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 Phone: 919-828-0577x222

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)
Bladen Co. Closed MSW Landfill	1522 Mercer Mill Road, Elizabethtown, NC	09-01	.0500	March 30, 2016

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 — 919-828-0577x222

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

Signature — 5/20/16 Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 2275 GEOLOGIST MADELINE GERMAN 5/20/16

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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March 2016 Semi-Annual Groundwater Monitoring Report

Bladen County Closed MSW Landfill
NC Solid Waste Permit No. 09-01

Prepared for:

Bladen County Solid Waste Management
1522 Mercer Mill Road
Elizabethtown, North Carolina 28337

May 2016

Prepared by:

NC LIC. NO. C-0828 (ENGINEERING)
SMITH+GARDNER
14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577

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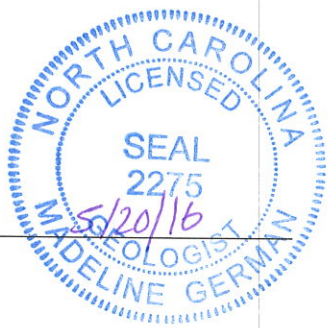
March 2016 Groundwater Monitoring Report

Bladen County Closed MSW Landfill
Solid Waste Permit No. 09-01

Prepared For:

Bladen County Solid Waste Management
Elizabethtown, North Carolina

S+G Project No. Bladen 08-04



Madeline German, P.G.
Project Geologist

Bobby J. Wolf
Project Geologist

May 2016

NC LIC. NO. C-0828 (ENGINEERING)
SMITH+GARDNER
14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577

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Bladen County Closed MSW Landfill
NC Solid Waste Permit No. 09-01

March 2016 Groundwater Monitoring Report

Table of Contents

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1.0 INTRODUCTION

The closed, unlined Bladen County Municiple Solid Waste (MSW) Landfill (Solid Waste Permit # 09-01) requires semi-annual groundwater monitoring as a condition of the water quality monitoring program. This report, prepared by Smith Gardner, Inc. (S+G), presents the March 30, 2016 monitoring event results. This event was performed in compliance with NC Solid Waste Regulations.

As specified in rule 15A NCAC 13B .0544 the October 2006 Electronic Deliverables Memo[1] and the November 5, 2014 Groundwater, Surface Water, Soil, Sediment, and Landfill Gas Electronic Document Submittal Memo[2], this report includes a Solid Waste Section (SWS) Environmental Monitoring Report Form and field procedure and laboratory analyses summaries for the closed MSW site. A potentiometric surface map, summary tables and laboratory analytical report are also included.

2.0 SITE GEOLOGY

The Bladen County MSW Landfill is located off Highway 87 just east of Elizabethtown in the Coastal Plain physiographic province. According to the *Geologic Map of North Carolina (1985)*, this area is underlain by the Black Creek Formation, which is characterized by gray to black lignitic clay with thin beds of fine grained sands and thick lenses of cross-grained sand.

3.0 SAMPLING LOCATIONS

The sampling event was reportedly performed by Environment 1, Inc. (Greenville, NC) personnel on March 30, 2016. The groundwater monitoring network for the MSW landfill includes seven groundwater monitoring wells (MW-1, MW-3, MW-4, MW-5A, MW-7, MW-8 & MW-9) and two surface water locations (SW-1 & SW-2). MW-1 serves as the background location. **Figure 1** illustrates the sampling locations.

4.0 SAMPLING PROCEDURES

Sampling methods followed the protocol outlined in the North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities (Department of Environmental Quality (DEQ), Division of Waste Management (DWM)). The depth to water in each well was gauged prior to purging and sampling. The field parameters pH, specific conductivity and temperature were measured at each sampling location. Water table elevations are included in **Table 1**.

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

2 Groundwater, Surface Water, Soil, Sediment, and Landfill Gas Electronic Document Submittal, NCDENR – Solid Waste Section, November 5, 2014.

Samples were collected by Environment 1, Inc. personnel in laboratory prepared containers. Groundwater samples were properly preserved, placed on ice and transported to the laboratory facility (Environment 1, Inc.), within the specified hold times for each analysis.

