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):

Smith Gardner, Inc.

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

Name: Madeline German, PG Phone: 919-828-0577 x222

E-mail: madeline@smithgardnerinc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Martin County Closed MSW & Active C&D Landfill	SR 1440, Williamston, NC 27892	59-01	.0500	November 16, 2012

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.

Madeline German, PG — Geologist — 919-828-0577 x222

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

Signature — 1/25/2013 Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 2275 1/25/13 GEOLOGIST MADELINE GERMAN

14 N. Boylan Ave, Raleigh, NC 27603

Facility Representative Address

CO828

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

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Fall 2012 Ground Water Monitoring Report

Martin County Landfill
NC Solid Waste Permit No. 59-01

Prepared for:

Martin County Soild Waste Management
Williamston, North Carolina

January 2013

Prepared by:

SMITH+GARDNER

14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577

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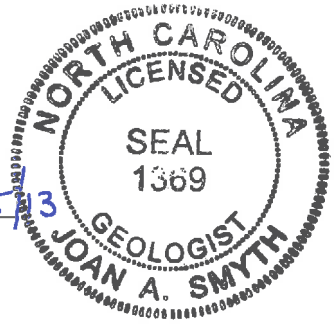
Fall 2012 Groundwater Monitoring Report

Martin County Landfill
NC Solid Waste Permit No. 59-01

Prepared For:
Martin County Solid Waste Management
Williamston, North Carolina

S+G Project No. MARTIN 11-2

Madeline German P.G.
Project Geologist



1/25/13

Joan Smyth, P.G.
Senior Hydrogeologist

January 2013

SMITH+GARDNER

14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577

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Martin County Landfill
NC Solid Waste Permit No. 59-01

Fall 2012 Groundwater Monitoring Report

Table of Contents

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1.0 INTRODUCTION

The Martin County Landfill, currently operating under Solid Waste Permit # 59-01 and 15A NCAC 13B.0544, is required to perform semi-annual ground water monitoring. The facility includes a closed MSW landfill and an active C&D landfill. This report presents the results from the groundwater monitoring event performed November 16, 2012. This report includes a field procedure summary, laboratory analyses, summary tables and laboratory analytical reports.

2.0 SITE GEOLOGY

The Martin Co. landfill is located off McCaskey Road near Williamston in the Coastal Plain physiographic province. According to the Geologic Map of North Carolina (1985) this area is underlain by the Yorktown Formation. The Yorktown Formation is characterized by fossiliferous clay with varying amounts of fine-grained sand, bluish gray, shell material commonly concentrated in lenses.

3.0 SAMPLING PROCEDURES

Environment 1 personnel conducted the monitoring network sampling event November 16, 2012. Samples were collected from four ground water wells (MW-1, MW-2R, MW-3 and MW-4) for the MSW landfill and from three ground water monitoring wells (CDW-2R, CDW-5 and CDW-6) for the C&D landfill. Four surface water locations (SW-1, SW-2, SW-3 and CDSW-2) are monitored for the facility. MW-1 serves as the background well for the facility. SW-2 was dry and could not be sampled this event.

Reported sampling methods followed the protocol outlined in the North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities (NCDENR, DWM) and the Site Groundwater Monitoring Plan[1]. The depth to water in each well was gauged to determine groundwater depth then purged three to five well volumes or until dry. Field measurements of pH, specific conductivity and temperature were recorded at each monitoring location. Water table elevations and field parameter results are included in **Tables 1 and 2,** respectively.

Samples were reportedly collected by Environment 1 personnel in laboratory prepared containers for the specified analytical procedures. Ground water samples were properly preserved, placed on ice, and transported to the laboratory facility (Environment 1, Inc. Wastewater ID: 10), within the specified hold times for each analysis.

[1] Water Quality Monitoring Plan, Martin County C&D Landfill, January 2012. Richardson Smith Gardner and Associates, Inc.

4.0 FIELD AND LABORATORY RESULTS

4.1 Field Results

Field measurements for groundwater depth, pH, temperature and specific conductance were collected for each well sampled during this monitoring event. Results are consistent with previous monitoring events. Depth to ground water and field measurements are included in **Tables 1 and 2**.

