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).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- 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):

Richardson Smith Gardner and Associates, Inc.

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

Name: Joan Smyth, P.G. Phone: 919-828-0577 x 122

E-mail: joan@rsgengineers.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Davidson County Holly Grove Landfill	220 Landfill Road Lexington, NC 27292	29-02	.0500	April 28, 2008

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.

Joan Smyth, P.G.	Senior Hydrogeologist	919-828-0577 x 122
Facility Representative Name (Print)	Title	(Area Code) Telephone Number
Joan A. Smyth	6/30/08	Affix NC Licensed/ Professional Geologist/Engineer Seal here:
Signature	Date	

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

Revised 01/2007

Ground Water Monitoring Report
Davidson County Holly Grove Landfill
April 2008 Semi - Annual Report

Prepared for:

Davidson County Integrated Solid Waste
1242 Old Highway 29
Thomasville, NC 27360

RSG Project No. **DAVDCO - 1**

Joan A. Smyth, P.G.
Senior Hydrogeologist

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

June 2008

RICHARDSON SMITH GARDNER & ASSOCIATES
Engineering and Geological Services
14 N. Boylan Avenue
Raleigh, North Carolina 27603

Davidson County Holly Grove Landfill

Ground Water Monitoring Report
April 2008 Monitoring Event

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1.0 Introduction

On April 28th 2008, Richardson Smith Gardner & Associates, Inc. (RSG), personnel performed the required semi-annual ground water monitoring event at the Davidson County Holly Grove Landfill required by State ground water standard 15A NCAC 13B.1632 This sampling event satisfies the requirements of the monitoring programs for this site. The following report summarizes the monitoring event, sampling procedures, field and laboratory results, and ground water characterization as required by NC Solid Waste Regulations. Also included are summary tables of ground water measurements, field parameters, detected constituents, and the laboratory analytical report.

2.0 Davidson County Holly Grove Landfill

The following summarizes the monitoring event, sampling procedures, field and laboratory results, and ground water characterization as required by NC Solid Waste Regulations. Also included are summary tables of field measurements and detected constituents, as well as the laboratory analysis reports and concentration vs. time graphs.

The Holly Grove Landfills consists of three separate phases (**Figure 1**). Areas 1 and 2 were unlined municipal solid waste facilities owned and operated by Davidson County Integrated Solid Waste. The Scarlett Landfill, to the west of Areas 1 and 2, is a private landfill formerly owned by Ms. Virginia White, and previously owned and operated by Mr. Scarlett. The property was recently sold to another individual and is being used to house storage containers. These three landfills comprise the Holly Grove Landfill (under permit 29-02) and are monitored as one unit due to the close proximity of the waste margins.

2.1 Sampling Procedures

Ground water sampling was performed at sixteen (16) well locations. Monitoring well MW-7 was previously abandoned after significant damage and could not be sampled. Well replacement efforts yielded no water, so this location has been removed from the well network. In addition, semi-annual surface water monitoring was performed at three locations around the landfills. The background well for the site, MW-4, is also MW-1s for the lined Davidson County Landfill (Permit 29-06). The lined landfill was sampled in conjunction with this site. This data is included in the summary tables of this report.

Sampling procedures followed the protocols set forth in the site's Water Quality Monitoring Plan[1] and the North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities. Each well was gauged to determine ground water depth and then purged of three well volumes or until dry. Ground water purging and sample collection was performed using a factory sealed teflon bailer.

Field measurements of pH, specific conductivity, turbidity, and temperature, were taken at each

well and surface water sampling location. Samples were collected in laboratory containers provided by Environment 1, Inc. (NC Laboratory Certification # 10). Upon collection, the samples were sealed, placed on ice, and transported to the above referenced laboratory. All samples were preserved and remained on fresh ice prior to shipment, and were received by the laboratory and analyzed within specified holding times.

During the sampling process, all wells were found to be in good condition and free of obstructions.

2.2 Field and Laboratory Results

All samples were transported to the laboratory facility under proper chain of custody analyzed at the specified Solid Waste Section Limits (SWSLs) for Appendix I constituents[1]. The laboratory analysis was received by our office and reviewed for accuracy. The laboratory report is attached as **Appendix A**. Ground water and field measurements included as **Tables 1 and 2,** respectively, remained similar to previous results.

Inorganic laboratory analysis detected seven (7) inorganic constituents (barium, cobalt, copper, total chromium, lead, vanadium and zinc) in ten (10) wells. These results are included as **Table 3**. Three inorganic constituents were detected above the 2L standard:

- cobalt;
- total chromium;
- lead; and
- vanadium

Surface water sampling was conducted at three points, with the results included in **Table 3** and locations shown in **Figure 1**. Surface water (SW-3) detected one constituent, zinc, above the SWSL limits. No other consitiuents were detected above the SWSLs in the surface water samples.

Organic analyses resulted in twelve (12) parameters detected in eleven (11) wells. Detected organic constituents are shown in **Table 4**. Eight (8) organic constituents were detected above the 2L standard:

- 1,2-dichloroethane (MW-1a);
- 1,2-dichloropropane (MW-1a);
- 1,4-dichlorobenzene (MW-1a, MW-2, MW-9, MW-12, and MW-13);
- benzene (MW-1a, MW-9, MW-13);
- trichlorofluoromethane (MW-14);
- tetrachloroethene (MW-1a);
- trichloroethene (MW-1a, MW-8, MW-17); and

1 New guidelines for electronic submittal of environmental monitoring data memo, NCDENR DWM, Solid Waste Section, October 27, 2006.

- vinyl chloride (MW-1a, MW-2, MW-11, MW-12).

A review of time versus concentration graphs (included in **Appendix B**) for each well indicate general stability of detected constituents across the site. It should be noted that many of the recent detections shown are "J" values below the SWSL.