5.0 FIELD AND LABORATORY RESULTS

5.1 Field Parameter Results

Temperature, pH, and specific conductance were measured in the field at the time of sampling. The field parameter results are summarized in **Table 2** and have remained consistent with previously reported sampling events.

5.2 Laboratory Results

Samples were transported to the laboratory facility under proper chain of custody and analyzed to the laboratory established Method Detection Limits (MDL) for each parameter. Groundwater sample analytical results were compared with the DWM Solid Waste Quantitation Limits (SWSLs) for Appendix I constituents, the North Carolina Administrative Code(NCAC) 2L.0200 2L Standard (2L) and the Federal Maximum Contamint Limit. Surface water sample analytical results were compared with the 15A NCAC 2B Standard (2B) for Class C waters.

Table 3 summarizes the detected constituent list. Several constituents were detected above their MDL at concentrations below the SWSLs. These are listed as "J" values on **Table 3**, indicating they are non-quantifiable values. The laboratory report is included as **Appendix A**.

5.2.1 Inorganic Constituent Results

No inorganics were reported above their 2L Standard during the March 2016 monitoring event.

5.2.2 Organic Constituent Results

Only vinyl chloride in the sample from MW-9 was reported at a concentration above its 2L Standard for this event.

5.2.3 Surface Water Results

No quantifiable detections of inorganic or organic constituents were reported in samples from the surface water locations.

6.0 GROUNDWATER CHARACTERIZATION

A potentiometric map (**Figure 1**) for the uppermost aquifer, was prepared from the groundwater elevation data for this sampling event. The data indicates that groundwater is flowing generally north to northwest across most of the site. Hydraulic conductivity data is not available for these wells so groundwater velocities could not be calculated.

7.0 CONCLUSIONS

The reported organic detections are consistent with historically reported detections at the site. Monitoring well MW-9 is located immediately adjacent to the waste at the site.

Surface water sampling did not indicate contaminant migration.

The next groundwater monitoring event is scheduled for September 2016. Following receipt of laboratory data a report will be prepared and submitted to NCDEQ and Bladen County.

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FIGURE

March 2016 Groundwater Monitoring Report
Bladen County Closed MSW Landfill
NC Solid Waste Permit No. 09-01