4.2 Laboratory Analysis

Samples were transported to the Environment 1 laboratory facility in Greenville, NC under proper chain of custody analyzed at the specified DWM Solid Waste Quantitation Limits (SWSLs)[2] for Appendix I constituents. The laboratory report is included as **Appendix A**.

4.3 Laboratory Results

4.3.1 Inorganic Constituents

Laboratory analysis for this monitoring event indicated four inorganic constituents: arsenic (MW-4 and CDW-2R), barium (MW-2, MW-3. MW-4, CDW-2R and CDW-6), beryllium (MW-2) and cadmium (CDW-5) were detected above the Solid Waste Section Reporting Limits (SWSLs). Only arsenic in sample from MW-4 and CDW-2R was detected at concentrations above the groundwater standards outlined in 15A NCAC 2L.0200.

Detected inorganic constituents are presented in **Table 3**. Most detections were noted as "J" values by the laboratory because the detected concentration falls between the MDL and SWSL; therefore is a non-quantifiable value.

Surface water samples had no detections above their respective 2B standards.

4.3.2 Organic Constituents

Laboratory analysis for this monitoring event indicates seven organic constituents (1,4-dichlorobenzene, benzene, chlorobenzene, cis 1,2-dichloroethene, toluene, xylenes and vinyl chloride) were detected above the SWSLs. The following constituents were detected at concentrations above their respective 2L Standards:

- Benzene (MW-2 and MW-4); and
- 1,4 dichlorobenzene (MW-4).

[2] New Guidelines for Electronic Submittal of Environmental Monitoring Data Memo, NCDENR – Solid Waste Section, October 27, 2006

Most organics were not reportable above the method detection limit (MDL) values. Table 4 summarizes the list of constituents detected including non-quantifiable "J" value detections.

No detections were reported in surface water samples.

5.0 GROUND WATER CHARACTERIZATION

A potentiometric surface map was prepared from ground water elevation data collected during this sampling event. The data indicates that ground water is flowing generally to the north and east across most of the site. Hydraulic conductivity data is not available for these wells so ground water velocities could not be calculated. The potentiometric surface map is provided as Figure 1.

6.0 CONCLUSIONS

Monitoring event results indicate detectable concentrations of the inorganic constituents arsenic, barium, beryllium and cadmium. These constituents are found naturally in North Carolina and sample turbidity can yield results that are "biased high" due to these naturally occurring constituents. These results are similar to previous sampling events at this site. The next ground water monitoring event is scheduled for April 2013. A report with laboratory analysis will be submitted to NCDENR in accordance with 15A NCAC 13B .0544.

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FIGURES

Fall 2012 Ground Water Monitoring Report
Martin County Landfill
Solid Waste Permit No. 59-01