3.0 Site Ground Water Characterization

A potentiometric surface map was prepared for the entire site from ground water elevation data collected during this sampling event. Ground water velocity was calculated for each monitoring well on-site using the equation V = (KI)/n where:

K = hydraulic conductivity
I = ground water gradient
n = porosity

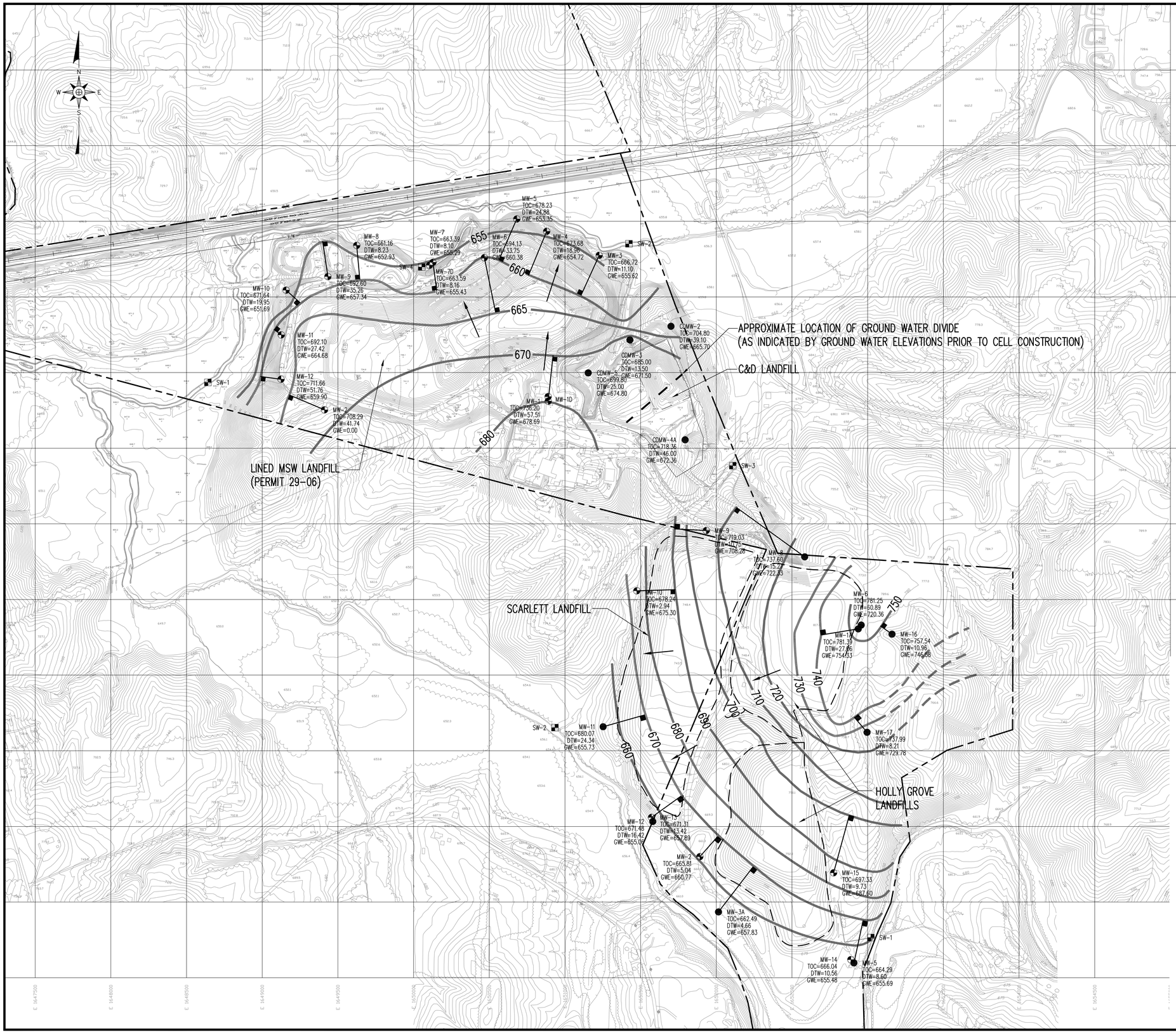
Ground water velocities at the Holly Grove Landfill ranged from 0.021 feet/day (MW-3a) to 1.704 feet/day (MW-9). These calculations are included in **Table 5**. The data indicates that ground water is flowing generally to the south and southwest across most of the site. This is consistent with ground water flow patterns previously seen at this site. The potentiometric surface map (**Figure 1**) is also attached for your review.

4.0 Conclusions

The results presented from the Holly Grove landfill indicate an increased number of detections of certain constituents. In the case of inorganic constituents, this is likely due to turbidity of samples and an increase in suspended solids due to field procedures. In the case of organic constituents this increase is mainly due to a requirement by DENR for laboratories to lower their SWSLs. In general, ground water concentrations detected at the site have remained stable.

The next ground water monitoring event is tentatively scheduled for October 2008. The results of this event will be reported to NCDENR upon completion of analysis of laboratory data.

Figures



LEGEND

MW-1A	PREVIOUSLY INSTALLED MONITORING WELL
MW-5	BEDROCK MONITORING WELL
SW-2	EXISTING SURFACE WATER MONITORING STATION
	GROUNDWATER SURFACE COUNTOUR (DASHED WHERE INFERRED)
	DIRECTION OF GROUNDWATER FLOW
	PROPERTY LINE
	WASTE BOUNDARY
	MEASUREMENT FOR HYDRAULIC GRADIENT CALCULATION

NOTE:

1. GROUND WATER DATA RECORDED ON APRIL 28, 2008 BY RICHARDSON SMITH GARDNER & ASSOCIATES, INC. PERSONNEL.

0 300' 600' 900'

NO.	DATE	REVISION

RICHARDSON SMITH GARDNER & ASSOCIATES
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SEAL

SEAL

PROJECT TITLE: DAVIDSON COUNTY LANDFILLS

DRAWING TITLE: POTENTIOMETRIC SURFACE MAP
LINED LANDFILL, C&D AND
HOLLY GROVE LANDFILLS
(SPRING 2008)