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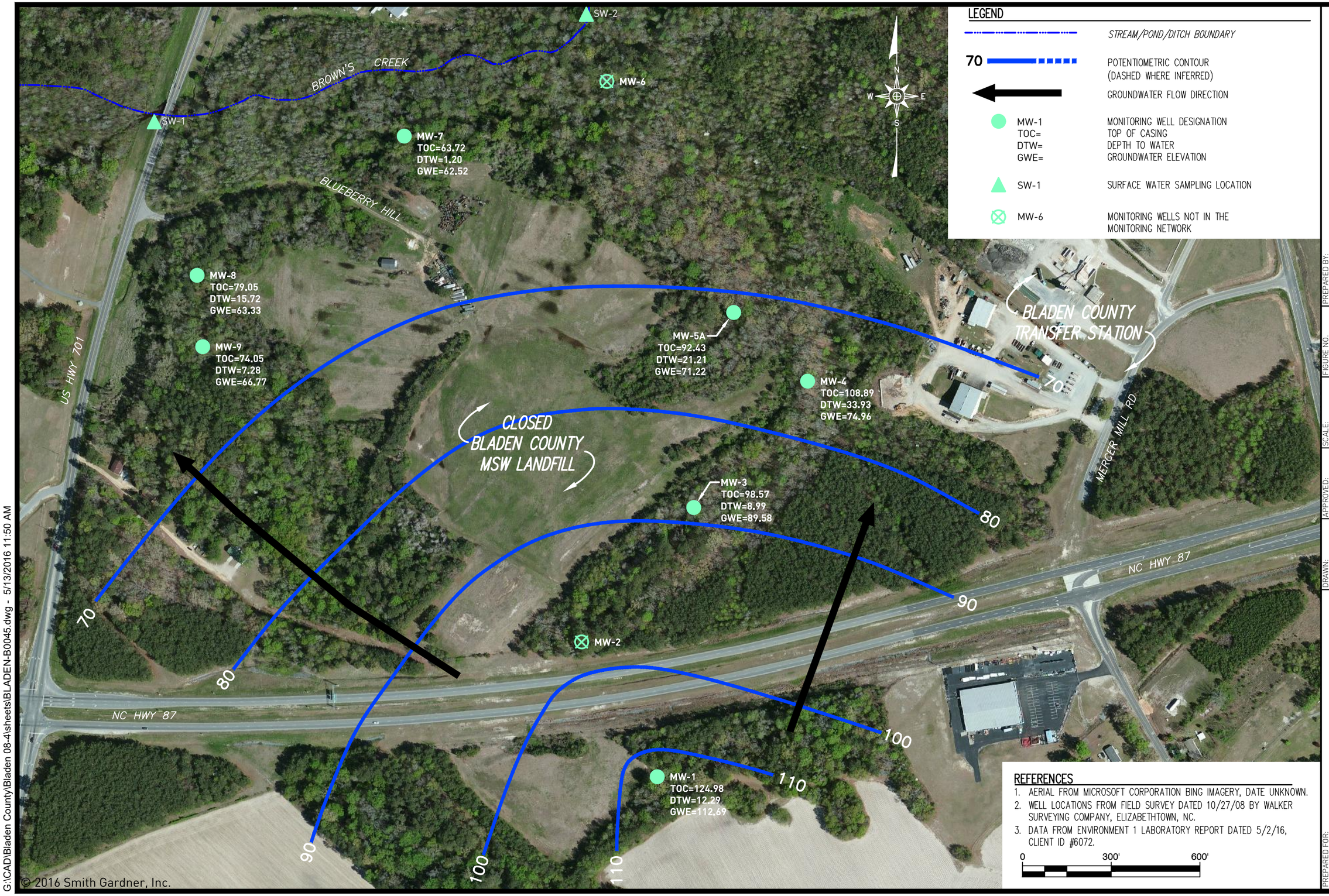

LEGEND

- STREAM/POND/DITCH BOUNDARY
- 70 — POTENTIOMETRIC CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- MW-1 (TOC= DTW= GWE=) — MONITORING WELL DESIGNATION, TOP OF CASING, DEPTH TO WATER, GROUNDWATER ELEVATION
- SW-1 — SURFACE WATER SAMPLING LOCATION
- MW-6 — MONITORING WELLS NOT IN THE MONITORING NETWORK

REFERENCES

1. AERIAL FROM MICROSOFT CORPORATION BING IMAGERY, DATE UNKNOWN.
2. WELL LOCATIONS FROM FIELD SURVEY DATED 10/27/08 BY WALKER SURVEYING COMPANY, ELIZABETHTOWN, NC.
3. DATA FROM ENVIRONMENT 1 LABORATORY REPORT DATED 5/2/16, CLIENT ID #6072.

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PREPARED BY:
SMITH+GARDNER
NC LIC. NO. C-0828 [ENGINEERING]
14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577

PREPARED FOR:

BLADEN COUNTY MSW LANDFILL
POTENTIOMETRIC SURFACE MAP
MARCH 2016

DRAWN:	C.T.J.
APPROVED:	M.M.G.
DATE:	May 2016
SCALE:	AS SHOWN
PROJECT NO:	BLADEN 08-4
FILENAME:	BLADEN-B0045
FIGURE NO.	1

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TABLES

March 2016 Groundwater Monitoring Report
Bladen County Closed MSW Landfill
Solid Waste Permit No. 09-01

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Table 1
Groundwater Elevation Data
Bladen County MSW Landfill
March 30, 2016