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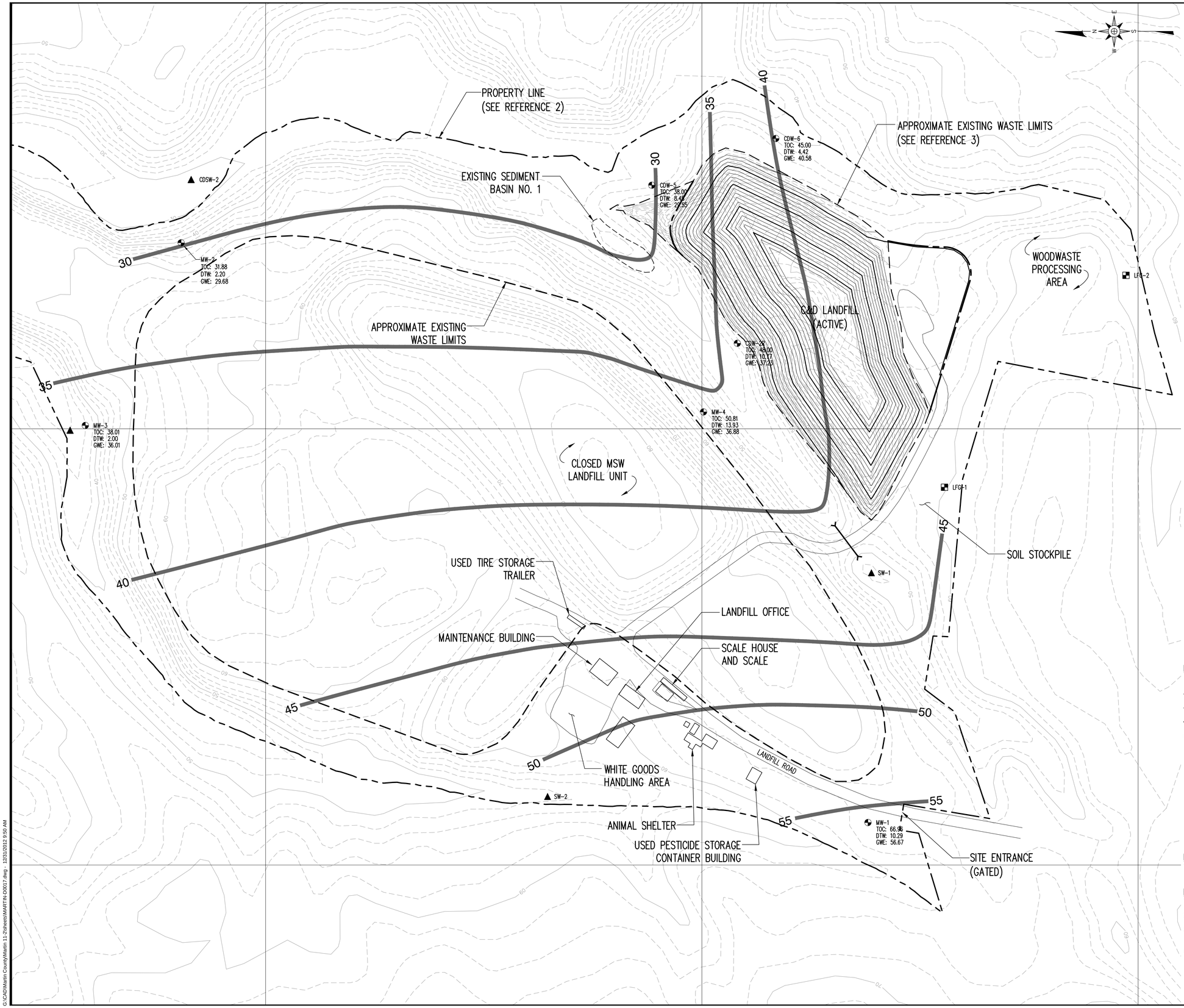

LEGEND

- EXISTING CONTOUR (SEE REFERENCE 1)
- PROPERTY LINE (SEE REFERENCE 2)
- APPROXIMATE EXISTING WASTE LIMITS
- LIMIT OF FUTURE WASTE PLACEMENT
- 50 GROUNDWATER SURFACE CONTOUR (5' INTERVAL)(DASHED WHERE INFERRED)
- MW-2 EXISTING MONITORING WELL
- TOC TOP OF CASING ELEVATION
- DTW MEASURED DEPTH TO WATER
- GWE GROUNDWATER SURFACE ELEVATION
- SW-1 SURFACE WATER SAMPLING LOCATION
- LFG-1 LANDFILL GAS SAMPLING LOCATION

NOTE

1. CDW WELLS TOC ELEVATION NOT SURVEYED, GROUNDWATER ELEVATIONS AND CONTOURS ARE ESTIMATED.

REFERENCES

1. OVERALL BASE TOPOGRAPHY REFERENCES NCDOT GIS DEPARTMENT DATA RELEASE MARCH 2005.
2. PROPERTY LINE FROM GIS PARCEL DATA PROVIDED BY MARTIN COUNTY GIS DEPARTMENT.
3. TOPOGRAPHY WITHIN THE APPROXIMATE EXISTING WASTE LIMITS FROM FIELD SURVEY DATED JUNE 22, 2011 BY ROANOKE LAND SURVEYING, WILLIAMSTON, NC.
4. GROUNDWATER POTENTIOMETRIC SURFACE FROM DATA COLLECTED ON NOVEMBER 16, 2012.