DESIGNED BY: J.A.S.	DRAWN BY: C.T.J.
CHECKED BY:	PROJECT NO.: DAVDCO-4
SCALE: AS SHOWN	DATE: JUNE 2008
FILE NAME: DAVDCO-D0456	
SHEET NO.	DRAWING NO. FIG.1

G:\CAD\Davidson\Davdco-4\sheets\DAVDCO-D0456.dwg - 6/13/2009 11:46 AM

Tables

Table 1
Ground Water Elevations
Davidson County Holly Grove Landfill
04/28/08

Well	Northing	Easting	Top of Casing	Depth to Water	Water Table Elevation
MW-1a	761805.92	1652937.78	781.39	27.06	754.33
MW-2	760300.50	1651891.20	665.81	5.04	660.77
MW-3a	759934.68	1652014.48	662.49	4.66	657.83
MW-4	763311.06	1650889.31	736.20	57.51	678.69
MW-5	759598.21	1652909.22	664.29	8.6	655.69
MW-6	761831.31	1652957.39	781.25	60.89	720.36
MW-8	762282.39	1652584.06	737.60	15.27	722.33
MW-9	762456.06	1651933.56	719.03	10.75	708.28
MW-10	762057.74	1651474.85	678.24	2.94	675.30
MW-11	761158.90	1651252.18	680.07	24.34	655.73
MW-12	760532.63	1651580.20	671.48	16.42	655.06
MW-13	760559.79	1651571.95	671.31	13.42	657.89
MW-14	762282.39	1652584.06	666.04	10.56	655.48
MW-15	760193.97	1652774.91	697.33	9.73	687.60
MW-16	761771.23	1653160.68	757.54	10.96	746.58
MW-17	761121.95	1652995.87	737.99	8.21	729.78

Table 2
Field Parameters
Davidson County Holly Grove Landfill
04/29/08

Well	pH (std units)	Sp. Conductivity (uMhos)	Temperature (degrees C)	Turbidity (NTU)
MW-1a	7.2	1500	15	34.3
MW-2	6.7	880	12	31.7
MW-3A	8	500	12	10.4
MW-4	6.6	560	17	15.2
MW-5	6.7	200	12	4.06
MW-6	8.0	780	14	120
MW-8	7.6	996	13	20.9
MW-9	6.9	1440	11	18.9
MW-10	7.1	2090	12	16.8
MW-11	7.0	170	15	381
MW-12	7.3	179	15	24.4
MW-13	6.8	3310	14	39.8
MW-14	7.2	400	14	12.1
MW-15	6.8	170	13	110
MW-16	8.1	820	14	11.1
MW-17	7.5	610	16	33.4
SW-1	8.2	150	16	14.9
SW-2	8.2	150	16	16.3
SW-3	7.8	320	14	13.2

NM- Not Measured

Note: SW-3 associated with the C&D landfill reported in Holly Grove Landfill laboratory analysis.
Data collected by Clark Wipfield of RSG Engineers, Inc.

Table 3
Detected Inorganic Parameters
Davidson County Holly Grove Landfill
04/28/08

Constituent	SWSL	2L	GWP	MW-1a	MW-2	MW-3a	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	SW-1	SW-2	SW-3
Antimony	6	---	1.4	ND	ND	ND	ND	2.0J	0.2J	0.1J	0.4J	ND	0.5J	0.2J	ND	ND	0.2J	0.1J	ND	0.1J	ND
Arsenic	10	50	---	1.2J	0.7J	0.2J	0.1J	2.3J	2.2J	1.9J	5.3J	1.9J	6.6J	ND	0.2J	0.2J	0.9J	1.3J	0.1J	0.2J	ND
Barium	100	2000	---	**233**	**149**	16.6J	25.5J	**142**	**171**	**215**	**233**	64.3J	68.5J	**224**	28.0J	41.2J	35.6J	**139**	18.4J	19.8J	54.2J
Beryllium	1	---	4	ND	ND	ND	ND	0.1J	0.4J	ND	0.1J	ND	ND	ND	ND	0.1J	ND	ND	ND	ND	ND
Cadmium	1	1.75	---	0.2J	0.2J	0.1J	ND	0.3J	0.2J	0.1J	0.3J	0.1J	0.4J	0.1J	0.1J	0.1J	0.1J	0.1J	ND	ND	ND
Cobalt	10	---	70	**14**	**11**	0.2J	0.2J	3.5J	9.2J	**16**	**13**	1.8J	1.2J	**16**	0.2J	**11**	0.5J	3.4J	0.4J	0.5J	1.4J
Copper	10	1000	---	2.2J	2.6J	0.6J	1.1J	8.9J	**19**	4.2J	**21**	3.3J	2.6J	5.3J	1.9J	6.6J	1.2J	2.7J	2.5J	2.8J	2.2J
Total Chromium	10	50	---	ND	0.2J	ND	ND	**15**	**53**	2.2J	0.9J	ND	0.6J	1.2J	ND	8.0J	0.2J	ND	0.4J	0.4J	0.8J
Lead	10	15	---	0.2J	0.2J	0.1J	0.1J	4.7J	3.6J	0.3J	0.8J	0.2J	0.6J	0.8J	0.1J	0.8J	**23**	0.3J	0.6J	0.7J	0.2J
Nickel	50	100	---	7.6J	4.5J	2.1J	1.2J	7.0J	21.2J	10.0J	27.9J	11.2J	12.6J	31.0J	1.5J	7.9J	3.7J	2.7J	2.6J	3.3J	2.0J
Selenium	10	50	---	1.1J	2.3J	1.5J	0.8J	1.6J	3.9J	2.3J	ND	8.1J	ND	ND	2.1J	0.8J	4.7J	2.1J	0.5J	0.2J	0.7J
Silver	10	17.5	---	0.1J	ND	ND	ND	0.1J	0.1J	ND	0.1J	ND	ND	ND	0.1J	ND	0.1J	0.1J	ND	0.1J	0.1J
Thallium	5	---	0.28	0.2J	ND	ND	ND	0.1J	0.1J	ND	0.1J	ND	ND	ND	ND	ND	ND	ND	ND	0.2J	0.1J
Vanadium	25	---	3	15.6J	1.9J	1.5J	1.2J	22.0J	**46**	4.3J	7.7J	2.1J	ND	ND	3.3J	9.8J	9.0J	14.1J	2.2J	2.9J	2.5J
Zinc	10	1050	---	4.9J	6.3J	2.3J	3.8J	**38**	**74**	7.8J	6.1J	5.5J	5.9J	6.3J	2.8J	**12**	3.2J	8.0J	7.8J	8.5J	**18**