By: MG
Date: 5/10/2016

Well	Well Installation Date	Latitude	Longitude	Well Diameter (inches)	Total Well Depth (feet bgs)	Ground Surface Elevation (feet amsl)	TOC Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet)	Screen Interval (feet bgs)	Screen Geology
MW-1	NA	34.60291	78.61027	2.0	41.12	124.52	124.98	12.29	112.69	31-41	NA
MW-3	NA	34.60541	78.60985	2.0	21.52	97.00	98.57	8.99	89.58	11.5-21.5	NA
MW-4	NA	34.60658	78.60856	2.0	44.32	107.34	108.89	33.93	74.96	34.5-44.5	NA
MW-5A	NA	34.60722	78.60939	2.0	31.74	90.35	92.43	21.21	71.22	22-32	NA
MW-7	NA	34.60886	78.61308	2.0	15.14	62.06	63.72	1.20	62.52	5 - 15	NA
MW-8	NA	34.60758	78.61542	2.0	30.00	77.49	79.05	15.72	63.33	20-30	NA
MW-9	NA	34.60692	78.61536	2.0	17.58	72.09	74.05	7.28	66.77	7.5-17.5	NA

NOTE:
1. Well locations and elevations provided by Walker Surveying Co., Elizabethtown, NC from field survey conducted on 10/27/08.
2. Total Well Depth and Depth to Water from Environment 1 laboratory report dated 05/02/2016, Client ID# 6072.
3. Screened interval is assumed to be 10 feet. No well construction data is currently available.
4. NA-Not Available

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Table 2
Field Parameters
Bladen County MSW Landfill
March 30 2016

By: MG
Date: 5/10/2016

Well Identification #	Temperature (°Celsius)	Specific Conductivity (uS/cm)	pH
MW-1	17	248	5.4
MW-3	16	534	6.3
MW-4	19	652	6.7
MW-5A	18	674	7.0
MW-7	17	504	6.7
MW-8	18	432	6.4
MW-9	17	854	6.6
SW-1	16	119	6.2
SW-2	16	175	7.6

NOTE: 1. Data from Environment 1 laboratory report dated 5/2/2016,Client ID# 6072.

SMITH+GARDNER

Table 3
Detected Constituents
Bladen County MSW Landfill
March 30, 2016

By: MG
Date: 5/10/2016

Constituents	MDL	SWSL	2L	MCL	2B	MW-1	MW-3	MW-4	MW-5A	MW-7	MW-8	MW-9	SW-1	SW-2
Inorganic Constituents														
Arsenic	0.66	10	10	10	10	<0.66	4.8 J	<0.66	<0.66	0.92 J	<0.66	4.6 J	<0.66	<0.66
Barium	0.02	100	700	200	200000	129	33.1 J	70.3 J	158	40 J	92.4 J	107	27.7 J	39.5 J
Cadmium	0.05	1	2	5	2	0.24 J	0.18 J	0.16 J	0.12 J	0.15 J	0.48 J	<0.05	0.07 J	0.1 J
Lead	0.06	10	15	15	25	0.53 J	<0.06	0.7 J	<0.06	<0.06	0.13 J	<0.06	0.51 J	0.11 J
Selenium	0.54	10	20	50	5	1.3 J	<0.54	1 J	0.82 J	0.59 J	0.82 J	14	<0.54	<0.54
Organic Constituents														
Benzene	0.24	1	1	5	51	<0.24	0.9 J	<0.24	<0.24	<0.24	<0.24	0.9 J	<0.24	<0.24
Chlorobenzene	0.30	3	50	100	140	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	2.7 J	<0.3	<0.3
1,4- Dichlorobenzene	0.39	1	6	75	100	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	0.4 J	<0.39	<0.39
Cis-1,2-Dichloroethene	0.25	5	70	70	720	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	1.7 J	<0.25	<0.25
1,1 Dichloroethane	0.20	5	6	NE	100	<0.2	<0.2	0.7 J	<0.2	<0.2	<0.2	0.3 J	<0.2	<0.2
2-Butanone	2.21	100	4000	NE	750000	<2.21	<2.21	<2.21	2.7 J	<2.21	<2.21	<2.21	<2.21	<2.21
Vinyl Chloride	0.63	1	0.03	2	2.4	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	**2.20**	<0.63	<0.63

NOTE:
- MDL - Method Detection Limit
- SWSL - Solid Waste Quantitation Limit
- 2L - Groundwater Standards (15A NCAC 2L 0200)
- MCL - Maximum Contaminant Level
- 2B - NCAC 2B Standard for Class C waters
- **Bold** - Concentrations above 2L standard.
- J - Laboratory identified constituents below SWSL limit but above method detection limit.
- <MDL - Constitunent not detected above MDL

SWSLs, 2L Standards and Results are presented in ug/l.
Data from Environment 1 laboratory report dated 5/2/2016, Client ID# 6072.

