.0	1.20	0.90 J	--- U	0.80 J	2.80
21. 1,2-Dichloroethane	0.27	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.23	1.0	--- U	5.50	--- U	0.30 J	--- U
23. 1,2-Dichloropropane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.24	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	1.19	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.23	1.0	--- U	--- U	--- U	--- U	--- U
28. trans-1,3-Dichloropropene	0.28	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.25	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.17	1.0	--- U	2.30	--- U	0.30 J	--- U
31. 2-Hexanone	1.57	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.24	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.30	3.0	3.40	2.80 J	--- U	1.00 J	22.20
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.68	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.28	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.19	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.20	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	0.90 J	--- U	--- U	0.80 J	5.00
44. 1,2-Dichlorobenzene	0.32	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	2.72	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- U	--- U	--- U	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

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CLIENT ID: 6025

ANALYST: MAO
DATE COLLECTED: 06/12/12
DATE REPORTED: 07/06/12

REVIEWED BY: _____

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Date Analyzed: 06/13/12 MW-F	06/14/12 MW-G	06/14/12 MW-H	06/14/12 MW-I	06/14/12 MW-J
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	14.20	1.70	--- U	10.10	1.50
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	1.20 J	--- U	--- U	0.60 J	--- U
5. Trichlorofluoromethane	0.24	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	9.06	100.0	--- U	--- U	--- U	--- U	--- U
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.64	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	0.50 J	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	3.50 J	--- U	--- U	1.60 J	0.50 J
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	29.70	--- U	1.10 J	4.00 J	3.40 J
15. 2-Butanone	2.21	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.27	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.25	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.24	1.0	3.20	--- U	--- U	3.60	0.40 J
21. 1,2-Dichloroethane	0.27	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.23	1.0	1.50	0.40 J	--- U	--- U	0.50 J
23. 1,2-Dichloropropane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.24	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	1.19	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.23	1.0	0.30 J	--- U	--- U	--- U	--- U
28. trans-1,3-Dichloropropene	0.28	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.25	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.17	1.0	0.30 J	0.90 J	--- U	--- U	0.60 J
31. 2-Hexanone	1.57	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.24	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.30	3.0	16.10	--- U	0.70 J	19.20	0.40 J
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.68	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.28	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.19	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.20	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	5.00	--- U	--- U	6.00	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	0.40 J	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	2.72	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- U	--- U	--- U	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER, NC 27529

CLIENT ID: 6025

ANALYST: MAO
DATE COLLECTED: 06/12/12
DATE REPORTED: 07/06/12

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed: MDL	SWSL	06/14/12 MW-K	06/14/12 MW-L	06/14/12 MW-M	06/14/12 Equipment Blank	06/14/12 Trip Blank
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	--- U	1.20	--- U	--- U	--- U
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	--- U	--- U	--- U	--- U	--- U
5. Trichlorofluoromethane	0.24	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	9.06	100.0	--- U	10.00 J	--- U	--- U	--- U
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.64	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U	--- U	--- U	--- U	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	1.40 J	1.40 J	--- U	--- U
15. 2-Butanone	2.21	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.27	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.25	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.24	1.0	--- U	0.40 J	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.27	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.23	1.0	--- U	--- U	--- U	--- U	--- U
23. 1,2-Dichloropropane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.24	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	1.19	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.23	1.0	--- U	--- U	--- U	--- U	--- U
28. trans-1,3-Dichloropropene	0.28	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.25	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.57	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.24	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.30	3.0	--- U	0.30 J	0.50 J	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.68	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.28	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.19	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.20	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	--- U	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	2.72	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- U	--- U	--- U	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Inc.
P.O. Box 7085, 114 Oakmont Dr.
Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

CLIENT: 6025 **Week: 26**

HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER NC 27529

(919) 772-5393

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

CHLORINE NEUTRALIZED AT COLLECTION																				
pH CHECK (LAB)		L2				L2	L2	L2												
CONTAINER TYPE, P/G		P	P	P	P		G	G	G											
CHEMICAL PRESERVATION		A	A	A	A		E	E	E											
PARAMETERS		Field pH	Metals	Conductivity	Temperature	Field Parameter	EPA 8260B	8260 Dup. 1	8260 Dup. 2											