0 100' 200' 300'

PREPARED FOR:

MARTIN COUNTY

PREPARED BY:

NC LIC. NO. C-0828 (ENGINEERING)

SMITH+ GARDNER

ENGINEERS

14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577

SEAL

SEAL

REV.	DATE	DESCRIPTION

PROJECT TITLE:

MSW AND C&D LANDILL MONITORING REPORT

DRAWING TITLE:

GROUNDWATER POTENTIOMETRIC MAP NOVEMBER 2012

DESIGNED: MMG	PROJECT NO: MARTIN 11-2
DRAWN: WRB	SCALE: AS SHOWN
APPROVED:	DATE: DEC. 2012
FILENAME: MARTIN-D0017	
SHEET NUMBER:	DRAWING NUMBER: FIG. 1

G:\CAD\Martin County\Martin 11.2\sheets\MARTIN-D0017.dwg 12/31/2012 9:50 AM

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TABLES

Fall 2012 Ground Water Monitoring Report
Martin County Landfill
Solid Waste Permit No. 59-01

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By: CS
Date: 12/21/2012

Table 1
Ground Water Elevation Data
Martin County Landfill
11/16/2012

Well	TOC Elevation (feet)	Depth to Water (feet)	GW Elevation (feet)
MW-1	66.96	10.29	56.67
MW-2	31.88	2.20	29.68
MW-3	38.01	2.00	36.01
MW-4	50.81	13.93	36.88
CDW-2R	48*	10.77	37.23
CDW-5	38*	8.45	29.55
CDW-6	45*	4.42	40.58

Well locations and elevations provided by Roanoke Land Surveying (RLS) survey dated 4/3/1990.
CDW wells not yet surveyed, TOC is estimated from map elevation and tapemeasured stick-up
Depth to water from Environment 1 laboratory report dated 12/13/12 ID # 6023.

SMITH+GARDNER

By: CS
Date: 12/21/2012

Table 2
Field Parameters
Martin County Landfill
11/16/2012

Well Identification #	Temperature (°Celsius)	Specific Conductivity (uMhos/cm)	pH (SU)
MW-1	18	223	7.3
MW-2	17	971	5.3
MW-3	16	1048	6.7
MW-4	18	1337	6.2
CDW-2R	18	1256	6.4
CDW-5	19	924	4.5
CDW-6	16	1114	5.8
SW-1	11	267	6.4
SW-2	DRY	DRY	DRY
SW-3	11	320	6.5
CDSW-2	10	383	6.5

Note: 1. Data from Environment 1 laboratory report dated 12/13/12, ID# 6023

SMITH+GARDNER

Table 3
Detected Inorganic Constituents
Martin County Landfill
11/16/2012

By: CS
Date:12/21/2012

Constituents	SWSL	2L or GWP	MDL	2B	MW-1	MW-2	MW-3	MW-4	CDMW-2R	CDMW-5	CDMW-6
Antimony	6	1§	0.02	640	0.12 J	0.06 J	0.03 J	0.18 J	NA	NA	NA
Arsenic	10	10	0.13	10	3 J	2 J	0.16 J	**44**	**25**	1.8 J	4.1 J
Barium	100	700	0.07	2000000	88.6 J	**247**	**165**	**115**	**107**	61.4 J	**124**
Beryllium	1	4§	0.07	6.5	0.21 J	**3**	<0.07	<0.07	NA	NA	NA
Cadmium	1	2	0.03	2	0.15 J	0.16 J	0.21 J	0.05 J	0.29 J	**2**	0.24 J
Cobalt	10	1§	0.02	270	0.29 J	1 J	0.15 J	0.58 J	NA	NA	NA
Copper	10	1000	0.06	7	0.23 J	1 J	0.45 J	0.69 J	NA	NA	NA
Total Chromium	10	10	0.18	50	<0.18	0.24 J	<0.18	1.2 J	2.1 J	0.59 J	1.5 J
Lead	10	15	0.08	25	0.18 J	0.21 J	0.09 J	0.10 J	1.3 J	0.34 J	1.3 J
Mercury	0.2	1	0.02	0.012	NA	NA	NA	NA	<0.02	<0.02	<0.02
Nickel	50	100	0.06	88	1.1 J	5.2 J	2.5 J	3.7 J	NA	NA	NA
Selenium	10	20	0.17	5	<0.17	4.7 J	1.3 J	0.97 J	3.2 J	4.1 J	4.3 J
Vanadium	25	0.3§	0.10	NE	1.2 J	4.2 J	0.9 J	2.2 J	NA	NA	NA
Zinc	10	1000	0.48	50	4.1 J	6.3 J	2.5 J	8.5 J	NA	NA	NA