SWSL - Solid Waste Section Quantitative Limits
ND - Not detected at or above SWSL
Shading - Levels above 2L standard or no 2L standard
Bold Letters - Constituents detected above SWSL
J - Constituents detected below SWSL
ND - Not detected at or above SWSL
GWP - Ground Water Protection Standard

Note: - All SWSLs, 2L Standards and Results are in ug/l.
- Lab data analysis by Environmental 1, Inc.

Table 4
Detected Organic Parameters
Davidson County Holly Grove Landfill
04/28/08

Parameter	SWSL	2L	GWP	MW-1a	MW-2	MW-3a	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	SW-1	SW-2	SW-3
1,1-dichloroethene	5	---	---	0.30J	ND	ND	ND	ND	0.30J	ND	ND	0.20J	1.50J	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	5	70	---	**45.8**	1.90J	3.10J	0.50J	**8**	**10.1**	0.60J	0.20J	3.40J	**23.4**	**9.8**	1.70J	0.9J	0.40J	**15.4**	ND	ND	ND
1,2-dichlorobenzene	5	24	---	ND	ND	ND	ND	ND	ND	0.40J	ND	ND	0.30J	1.60J	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	1	0.38	---	2.9	ND	ND	ND	ND	ND	ND	ND	ND	0.80J	0.40J	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	1	0.51	---	4.4	ND	ND	ND	0.40J	ND	0.40J	ND	0.40J	0.80J	ND	ND	ND	ND	0.90J	ND	ND	ND
1,4-dichlorobenzene	1	1.4	---	4.3	2.2	ND	ND	ND	ND	5.5	0.90J	0.40J	5	11.1	ND	ND	ND	ND	ND	ND	ND
acetone	100	700	---	21.30J	4.60J	ND	ND	1.70J	2.10J	2.0J	2.40J	1.90J	7.0J	7.7J	ND	ND	ND	1.30J	1.60J	1.60J	ND
benzene	1	1	---	6.7	0.70J	0.20J	ND	ND	0.90J	3.2	0.90J	0.30J	0.70J	3.3	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	3	50	---	0.60J	**3.1**	ND	ND	ND	ND	**5.2**	**8.7**	**1.7**	1.50J	**8.4**	ND	ND	ND	ND	ND	ND	ND
chloroethane	10	2800	---	2.40J	6.70J	0.60J	0.60J	ND	1.40J	ND	0.80J	0.40J	3.4J	**34.7**	ND	0.40J	ND	ND	ND	ND	ND
chloromethane	1	2.6	---	0.40J	ND	ND	ND	ND	0.30J	ND	ND	ND	ND	ND	ND	ND	ND	0.50J	ND	ND	ND
cis-1,2-dichloroethene	5	70	---	**51.7**	0.30J	0.30J	0.20J	0.50J	0.20J	1.90J	ND	0.50J	0.7J	ND	ND	ND	ND	1.50J	ND	ND	ND
ethylbenzene	1	550	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.40J	ND	ND	ND	ND	ND	ND	ND
methylene chloride	1	4.6	---	0.40J	0.20J	0.30J	ND	0.20J	0.20J	ND	ND	ND	0.40J	ND	0.20J	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	5	100	---	0.70J	ND	ND	ND	ND	ND	ND	ND	ND	0.20J	ND	ND	ND	ND	ND	ND	ND	ND
trichlorofluoromethane	1	2.1	---	ND	ND	ND	ND	ND	0.20J	ND	ND	ND	ND	ND	4	ND	ND	ND	ND	ND	ND
tetrachloroethene	1	0.7	---	1.5	ND	ND	ND	0.70J	0.30J	ND	ND	ND	ND	ND	ND	ND	ND	0.80J	ND	ND	ND
toluene	1	1000	---	0.30J	0.20J	0.20J	ND	ND	0.20J	0.60J	0.20J	0.20J	0.20J	**1.3**	ND	ND	ND	ND	ND	0.20J	ND
trichloroethene	1	---	---	3.4	ND	0.20J	ND	0.50J	1.5	ND	ND	0.30J	0.40J	ND	0.20J	ND	ND	1.1	ND	ND	ND
vinly chloride	1	0.015	---	2.2	2.5	0.40J	ND	ND	0.40J	0.90J	ND	1.4	1.8	0.60J	ND	ND	ND	ND	ND	ND	ND
xylenes	5	530	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.0J	ND	ND	ND	ND	ND	ND	ND

SWSL - Solid Waste Section Quantitative Limits
GWP - Ground Water Protection Standard
ND - Not detected at or above SWSL
Shading - Levels above 2L standard or no 2L standard
Bold Letters - Constituents detected above SWSL
J - Constituents detected below SWSL
NS - Not Sampled
Note - Trip Blank detected 0.20J and 1.60 of Chloroform and Toluene respectivity
- All SWSLs, 2L Standards and Results are in ug/l.
- Lab data analysisi by Environmental 1, Inc.