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Appendix A

Laboratory Analytical Report

March 2016 Groundwater Monitoring Report
Bladen County Closed MSW Landfill
Solid Waste Permit No. 09-01

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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#: 6072

BLADEN COUNTY MSW
MS. JOAN SMYTH
SMITH GARDNER, INC.
14 NORTH BOYLAN AVE.
RALEIGH ,NC 27603

DATE COLLECTED: 03/30/16
DATE REPORTED : 05/02/16

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-1	MW-3	MW-4	MW-5A	MW-7	Analysis Date	Analyst	Method Code
PH (field measurement), Units			5.4	6.3	6.7	7.0	6.7	03/30/16	TB	4500HB-00
Arsenic, ug/l	0.66	10.0	--- U	4.8 J	--- U	--- U	0.92 J	04/11/16	LFJ	EPA200.8
Barium, ug/l	0.02	100.0	129	33.1 J	70.3 J	158	40.0 J	04/11/16	LFJ	EPA200.8
Cadmium, ug/l	0.05	1.0	0.24 J	0.18 J	0.16 J	0.12 J	0.15 J	04/11/16	LFJ	EPA200.8
Total Chromium, ug/l	0.06	10.0	--- U	--- U	--- U	--- U	--- U	04/11/16	LFJ	EPA200.8
Lead, ug/l	0.06	10.0	0.53 J	--- U	0.70 J	--- U	--- U	04/11/16	LFJ	EPA200.8
Mercury, ug/l	0.04	0.20	--- U	--- U	--- U	--- U	--- U	04/15/16	JMN	245.1 R3-9
Selenium, ug/l	0.54	10.0	1.3 J	--- U	1.0 J	0.82 J	0.59 J	04/11/16	LFJ	EPA200.8
Silver, ug/l	0.06	10.0	--- U	--- U	--- U	--- U	--- U	04/11/16	LFJ	EPA200.8
Conductivity (at 25c), uMhos/cm	1.0	1.0	248	534	652	674	504	03/30/16	TB	2510B-97
Temperature, °C			17	16	19	18	17	03/30/16	TB	2550B-00
Static Water Level, feet			12.29	8.99	33.93	21.21	1.20	03/30/16	TB	
Well Depth, feet			41.12	21.52	44.32	31.74	15.14	03/30/16	TB	

J = Between MDL and SWSL, U = Below ALL Quantitation 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#: 6072

BLADEN COUNTY MSW
MS. JOAN SMYTH
SMITH GARDNER, INC.
14 NORTH BOYLAN AVE.
RALEIGH ,NC 27603

DATE COLLECTED: 03/30/16
DATE REPORTED : 05/02/16

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-8	MW-9	SW-1	SW-2	Trip Blank	Analysis Date	Analyst	Method Code
PH (field measurement), Units			6.4	6.6	6.2	7.6		03/30/16	TB	4500HB-00
Arsenic, ug/l	0.66	10.0	--- U	4.6 J	--- U	--- U		04/11/16	LFJ	EPA200.8
Barium, ug/l	0.02	100.0	92.4 J	107	27.7 J	39.5 J		04/11/16	LFJ	EPA200.8
Cadmium, ug/l	0.05	1.0	0.48 J	--- U	0.07 J	0.10 J		04/11/16	LFJ	EPA200.8
Total Chromium, ug/l	0.06	10.0	--- U	--- U	--- U	--- U		04/11/16	LFJ	EPA200.8
Lead, ug/l	0.06	10.0	0.13 J	--- U	0.51 J	0.11 J		04/11/16	LFJ	EPA200.8
Mercury, ug/l	0.04	0.20	--- U	--- U	--- U	--- U		04/15/16	JMN	245.1 R3-9
Selenium, ug/l	0.54	10.0	0.82 J	14	--- U	--- U		04/11/16	LFJ	EPA200.8
Silver, ug/l	0.06	10.0	--- U	--- U	--- U	--- U		04/11/16	LFJ	EPA200.8
Conductivity (at 25c), uMhos/cm	1.0	1.0	432	854	119	175		03/30/16	TB	2510B-97
Temperature, °C			18	17	16	16		03/30/16	TB	2550B-00
Static Water Level, feet			15.72	7.28				03/30/16	TB	
Well Depth, feet			30.00	17.58				03/30/16	TB	