SWSL - Solid Waste Section Quantitation Limit
2L - Groundwater Standards (15A NCAC 2L 0200)
GWP - Groundwater Protection Standard (identified by §)
MDL - Method Detection Limit
2B - NCAC 2B Standard for Class C waters
Shading - Concentrations above 2L standard
Bold Letters - Constituent detected above SWSL
< MDL - Constituent not detected above the MDL
J - Detected constituents below SWSL but above MDL
NA - Not Analyzed

SWSLs, 2L Standards and Results are presented in ug/l.
Data from Environment 1 laboratory report dated 12/13/12, ID# 6023.

SMITH+GARDNER

Table 3
Detected Inorganic Constituents
Martin County Landfill
11/16/2012

By: CS
Date:12/21/2012

Constituents	SW-1	SW-3	CDSW-2
Antimony	0.03 J	0.04 J	NA
Arsenic	0.56 J	0.54 J	3.9 J
Barium	80.6 J	37.3 J	97.7 J
Beryllium	<0.07	<0.07	NA
Cadmium	0.07 J	0.03	0.16 J
Cobalt	0.62 J	0.54 J	NA
Copper	0.80 J	0.57 J	NA
Total Chromium	<0.18	0.32 J	1.9 J
Lead	0.25 J	0.31 J	2.4 J
Mercury	NA	NA	0.03 J
Nickel	1.6 J	1.4 J	NA
Selenium	<0.17	1.0 J	<0.17
Vanadium	1.1 J	1.1 J	NA
Zinc	11	4.4 J	NA

SMITH+GARDNER

By: CS
Date: 12/21/2012

Table 4
Detected Organic Constituents
Martin County Landfill
11/16/2012

Constituents	SWSL	2L	MDL	MW-2	MW-3	MW-4	CDMW-2R	CDMW-5	CDMW-6
1,1- Dichloroethane	5	6	0.20	0.8 J	0.6 J	2.1 J	<0.20	<0.20	<0.20
1,4-Dichlorobenzene	1	6	0.39	0.4 J	<0.39	**8.9**	<0.39	<0.39	<0.39
1,2-Dichlorobenzene	5	20	0.32	<0.32	<0.32	0.7 J	<0.32	<0.32	<0.32
Benzene	1	1	0.24	**3.5**	0.4 J	**5.5**	0.3 J	0.3 J	<0.24
Chlorobenzene	3	50	0.30	**4.1**	<0.30	**28.3**	<0.30	<0.30	<0.30
Cis-1,2-Dichloroethene	5	70	0.25	1.2 J	**14.6**	0.8 J	<0.25	<0.25	<0.25
Chloroethane	10	3000	0.48	<0.48	<0.48	0.6 J	<0.48	<0.48	<0.48
Ethylbenzene	1	600	0.21	0.5 J	<0.21	0.3 J	<0.21	<0.21	<0.21
Tetrahydrofuran	NE	NE	0.39	<0.39	<0.39	<0.39	3.3	2.1	6.7
Toluene	1	600	0.23	<0.23	<0.23	**1.9**	<0.23	<0.23	<0.23
Xylenes	5	500	0.68	<0.68	<0.68	**8.5**	<0.68	<0.68	<0.68
Vinyl Chloride	1	0.03	0.63	<0.63	<0.63	**12.9**	<0.63	<0.63	<0.63

SWSL	-	Solid Waste Section Quantitation Limit
2L	-	Groundwater Standards (15A NCAC 2L 0200)
MDL	-	Method Detection Limit
Shading	-	Concentrations above 2L standard
Bold Letters	-	Constituent detected above SWSL
< MDL	-	Constituent not detected above the MDL
J	-	Detected constituents below SWSL but above MDL

SWSLs, 2L Standards and Results are presented in ug/l.
Data from Environment 1 laboratory report dated 12/13/12, ID# 6023.