Table 5
Ground Water Velocity Calculations
Holly Grove Landfill - Davidson County
04/28/08

Parameter Units	Hydraulic Conductivity feet/day	Porosity %	Hydraulic Gradient feet/foot	Velocity feet/day
MW-1a	0.415	0.15	0.061	0.169
MW-2	1.440	0.20	0.046	0.331
MW-3a	0.105	0.15	0.03	0.021
MW-5	1.814	0.20	0.05	0.454
MW-9	3.787	0.20	0.09	1.704
MW-10	1.541	0.20	0.061	0.470
MW-11	1.440	0.15	0.05	0.480
MW-13	5.890	0.20	0.05	1.472
MW-15	5.688	0.20	0.031	0.882

Notes

Velocity calculated from V=KI/n:

V = Velocity
K = Hydraulc Conductivity
I = Gradient
n = Porosity

Hydraulic conductivity data from slug testing

Appendix A

Laboratory Analytical Report

Environment 1, Incorporated

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

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

ID#: 6037

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 04/30/08
DATE REPORTED : 05/29/08

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-1A	MW-2	MW-3A	MW-5	MW-6	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.44	6.0	--- U	--- U	--- U	--- U	2.0 J	05/07/08	CMF	EPA200.8
Arsenic, ug/l	0.57	10.0	1.2 J	0.7 J	0.2 J	0.1 J	2.3 J	05/07/08	CMF	EPA200.8
Barium, ug/l	0.11	100.0	233	149	16.6 J	25.5 J	142	05/07/08	CMF	EPA200.8
Beryllium, ug/l	0.06	1.0	--- U	--- U	--- U	--- U	0.1 J	05/07/08	CMF	EPA200.8
Cadmium, ug/l	0.05	1.0	0.2 J	0.2 J	0.1 J	--- U	0.3 J	05/07/08	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	14	11	0.2 J	0.2 J	3.5 J	05/07/08	CMF	EPA200.8
Copper, ug/l	0.05	10.0	2.2 J	2.6 J	0.6 J	1.1 J	8.9 J	05/07/08	CMF	EPA200.8
Total Chromium, ug/l	0.11	10.0	--- U	0.2 J	--- U	--- U	15	05/07/08	CMF	EPA200.8
Lead, ug/l	0.32	10.0	0.2 J	0.2 J	0.1 J	0.1 J	4.7 J	05/07/08	CMF	EPA200.8
Nickel, ug/l	0.06	50.0	7.6 J	4.5 J	2.1 J	1.2 J	7.0 J	05/07/08	CMF	EPA200.8
Selenium, ug/l	0.51	10.0	1.1 J	2.3 J	1.5 J	0.8 J	1.6 J	05/07/08	CMF	EPA200.8
Silver, ug/l	0.04	10.0	0.1 J	--- U	--- U	--- U	0.1 J	05/07/08	CMF	EPA200.8
Thallium, ug/l	0.63	5.0	0.2 J	--- U	--- U	--- U	0.1 J	05/07/08	CMF	EPA200.8
Vanadium, ug/l	0.07	25.0	15.6 J	1.9 J	1.5 J	1.2 J	22.0 J	05/07/08	CMF	EPA200.8
Zinc, ug/l	0.04	10.0	4.9 J	6.3 J	2.3 J	3.8 J	38	05/07/08	CMF	EPA200.8

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

Environment 1, Incorporated

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

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

ID#: 6037

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 04/30/08
DATE REPORTED : 05/29/08

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-7	MW-8	MW-9	MW-10	MW-11	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.44	6.0	Missing	0.2 J	0.1 J	0.4 J	--- U	05/07/08	CMF	EPA200.8
Arsenic, ug/l	0.57	10.0	Missing	2.2 J	1.9 J	5.3 J	1.9 J	05/07/08	CMF	EPA200.8
Barium, ug/l	0.11	100.0	Missing	171	215	233	64.3 J	05/07/08	CMF	EPA200.8
Beryllium, ug/l	0.06	1.0	Missing	0.4 J	--- U	0.1 J	--- U	05/07/08	CMF	EPA200.8
Cadmium, ug/l	0.05	1.0	Missing	0.2 J	0.1 J	0.3 J	0.1 J	05/07/08	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	Missing	9.2 J	16	13	1.8 J	05/07/08	CMF	EPA200.8
Copper, ug/l	0.05	10.0	Missing	19	4.2 J	21	3.3 J	05/07/08	CMF	EPA200.8
Total Chromium, ug/l	0.11	10.0	Missing	53	2.2 J	0.9 J	--- U	05/07/08	CMF	EPA200.8
Lead, ug/l	0.32	10.0	Missing	3.6 J	0.3 J	0.8 J	0.2 J	05/07/08	CMF	EPA200.8
Nickel, ug/l	0.06	50.0	Missing	21.2 J	10.0 J	27.9 J	11.2 J	05/07/08	CMF	EPA200.8
Selenium, ug/l	0.51	10.0	Missing	3.9 J	2.3 J		8.1 J	05/07/08	CMF	EPA200.8
Selenium, ug/l	0.51	10.0				--- U		05/15/08	CMF	SM3113B
Silver, ug/l	0.04	10.0	Missing	0.1 J	--- U	0.1 J	--- U	05/07/08	CMF	EPA200.8
Thallium, ug/l	0.63	5.0	Missing	0.1 J	--- U	0.1 J	--- U	05/07/08	CMF	EPA200.8
Vanadium, ug/l	0.07	25.0	Missing	45	4.3 J	7.7 J	2.1 J	05/07/08	CMF	EPA200.8
Zinc, ug/l	0.04	10.0	Missing	74	7.8 J	6.1 J	5.5 J	05/07/08	CMF	EPA200.8

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

Environment 1, Incorporated

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

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

ID#: 6037

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 04/30/08
DATE REPORTED : 05/29/08