A - NONE, B - HNO_3, C - H_2SO_4, D - NAOH, E - HCL, F - ZINC ACETATE, G - NA THIOSULFATE

SAMPLE LOCATION		COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Field pH	Metals	Conductivity	Temperature	Field Parameter	EPA 8260B	8260 Dup. 1	8260 Dup. 2
MW-A	06	12 12	1000		18	5	G	G	G	G	G	G	G	G
MW-B	06	12 12	0930		17	4	G	G	G	G	G	G	G	
MW-C	06	12 12	0950		16	4	G	G	G	G	G	G	G	
MW-D	06	12 12	1120		17	4	G	G	G	G	G	G	G	
MW-E	06	12 12	1050		19	4	G	G	G	G	G	G	G	
MW-F	06	12 12	1005		19	4	G	G	G	G	G	G	G	
MW-G	06	12 12	0920		17	4	G	G	G	G	G	G	G	
MW-H	06	12 12	1015		17	4	G	G	G	G	G	G	G	
MW-I	06	12 12	1025		17	4	G	G	G	G	G	G	G	
MW-J	06	12 12	1040		17	4	G	G	G	G	G	G	G	
MW-K	06	12 12	1110		17	4	G	G	G	G	G	G	G	

CLASSIFICATION:
- ☐ WASTEWATER (NPDES)
- ☐ DRINKING WATER
- ☐ DWQ/GW
- ☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY: (Y) N

SAMPLES COLLECTED BY: (Please Print) [illegible]

SAMPLES RECEIVED IN LAB AT 0.2 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
[illegible] 06	12 12	[illegible]	6/12/12 2:11
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:

PLEASE READ Instructions for completing this form on the reverse side.

Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested

FORM #5

№ 233009

Environment 1, Inc.
P.O. Box 7085, 114 Oakmont Dr.
Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

CLIENT: 6025 **Week: 26**

HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER NC 27529

(919) 772-5393

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Field pH	Metals	Conductivity	Temperature	Field Parameter	EPA 8260B	8260 Dup. 1	8260 Dup. 2
CHLORINE NEUTRALIZED AT COLLECTION													
pH CHECK (LAB)							L2				L2	L2	L2
CONTAINER TYPE, P/G						P	P	P	P		G	G	G
CHEMICAL PRESERVATION						A	A	A	A		E	E	E
MW-L 06	12/12	1100		17	4	C	C	C	C	C	C	C	
MW-M 06	12/12	0940		19	5	C	C	C	C	C	C	C	C
Equipment Blank 06	12/12				3		C				C	C	
Trip Blank					2								

PARAMETERS

A - NONE D - NAOH
B - HNO_3 E - HCL
C - H_2SO_4 F - ZINC ACETATE
G - NA THIOSULFATE

CLASSIFICATION:
☐ WASTEWATER (NPDES)
☐ DRINKING WATER
☐ DWQ/GW
☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY: (Y) N

SAMPLES COLLECTED BY: (Please Print) Bob Pope / Fat

SAMPLES RECEIVED IN LAB AT 0.2 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Bob Pope	06 12/12		6/12/12 2:11
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:

PLEASE READ Instructions for completing this form on the reverse side.

Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested

FORM #5

№ 233008

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6025 A

HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER ,NC 27529

DATE COLLECTED: 06/12/12
DATE REPORTED : 07/02/12

REVIEWED BY:

PARAMETERS	MDL	SWSL	SW-1	SW-2	SW-3	SW-4	Analysis Date	Analyst	Method Code
PH (field measurement), Units			6.0	6.0	6.3	6.4	06/12/12	RJH	SM4500HB
Antimony, ug/l	0.02	6.0	0.02 J	--- U	0.03 J	0.33 J	06/27/12	MEL	EPA200.8
Arsenic, ug/l	0.13	10.0	2.6 J	0.96 J	1.4 J	21	06/27/12	MEL	EPA200.8
Barium, ug/l	0.07	100.0	97.4 J	48.4 J	134	958	06/27/12	MEL	EPA200.8
Beryllium, ug/l	0.07	1.0	0.13 J	--- U	--- U	3	06/27/12	MEL	EPA200.8
Cadmium, ug/l	0.03	1.0	0.04 J	0.04 J	--- U	2	06/27/12	MEL	EPA200.8
Cobalt, ug/l	0.02	10.0	27	3.5 J	7.0 J	872	06/27/12	MEL	EPA200.8
Copper, ug/l	0.06	10.0	1.4 J	0.94 J	0.88 J	35	06/27/12	MEL	EPA200.8
Total Chromium, ug/l	0.18	10.0	1.8 J	0.79 J	0.78 J	22	06/27/12	MEL	EPA200.8
Lead, ug/l	0.08	10.0	1.3 J	0.77 J	0.50 J	41	06/27/12	MEL	EPA200.8
Nickel, ug/l	0.06	50.0	2.6 J	1.00 J	1.4 J	71	06/27/12	MEL	EPA200.8
Selenium, ug/l	0.17	10.0	0.40 J	--- U	0.34 J	3.8 J	06/27/12	MEL	EPA200.8
Silver, ug/l	0.10	10.0	--- U	--- U	--- U	0.18 J	06/27/12	MEL	EPA200.8
Thallium, ug/l	0.07	5.5	--- U	--- U	--- U	0.93 J	06/27/12	MEL	EPA200.8
Vanadium, ug/l	0.10	25.0	5.5 J	1.8 J	2.4 J	50	06/27/12	MEL	EPA200.8
Zinc, ug/l	0.48	10.0	5.1 J	26	15	405	06/27/12	MEL	EPA200.8
Conductivity (at 25c), uMhos/cm	1.0	1.0	90	90	292	193	06/12/12	RJH	SM2510B
Temperature, °C			23	22	20	24	06/12/12	RJH	SM2550B

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER, NC 27529

CLIENT ID: 6025 A

ANALYST: MAO
DATE COLLECTED: 06/12/12
DATE ANALYZED: 06/14/12
DATE REPORTED: 07/02/12

REVIEWED BY: _____

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	SW-1	SW-2	SW-3	SW-4
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	--- U	--- U	--- U	--- U
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	--- U	--- U	--- U	--- U
5. Trichlorofluoromethane	0.24	1.0	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U	--- U	--- U	--- U
7. Acetone	9.06	100.0	--- U	--- U	--- U	--- U
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	0.40 J
10. Methylene Chloride	0.64	1.0	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U	--- U	0.30 J	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	--- U	0.30 J	--- U
15. 2-Butanone	2.21	100.0	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.27	3.0	--- U	--- U	--- U	--- U
17. Chloroform	0.25	5.0	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U	--- U	--- U	--- U
20. Benzene	0.24	1.0	--- U	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.27	1.0	--- U	--- U	--- U	--- U
22. Trichloroethene	0.23	1.0	--- U	--- U	--- U	--- U
23. 1,2-Dichloropropane	0.21	1.0	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.21	1.0	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.24	1.0	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	1.19	100.0	--- U	--- U	--- U	--- U
27. Toluene	0.23	1.0	--- U	--- U	0.50 J	0.70 J
28. trans-1,3-Dichloropropene	0.28	1.0	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.25	1.0	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.17	1.0	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.57	50.0	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.24	3.0	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.30	3.0	--- U	--- U	0.30 J	--- U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.21	1.0	--- U	--- U	--- U	--- U
37. Xylenes	0.68	5.0	--- U	--- U	--- U	--- U
38. Dibromomethane	0.28	10.0	--- U	--- U	--- U	--- U
39. Styrene	0.19	1.0	--- U	--- U	--- U	--- U
40. Bromoform	0.20	3.0	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U	--- U	--- U	--- U
46. Acrylonitrile	2.72	200.0	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- U	--- U	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Inc.
P.O. Box 7085, 114 Oakmont Dr.
Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

CLIENT: 6025 A **Week: 26**

HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER NC 27529

(919) 772-5393

DISINFECTION
- ☐ CHLORINE
- ☐ UV
- ☐ NONE
- ☐ _____

																					CHLORINE NEUTRALIZED AT COLLECTION
								L2			L2	L2									pH CHECK (LAB)
								P	P	P	P	G	G								CONTAINER TYPE, P/G
								A	A	A	A	E	E								CHEMICAL PRESERVATION
SAMPLE LOCATION		COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Field pH	Metals	Conductivity	Temperature	EPA 8260B	8260 Dup. 1									PARAMETERS
SW-1	06	12/12	1140		23	4	G	G	G	G	G	G									
SW-2	06	12/12	1130		22	4	G	G	G	G	G	G									
SW-3	06	12/12	1015		20	4	G	G	G	G	G	G									
SW-4	06	12/12	1025		24	4	G	G	G	G	G	G									