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APPENDIX A

Laboratory Analytical Results

Fall 2012 Ground Water Monitoring Report
Martin County Landfill
Solid Waste Permit No. 59-01

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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#: 6023

MARTIN COUNTY LANDFILL
MR. MAURICE ROBINSON
P.O. BOX 668
WILLIAMSTON ,NC 27892

DATE COLLECTED: 11/16/12
DATE REPORTED : 12/13/12

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-1	MW-2	MW-3	MW-4	SW-1	Analysis Date	Analyst	Method Code
PH (field measurement), Units			7.3	5.3	6.7	6.2	6.4	11/16/12	RJH	4500HB-00
Antimony, ug/l	0.02	6.0	0.12 J	0.06 J	0.03 J	0.18 J	0.03 J	11/21/12	LFJ	EPA200.8
Arsenic, ug/l	0.13	10.0	3.0 J	2.0 J	0.16 J	44	0.56 J	11/21/12	LFJ	EPA200.8
Barium, ug/l	0.07	100.0	88.6 J	247	165	115	80.6 J	11/21/12	LFJ	EPA200.8
Beryllium, ug/l	0.07	1.0	0.21 J	3	--- U	--- U	--- U	11/21/12	LFJ	EPA200.8
Cadmium, ug/l	0.03	1.0	0.15 J	0.16 J	0.21 J	0.05 J	0.07 J	11/21/12	LFJ	EPA200.8
Cobalt, ug/l	0.02	10.0	0.29 J	1.0 J	0.15 J	0.58 J	0.62 J	11/21/12	LFJ	EPA200.8
Copper, ug/l	0.06	10.0	0.23 J	1.0 J	0.45 J	0.69 J	0.80 J	11/21/12	LFJ	EPA200.8
Total Chromium, ug/l	0.18	10.0	--- U	0.24 J	--- U	1.2 J	--- U	11/21/12	LFJ	EPA200.8
Lead, ug/l	0.08	10.0	0.18 J	0.21 J	0.09 J	0.10 J	0.25 J	11/21/12	LFJ	EPA200.8
Nickel, ug/l	0.06	50.0	1.1 J	5.2 J	2.5 J	3.7 J	1.6 J	11/21/12	LFJ	EPA200.8
Selenium, ug/l	0.17	10.0	--- U	4.7 J	1.3 J	0.97 J	--- U	11/21/12	LFJ	EPA200.8
Silver, ug/l	0.10	10.0	--- U	--- U	--- U	--- U	--- U	11/21/12	LFJ	EPA200.8
Thallium, ug/l	0.07	5.5	--- U	--- U	--- U	--- U	--- U	11/21/12	LFJ	EPA200.8
Vanadium, ug/l	0.10	25.0	1.2 J	4.2 J	0.9 J	2.2 J	1.1 J	11/21/12	LFJ	EPA200.8
Zinc, ug/l	0.48	10.0	4.1 J	6.3 J	2.5 J	8.5 J	11	11/21/12	LFJ	EPA200.8
Conductivity (at 25c), uMhos/cm	1.0	1.0	223	971	1048	1337	267	11/16/12	RJH	2510B-97
Temperature, °C			18	17	16	18	11	11/16/12	RJH	2550B-00
Static Water Level, feet			10.29	2.20	2.00	13.93		11/16/12	RJH	
Well Depth, feet			20.28	19.76	19.00	20.58		11/16/12	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
GREENVILLE, N.C. 27835-7085

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

ID#: 6023

MARTIN COUNTY LANDFILL
MR. MAURICE ROBINSON
P.O. BOX 668
WILLIAMSTON ,NC 27892

DATE COLLECTED: 11/16/12
DATE REPORTED : 12/13/12

REVIEWED BY:

PARAMETERS	MDL	SWSL	SW-3	CDW2R	CDW5	CDW6	CDWS2	Analysis Date	Analyst	Method Code
PH (field measurement), Units			6.5	6.4	4.5	5.8	6.5	11/16/12	RJH	4500HB-00
Antimony, ug/l	0.02	6.0	0.04 J					11/21/12	LFJ	EPA200.8
Arsenic, ug/l	0.13	10.0	0.54 J					11/21/12	LFJ	EPA200.8
Arsenic, ug/l	0.13	10.0		25	1.8 J	4.1 J	3.9 J	11/28/12	LFJ	EPA200.8
Barium, ug/l	0.07	100.0	67.3 J					11/21/12	LFJ	EPA200.8
Barium, ug/l	0.07	100.0		107	61.4 J	124	97.7 J	11/28/12	LFJ	EPA200.8
Beryllium, ug/l	0.07	1.0	--- U					11/21/12	LFJ	EPA200.8
Cadmium, ug/l	0.03	1.0	0.03 J					11/21/12	LFJ	EPA200.8
Cadmium, ug/l	0.03	1.0		0.29 J	2	0.24 J	0.16 J	11/28/12	LFJ	EPA200.8
Cobalt, ug/l	0.02	10.0	0.54 J					11/21/12	LFJ	EPA200.8
Copper, ug/l	0.06	10.0	0.57 J					11/21/12	LFJ	EPA200.8
Total Chromium, ug/l	0.18	10.0	0.32 J					11/21/12	LFJ	EPA200.8
Total Chromium, ug/l	0.18	10.0		2.1 J	0.59 J	1.5 J	1.9 J	11/28/12	LFJ	EPA200.8
Lead, ug/l	0.08	10.0	0.31 J					11/21/12	LFJ	EPA200.8
Lead, ug/l	0.08	10.0		1.3 J	0.34 J	1.3 J	2.4 J	11/28/12	LFJ	EPA200.8
Mercury, ug/l	0.02	0.20		--- U	--- U	--- U	0.03 J	11/28/12	LFJ	EPA200.8
Nickel, ug/l	0.06	50.0	1.4 J					11/21/12	LFJ	EPA200.8
Selenium, ug/l	0.17	10.0	--- U					11/21/12	LFJ	EPA200.8
Selenium, ug/l	0.17	10.0		3.2 J	4.1 J	4.3 J	1.0 J	11/28/12	LFJ	EPA200.8
Silver, ug/l	0.10	10.0	--- U					11/21/12	LFJ	EPA200.8
Silver, ug/l	0.10	10.0		--- U	--- U	--- U	--- U	11/28/12	LFJ	EPA200.8
Thallium, ug/l	0.07	5.5	--- U					11/21/12	LFJ	EPA200.8
Vanadium, ug/l	0.10	25.0	1.1 J					11/21/12	LFJ	EPA200.8
Zinc, ug/l	0.48	10.0	4.4 J					11/21/12	LFJ	EPA200.8
Conductivity (at 25c), uMhos/cm	1.0	1.0	320	1256	924	1114	383	11/16/12	RJH	2510B-97
Temperature, °C			11	18	19	16	10	11/16/12	RJH	2550B-00
Static Water Level, feet				10.77	8.45	4.42		11/16/12	RJH	
Well Depth, feet				22.81	18.65	18.50		11/16/12	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
GREENVILLE, N.C. 27835-7085

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

CLIENT: MARTIN COUNTY LANDFILL
MR. MAURICE ROBINSON
P.O. BOX 668
WILLIAMSTON, NC 27892

CLIENT ID: 6023

ANALYST: MAO
DATE COLLECTED: 11/16/12
DATE ANALYZED: 11/21/12
DATE REPORTED: 12/13/12

REVIEWED BY: _____

VOLATILE ORGANICS
EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	MDL	SWSL	MW-1	MW-2	MW-3	MW-4	SW-1
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	--- U	--- U	--- U	12.90	--- U
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	--- U	--- 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	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U	0.80 J	0.60 J	2.10 J	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	1.20 J	14.60	0.80 J	--- 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	3.50	0.40 J	5.50	--- 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	1.90	--- 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	4.10	--- U	28.30	--- U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.21	1.0	--- U	0.50 J	--- U	0.30 J	--- U
37. Xylenes	0.68	5.0	--- U	--- U	--- U	8.50	--- 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	0.40 J	--- U	8.90	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	--- U	--- U	--- U	0.70 J	--- 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: MARTIN COUNTY LANDFILL
MR. MAURICE ROBINSON
P.O. BOX 668
WILLIAMSTON, NC 27892