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-14	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.44	6.0	--- U	05/07/08	CMF	EPA200.8
Arsenic, ug/l	0.57	10.0	0.2 J	05/07/08	CMF	EPA200.8
Barium, ug/l	0.11	100.0	28.0 J	05/07/08	CMF	EPA200.8
Beryllium, ug/l	0.06	1.0	--- U	05/07/08	CMF	EPA200.8
Cadmium, ug/l	0.05	1.0	0.1 J	05/07/08	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	0.2 J	05/07/08	CMF	EPA200.8
Copper, ug/l	0.05	10.0	1.9 J	05/07/08	CMF	EPA200.8
Total Chromium, ug/l	0.11	10.0	--- U	05/07/08	CMF	EPA200.8
Lead, ug/l	0.32	10.0	0.1 J	05/07/08	CMF	EPA200.8
Nickel, ug/l	0.06	50.0	1.5 J	05/07/08	CMF	EPA200.8
Selenium, ug/l	0.51	10.0	2.1 J	05/07/08	CMF	EPA200.8
Silver, ug/l	0.04	10.0	0.1 J	05/07/08	CMF	EPA200.8
Thallium, ug/l	0.63	5.0	--- U	05/07/08	CMF	EPA200.8
Vanadium, ug/l	0.07	25.0	3.3 J	05/07/08	CMF	EPA200.8
Zinc, ug/l	0.04	10.0	2.8 J	05/07/08	CMF	EPA200.8

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

Environment 1, Incorporated

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

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

CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6037

ANALYST: MAO
DATE COLLECTED: 04/30/08
DATE REPORTED: 05/29/08

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	05/08/08 MW-1A	05/07/08 MW-2	05/08/08 MW-3A	05/08/08 MW-5	05/09/08 MW-6
Date Analyzed:			05/08/08	05/07/08	05/08/08	05/08/08	05/09/08
1. Chloromethane	0.18	1.0	0.40 J	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	2.20	2.50	0.40 J	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	2.40 J	6.70 J	0.60 J	0.60 J	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	0.30 J	--- U	--- U	--- U	--- U
7. Acetone	1.21	100.0	21.30 J	4.60 J	--- U	--- U	1.70 J
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.14	1.0	0.40 J	0.20 J	0.30 J	--- U	0.20 J
11. trans-1,2-Dichloroethene	0.13	5.0	0.70 J	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	45.80	1.90 J	3.10 J	0.50 J	8.00
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	51.70	0.30 J	0.30 J	0.20 J	0.50 J
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	6.70	0.70 J	0.20 J	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	2.90	--- U	--- U	--- U	--- U
22. Trichloroethene	0.13	1.0	3.40	--- U	0.20 J	--- U	0.50 J
23. 1,2-Dichloropropane	0.17	1.0	4.30	--- U	--- U	--- U	0.40 J
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	0.30 J	0.20 J	0.20 J	--- U	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	1.50	--- U	--- U	--- U	0.70 J
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	0.60 J	3.10	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	4.30	2.20	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U	--- U	--- U	--- U

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

Environment 1, Incorporated

Drinking Water for Trial
Wastewater ID: 10

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

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

CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6037

ANALYST: MAO
DATE COLLECTED: 04/30/08
DATE REPORTED: 05/29/08

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	05/09/08 MW-8	05/09/08 MW-9	05/09/08 MW-10	05/09/08 MW-11	05/09/08 MW-14
Date Analyzed:			05/09/08	05/09/08	05/09/08	05/09/08	05/09/08
1. Chloromethane	0.18	1.0	0.30 J	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	0.40 J	0.90 J	--- U	1.40	--- U
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	1.40 J	--- U	0.80 J	0.40 J	--- U
5. Trichlorofluoromethane	0.13	1.0	0.20 J	--- U	--- U	--- U	4.00
6. 1,1-Dichloroethene	0.14	5.0	0.30 J	--- U	--- U	0.20 J	--- U
7. Acetone	1.21	100.0	2.10 J	2.00 J	2.40 J	1.90 J	--- U
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.14	1.0	0.20 J	--- U	--- U	--- U	0.20 J
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	10.10	0.60 J	0.20 J	3.40 J	1.70 J
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	0.20 J	1.90 J	--- U	0.50 J	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	0.90 J	3.20	0.90 J	0.30 J	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.13	1.0	1.50	--- U	--- U	0.30 J	0.20 J
23. 1,2-Dichloropropane	0.17	1.0	--- U	0.40 J	--- U	0.40 J	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	0.20 J	0.60 J	0.20 J	0.20 J	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	0.30 J	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	5.20	8.70	3.10	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	5.50	0.90 J	1.70	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	0.40 J	--- U	0.40 J	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	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: 6037 **Week: 11**

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH NC 27603

(919) 828-0577

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	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	G	G	G
CHEMICAL PRESERVATION						A	A	E	E	E
MW-1A	4.30.08	9:40		15	4		■	■	■	■
MW-2	4.30.08	8:35		12	3		■	■	■	
MW-3A	4.30.08	8:10		12	3		■	■	■	
MW-5	4.30.08	11:25		12	3		■	■	■	
MW-6	4.30.08	9:35		14	3		■	■	■	
~~MW-7~~					~~3~~		~~■~~	~~■~~	~~■~~	
MW-8	4.30.08	9:15		13	3		■	■	■	
MW-9	4.30.08	9:45		11	3		■	■	■	
MW-10	4.30.08	8:50		12	3		■	■	■	
MW-11	4.30.08	7:30		12	3		■	■	■	
MW-12	4.29.08	5:07		15	4	■	■	■	■	

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) Britt Ransom

SAMPLES RECEIVED IN LAB AT 0.8 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
B Ransom	4.30.08 5:00	The UPS Store Lex NC	4.30.08 5:00
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
		B Jeffries	5-1-08 10:00
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:
MW-7 damaged by Heavy Equipment
All samples grab

Instructions for completing this form are 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

№ 160551

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: 6037 **Week: 11**

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH NC 27603

(919) 828-0577

DISINFECTION
- [ ] CHLORINE
- [ ] UV
- [ ] NONE
- [ ] _____

																						CHLORINE NEUTRALIZED AT COLLECTION
							L2	L2	L2													pH CHECK (LAB)
						P	P	G	G	G												CONTAINER TYPE, P/G
						A	A	E	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	EPA 8260B	8260 Dup. 1	8260 Dup. 2											PARAMETERS	
MW-13	4-29-08	5:20		14	3																	
MW-14	4-30-08	11:15		14	3																	