J = Between MDL and SWSL, U = Below ALL Quantitation 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: BLADEN COUNTY MSW
MS. JOAN SMYTH
SMITH GARDNER, INC.
14 NORTH BOYLAN AVE.
RALEIGH, NC 27603

CLIENT ID: 6072

ANALYST: MAO
DATE COLLECTED: 03/30/16
DATE REPORTED: 05/02/16

REVIEWED BY: _____

VOLATILE ORGANICS
EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	MDL	SWSL	Date Analyzed: 04/05/16 MW-1	04/04/16 MW-3	04/04/16 MW-4	04/04/16 MW-5A	04/04/16 MW-7
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	--- U	--- U	--- 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	--- 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	--- U	0.70 J	--- U	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	--- U	--- U	--- U	--- U
15. 2-Butanone	2.21	100.0	--- U	--- U	--- U	2.70 J	--- 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	0.90 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	--- U	--- U	--- 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 Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

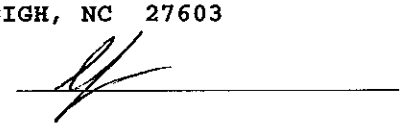
P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

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

CLIENT: BLADEN COUNTY MSW
MS. JOAN SMYTH
SMITH GARDNER, INC.
14 NORTH BOYLAN AVE.
RALEIGH, NC 27603

CLIENT ID: 6072

ANALYST: MAO
DATE COLLECTED: 03/30/16
DATE REPORTED: 05/02/16

REVIEWED BY: 

VOLATILE ORGANICS
EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	Date Analyzed: MDL	SWSL	04/05/16 MW-8	04/05/16 MW-9	04/05/16 SW-1	04/05/16 SW-2	04/05/16 Trip Blank
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	--- U	2.20	--- 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	--- 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	0.30 J	--- 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	1.70 J	--- U	--- 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	0.90 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	2.70 J	--- U	--- 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
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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	--- 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
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J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Inc.
P.O. Box 7085, 114 Oakmont Dr.
Greenville, NC 27858
environment1inc.com
Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

CLIENT: 6072 **Week: 13**

BLADEN COUNTY MSW
MS. JOAN SMYTH
SMITH GARDNER, INC.
14 NORTH BOYLAN AVE.
RALEIGH NC 27603

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

CHLORINE NEUTRALIZED AT COLLECTION

pH CHECK (LAB): 2 2 2 2 2

CONTAINER TYPE, P/G: P P P P G G G

CHEMICAL PRESERVATION: A A A A E E E

PARAMETERS/TESTS

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

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
MW-1	3-30-16	1005		17	5	G	G	G	G	G	G	G	G
MW-3	3-30-16	1020		16	4	G	G	G	G	G	G	G	
MW-4	3-30-16	1038		19	4	G	G	G	G	G	G	G	
MW-5A	3-30-16	1110		18	4	G	G	G	G	G	G	G	
MW-7	3-30-16	1140		17	4	G	G	G	G	G	G	G	
MW-8	3-30-16	1150		18	4	G	G	G	G	G	G	G	
MW-9	3-30-16	1200		17	4	G	G	G	G	G	G	G	
SW-1	3-30-16	0930		16	4	G	G	G	G	G	G	G	
SW-2	3-30-16	1100		16	4	G	G	G	G		G	G	
Trip Blank	3-30-16				2						G	G	

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

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

SAMPLES COLLECTED BY: (Please Print) Tom Beasley

SAMPLES RECEIVED IN LAB AT 04 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Tom Beasley	3-30-16 1500	[signature]	3/30/16 1307
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:

FORM #5

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.

№ 316957