CLIENT ID: 6023

ANALYST: MAO
DATE COLLECTED: 11/16/12
DATE ANALYZED: 11/21/12
DATE REPORTED: 12/13/12

REVIEWED BY: _____

VOLATILE ORGANICS
EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	MDL	SWSL	SW-3
1. Chloromethane	0.77	1.0	--- U
2. Vinyl Chloride	0.63	1.0	--- U
3. Bromomethane	0.67	10.0	--- U
4. Chloroethane	0.48	10.0	--- U
5. Trichlorofluoromethane	0.24	1.0	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U
7. Acetone	9.06	100.0	--- U
8. Iodomethane	0.26	10.0	--- U
9. Carbon Disulfide	0.23	100.0	--- U
10. Methylene Chloride	0.64	1.0	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U
13. Vinyl Acetate	0.20	50.0	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U
15. 2-Butanone	2.21	100.0	--- U
16. Bromochloromethane	0.27	3.0	--- U
17. Chloroform	0.25	5.0	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U
20. Benzene	0.24	1.0	--- U
21. 1,2-Dichloroethane	0.27	1.0	--- U
22. Trichloroethene	0.23	1.0	--- U
23. 1,2-Dichloropropane	0.21	1.0	--- U
24. Bromodichloromethane	0.21	1.0	--- U
25. Cis-1,3-Dichloropropene	0.24	1.0	--- U
26. 4-Methyl-2-Pentanone	1.19	100.0	--- U
27. Toluene	0.23	1.0	--- U
28. trans-1,3-Dichloropropene	0.28	1.0	--- U
29. 1,1,2-Trichloroethane	0.25	1.0	--- U
30. Tetrachloroethene	0.17	1.0	--- U
31. 2-Hexanone	1.57	50.0	--- U
32. Dibromochloromethane	0.24	3.0	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U
34. Chlorobenzene	0.30	3.0	--- U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U
36. Ethylbenzene	0.21	1.0	--- U
37. Xylenes	0.68	5.0	--- U
38. Dibromomethane	0.28	10.0	--- U
39. Styrene	0.19	1.0	--- U
40. Bromoform	0.20	3.0	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U
46. Acrylonitrile	2.72	200.0	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- 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: MARTIN COUNTY LANDFILL
MR. MAURICE ROBINSON
P.O. BOX 668
WILLIAMSTON, NC 27892

CLIENT ID: 6023

ANALYST: MAO
DATE COLLECTED: 11/16/12
DATE ANALYZED: 11/21/12
DATE REPORTED: 12/13/12

REVIEWED BY: _____

VOLATILE ORGANICS
EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	MDL	SWSL	CDW2R	CDW5	CDW6	CDWS2
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	--- U
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	--- U	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	--- U	--- U	--- 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	0.30 J	0.30 J	--- 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	--- U	--- U
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	--- U	--- 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
48. Tetrahydrofuran	0.39	1.0	3.30	2.10	6.70	--- U

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

Environment 2, 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: 6023 **Week:** 48

MARTIN COUNTY LANDFILL
MR. MAURICE ROBINSON
P.O. BOX 668
WILLIAMSTON NC 27892

(252) 792-1240

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

SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l OR ug/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Field pH	Metals	Conductivity	Temperature	Field Parameter	EPA 8260B	8260 Dup. 1	8260 Dup. 2
						A	A	A	A		E	E	E
						P	P	P	P		G	G	G
							L2				L2	L2	L2
MW-1	11	16/12	1155		18	5							
MW-2	11	16/12	1000		17	4							
MW-3	11	16/12	0935		16	4							
MW-4	11	16/12	1025		18	4							
SW-1	11	16/12	1135		11	4							
SW-2	12	16/12				4							
SW-3	12	16/12	0925		11	4							
CDW2R	11	16/12	1045		18	4							
CDW5	11	16/12	1120		19	4							
CDW6	11	16/12	1125		16	4							
CDWS2	11	16/12	0950		10	4							

CHLORINE NEUTRALIZED AT COLLECTION
pH CHECK (LAB)
CONTAINER TYPE, P/G
CHEMICAL PRESERVATION
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) H Lee for

SAMPLES RECEIVED IN LAB AT 1.0 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
H Lee	11/16/12		11/16/12 1515
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS: SW2 NO FLOW

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

N° 251843