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
- [x] SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY
Y N

SAMPLES COLLECTED BY:
(Please Print)

SAMPLES RECEIVED IN LAB AT 0.8 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
[signature]	4-30-08 5:00	The UPS Store Lex NC	4-30-08 5:00
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
		[signature]	5-1-08 10:00
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:
All samples grab

Instructions for completing this form are 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

№ 160550

Environment 1, Incorporated

REC'D JUN 02 2008

Wastewater ID: 10

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

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

ID#: 6037 A

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 04/30/08
DATE REPORTED : 05/23/08

REVIEWED BY:

PARAMETERS	MDL	SWSL	SW-1	SW-2	SW-3	MW-15	MW-16	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.08	6.0	--- U			--- U		05/07/08	CMF	EPA200.8
Antimony, ug/l	0.08	6.0		0.1 J	--- U		0.2 J	05/08/08	LFJ	EPA200.8
Arsenic, ug/l	0.07	10.0	0.1 J			0.2 J		05/07/08	CMF	EPA200.8
Arsenic, ug/l	0.07	10.0		0.2 J	--- U		0.9 J	05/08/08	LFJ	EPA200.8
Barium, ug/l	0.11	100.0	18.4 J			41.2 J		05/07/08	CMF	EPA200.8
Barium, ug/l	0.11	100.0		19.8 J	54.2 J		35.6 J	05/08/08	LFJ	EPA200.8
Beryllium, ug/l	0.06	1.0	--- U			0.1 J		05/07/08	CMF	EPA200.8
Beryllium, ug/l	0.06	1.0		--- U	--- U		--- U	05/08/08	LFJ	EPA200.8
Cadmium, ug/l	0.04	1.0	--- U			0.1 J		05/07/08	CMF	EPA200.8
Cadmium, ug/l	0.04	1.0		--- U	--- U		0.1 J	05/08/08	LFJ	EPA200.8
Cobalt, ug/l	0.03	10.0	0.4 J			11		05/07/08	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0		0.5 J	1.4 J		0.5 J	05/08/08	LFJ	EPA200.8
Copper, ug/l	0.05	10.0	2.5 J			6.6 J		05/07/08	CMF	EPA200.8
Copper, ug/l	0.05	10.0		2.8 J	2.2 J		1.2 J	05/08/08	LFJ	EPA200.8
Total Chromium, ug/l	0.11	10.0	0.4 J			8.0 J		05/07/08	CMF	EPA200.8
Total Chromium, ug/l	0.11	10.0		0.4 J	0.8 J		0.2 J	05/08/08	LFJ	EPA200.8
Lead, ug/l	0.04	10.0	0.6 J			0.8 J		05/07/08	CMF	EPA200.8
Lead, ug/l	0.04	10.0		0.7 J	0.2 J		23	05/08/08	LFJ	EPA200.8
Nickel, ug/l	0.06	50.0	2.6 J			7.9 J		05/07/08	CMF	EPA200.8
Nickel, ug/l	0.06	50.0		3.3 J	2.0 J		3.7 J	05/08/08	LFJ	EPA200.8
Selenium, ug/l	0.14	10.0	0.5 J			0.8 J		05/07/08	CMF	EPA200.8
Selenium, ug/l	0.14	10.0		0.2 J	0.7 J		4.7 J	05/08/08	LFJ	EPA200.8
Silver, ug/l	0.04	10.0	--- U			--- U		05/07/08	CMF	EPA200.8
Silver, ug/l	0.04	10.0		0.1 J	0.1 J		0.1 J	05/08/08	LFJ	EPA200.8
Thallium, ug/l	0.04	5.0	--- U			--- U		05/07/08	CMF	EPA200.8
Thallium, ug/l	0.04	5.0		0.2 J	0.1 J		--- U	05/08/08	LFJ	EPA200.8
Vanadium, ug/l	0.07	25.0	2.2 J			9.8 J		05/07/08	CMF	EPA200.8
Vanadium, ug/l	0.07	25.0		2.9 J	2.5 J		9.0 J	05/08/08	LFJ	EPA200.8
Zinc, ug/l	0.04	10.0	7.8 J			12		05/07/08	CMF	EPA200.8
Zinc, ug/l	0.04	10.0		8.5 J	18		3.2 J	05/08/08	LFJ	EPA200.8

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

Environment 1, Incorporated

Drinking Water Trip Blank
Wastewater ID: 10

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

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

ID#: 6037 A

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 04/30/08
DATE REPORTED : 05/23/08

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-17	Trip Blank	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.08	6.0	0.1 J		05/07/08	CMF	EPA200.8
Arsenic, ug/l	0.07	10.0	1.3 J		05/07/08	CMF	EPA200.8
Barium, ug/l	0.11	100.0	139		05/07/08	CMF	EPA200.8
Beryllium, ug/l	0.06	1.0	--- U		05/07/08	CMF	EPA200.8
Cadmium, ug/l	0.04	1.0	0.1 J		05/07/08	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	3.4 J		05/07/08	CMF	EPA200.8
Copper, ug/l	0.05	10.0	2.7 J		05/07/08	CMF	EPA200.8
Total Chromium, ug/l	0.11	10.0	--- U		05/07/08	CMF	EPA200.8
Lead, ug/l	0.04	10.0	0.3 J		05/07/08	CMF	EPA200.8
Nickel, ug/l	0.06	50.0	2.7 J		05/07/08	CMF	EPA200.8
Selenium, ug/l	0.14	10.0	2.1 J		05/07/08	CMF	EPA200.8
Silver, ug/l	0.04	10.0	0.1 J		05/07/08	CMF	EPA200.8
Thallium, ug/l	0.04	5.0	--- U		05/07/08	CMF	EPA200.8
Vanadium, ug/l	0.07	25.0	14.1 J		05/07/08	CMF	EPA200.8
Zinc, ug/l	0.04	10.0	8.0 J		05/07/08	CMF	EPA200.8