A - NONE D - NAOH
B - HNO_3 E - HCL
C - H_2SO_4 F - ZINC ACETATE
G - NA THIOSULFATE

CLASSIFICATION:
- ☐ WASTEWATER (NPDES)
- ☐ DRINKING WATER
- ☐ DWQ/GW
- ☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY
Y N

SAMPLES COLLECTED BY:
(Please Print)
H Lane / Fox

SAMPLES RECEIVED IN LAB AT 0.2 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Bob H Lane	06 12/12	B	12/12/12 2:11
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:

PLEASE READ Instructions for completing this form on the reverse side.

Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested

FORM #5

№ 233007

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6025

HERTFORD COUNTY LANDFILL
C/O MUNICIPAL ENGINEERS
P.O. BOX 97
GARNER ,NC 27529

DATE COLLECTED: 07/20/12
DATE REPORTED : 08/02/12

REVIEWED BY:

PARAMETERS	MDL	SW-4 SWSL		Analysis Date	Analyst	Method Code
Antimony, ug/l	0.02	6.0	0.08 J	07/30/12	LFJ	EPA200.8
Arsenic, ug/l	0.13	10.0	0.53 J	07/30/12	LFJ	EPA200.8
Barium, ug/l	0.07	100.0	160	07/30/12	LFJ	EPA200.8
Beryllium, ug/l	0.07	1.0	--- U	07/30/12	LFJ	EPA200.8
Cadmium, ug/l	0.03	1.0	--- U	07/30/12	LFJ	EPA200.8
Cobalt, ug/l	0.02	10.0	4.3 J	07/30/12	LFJ	EPA200.8
Copper, ug/l	0.06	10.0	0.53 J	07/30/12	LFJ	EPA200.8
Total Chromium, ug/l	0.18	10.0	0.21 J	07/30/12	LFJ	EPA200.8
Lead, ug/l	0.08	10.0	0.13 J	07/30/12	LFJ	EPA200.8
Nickel, ug/l	0.06	50.0	1.2 J	07/30/12	LFJ	EPA200.8
Selenium, ug/l	0.17	10.0	0.38 J	07/30/12	LFJ	EPA200.8
Silver, ug/l	0.10	10.0	--- U	07/31/12	LFJ	EPA200.8
Thallium, ug/l	0.07	5.5	--- U	07/31/12	LFJ	EPA200.8
Vanadium, ug/l	0.10	25.0	0.18 J	07/30/12	LFJ	EPA200.8
Zinc, ug/l	0.48	10.0	2.8 J	07/30/12	LFJ	EPA200.8

J = Between MDL and SWSL, U = Below ALL Quanititation Limits.

Environment 1, Inc.
P.O. Box 7085, 114 Oakmont Dr.
Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT: #6025 HS 7-31-12

HERTFORD CO LANDFILL

DISINFECTION																		
☐ CHLORINE																		CHLORINE NEUTRALIZED AT COLLECTION
☐ UV				22														pH CHECK (LAB)
☐ NONE				P														CONTAINER TYPE, P/G
☐ _____																		CHEMICAL PRESERVATION
				APPI METALS														PARAMETERS

A - NONE, B - HNO_3, C - H_2SO_4, D - NAOH, E - HCL, F - ZINC ACETATE, G - NA THIOSULFATE

SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS															
SURFACE WATER B4	7/20/12	1035		27	1			G												

CLASSIFICATION:
- ☐ WASTEWATER (NPDES)
- ☐ DRINKING WATER
- ☐ DWQ/GW
- ☐ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY: (Y) N

SAMPLES COLLECTED BY: (Please Print)

SAMPLES RECEIVED IN LAB AT 1.8 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
	7/20/2012		7/20 1:14
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:

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FORM #5

Nº 242811