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

Environment 1, Incorporated

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

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

CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

REVIEWED BY:

CLIENT ID: 6037 A

ANALYST: MAO
DATE COLLECTED: 04/30/08
DATE ANALYZED: 05/09/08
DATE REPORTED: 05/23/08

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	SW-1	SW-2	SW-3	MW-15	MW-16
1. Chloromethane	0.18	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	--- U	--- U	--- U	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	--- U	--- U	--- U	0.40 J	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	1.21	100.0	1.60 J	1.60 J	--- U	--- U	--- U
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.14	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	--- U	--- U	--- U	0.90 J	0.40 J
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U	--- U	--- U	--- U	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.13	1.0	--- U	--- U	--- U	--- U	--- U
23. 1,2-Dichloropropane	0.17	1.0	--- U	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	--- U	0.20 J	--- U	--- U	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	--- U	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U	--- U	--- U	--- U

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

Environment 1, Incorporated

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

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

CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6037 A

ANALYST: MAO
DATE COLLECTED: 04/30/08
DATE ANALYZED: 05/09/08
DATE REPORTED: 05/23/08

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-17	Trip Blank
1. Chloromethane	0.18	1.0	0.50 J	--- U
2. Vinyl Chloride	0.34	1.0	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U
4. Chloroethane	0.29	10.0	--- U	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	--- U	--- U
7. Acetone	1.21	100.0	1.30 J	--- U
8. Iodomethane	0.12	10.0	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U
10. Methylene Chloride	0.14	1.0	--- U	--- U
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	15.40	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	1.50 J	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U
17. Chloroform	0.13	5.0	--- U	0.20 J
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U
20. Benzene	0.16	1.0	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U
22. Trichloroethene	0.13	1.0	1.10	--- U
23. 1,2-Dichloropropane	0.17	1.0	0.90 J	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U
27. Toluene	0.13	1.0	--- U	1.60
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U
30. Tetrachloroethene	0.16	1.0	0.80 J	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- 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: 6037 A **Week. 11**

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH NC 27603

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

																						CHLORINE NEUTRALIZED AT COLLECTION
																						pH CHECK (LAB)
																						CONTAINER TYPE, P/G
																						CHEMICAL PRESERVATION
																						PARAMETERS
SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2													

Environment 1, Incorporated

REC'D JUN 02 2008

Wastewater ID: 10

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

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

ID#: 6037

DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 04/29/08
DATE REPORTED : 05/22/08

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-12	MW-13	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.44	6.0	0.5 J	0.2 J	05/07/08	CMF	EPA200.8
Arsenic, ug/l	0.57	10.0	6.6 J		05/07/08	CMF	EPA200.8
Arsenic, ug/l	0.57	10.0		--- U	05/14/08	CMF	SM3113B
Barium, ug/l	0.11	100.0	68.5 J	224	05/07/08	CMF	EPA200.8
Beryllium, ug/l	0.06	1.0	--- U	--- U	05/07/08	CMF	EPA200.8
Cadmium, ug/l	0.05	1.0	0.4 J	0.1 J	05/07/08	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	1.2 J	16	05/07/08	CMF	EPA200.8
Copper, ug/l	0.05	10.0	2.6 J	5.3 J	05/07/08	CMF	EPA200.8
Total Chromium, ug/l	0.11	10.0	0.6 J	1.2 J	05/07/08	CMF	EPA200.8
Lead, ug/l	0.32	10.0	0.6 J	0.8 J	05/07/08	CMF	EPA200.8
Nickel, ug/l	0.06	50.0	12.6 J	31.0 J	05/07/08	CMF	EPA200.8
Selenium, ug/l	0.51	10.0	--- U	--- U	05/15/08	CMF	SM3113B
Silver, ug/l	0.04	10.0	--- U	--- U	05/07/08	CMF	EPA200.8
Thallium, ug/l	0.63	5.0	--- U	--- U	05/07/08	CMF	EPA200.8
Zinc, ug/l	0.04	10.0	5.9 J	6.3 J	05/07/08	CMF	EPA200.8

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

Environment 1, Incorporated

Drinking Water ID: [illegible]
Wastewater ID: 10

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

PHONE (252) 756-6208
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CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6037

ANALYST: MAO
DATE COLLECTED: 04/29/08
DATE ANALYZED: 05/07/08
DATE REPORTED: 05/22/08

Page: 1

REVIEWED BY: _____

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-12	MW-13
1. Chloromethane	0.18	1.0	--- U	--- U
2. Vinyl Chloride	0.34	1.0	1.80	0.60 J
3. Bromomethane	0.26	10.0	--- U	--- U
4. Chloroethane	0.29	10.0	3.40 J	34.70
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	1.50 J	--- U
7. Acetone	1.21	100.0	7.00 J	7.70 J
8. Iodomethane	0.12	10.0	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U
10. Methylene Chloride	0.14	1.0	0.40 J	--- U
11. trans-1,2-Dichloroethene	0.13	5.0	0.20 J	--- U
12. 1,1-Dichloroethane	0.16	5.0	23.40	9.80
13. Vinyl Acetate	0.20	50.0	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	0.70 J	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U
20. Benzene	0.16	1.0	0.70 J	3.30
21. 1,2-Dichloroethane	0.12	1.0	0.80 J	0.40 J
22. Trichloroethene	0.13	1.0	0.40 J	--- U
23. 1,2-Dichloropropane	0.17	1.0	0.80 J	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U
27. Toluene	0.13	1.0	0.20 J	1.30
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U
30. Tetrachloroethene	0.16	1.0	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U
34. Chlorobenzene	0.13	3.0	1.50 J	8.40
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	0.40 J
37. Xylenes	0.48	5.0	--- U	3.00 J
38. Dibromomethane	0.17	10.0	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	5.00	11.10
44. 1,2-Dichlorobenzene	0.13	5.0	0.30 J	1.60 J
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U

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