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):

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 A. Smyth, P.G. Phone: 919-828-0577 x 221

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 Co. Phase 2 MSW Landfill	1242 Old Hwy. 29 Thomasville, NC	29-06	.1600	March 16 - 17, 2011

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 A. Smyth, P.G. | Senior Hydrogeologist | 919-828-0577 x 221

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

Joan A. Smyth 5/19/11

Signature | Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

5/19/11

14 N. Boylan Avenue Raleigh, NC 27603

Facility Representative Address

C0828

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

Revised 6/2009

Ground Water Monitoring Report

Spring 2011 Monitoring Event

Davidson County
MSW Phase 2 – Area 1 Landfill
Lexington, North Carolina
NC Solid Waste Permit # 29-06

Prepared for:

Davidson County Integrated Solid Waste
1242 Old Highway 29
Thomasville, NC 27360-0024

May 2011

RICHARDSON SMITH GARDNER
& ASSOCIATES
ENGINEERING & GEOLOGICAL
SERVICES

PRINTED ON 100% RECYCLED PAPER

Ground Water Monitoring Report
Davidson County Phase 2 - Area 1 Landfill
Spring 2011 Monitoring Event

Prepared for:

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

RSG Project No. **DAVDCO 10-9**

Joan A. Smyth, P.G.
Senior Hydrogeologist

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

May 2011

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

PRINTED ON 100% RECYCLED PAPER

Davidson County MSW Phase 2 Landfill

Ground Water Monitoring Report
Spring 2011 Monitoring Event

1.0 INTRODUCTION 1

2.0 SITE GEOLOGY.....1

3.0 DAVIDSON COUNTY MSW PHASE 2 LANDFILL 1
3.1 Sampling Procedures 1
3.2 Field and Laboratory Results.....2
3.3 Statistical Analysis.....2
3.4 2L/MCL Statistical analysis.....2

4.0 SITE GROUND WATER CHARACTERIZATION 2

5.0 CONCLUSIONS.....3

FIGURES

Figure 1 – Davidson County Landfill Site Potentiometric Map

TABLES

Table 1 – Ground Water Elevations & Velocities
Table 2 – Field Parameters
Table 3 – Detected Constituents
Table 4 – Leachate Analytical Data
Table 5 – Statistical Analysis Summary
Table 6 – Aquifer Conductivity and Velocity Table

APPENDICES

Appendix A – Field Data Sheets
Appendix B – Monitoring Well Information
Appendix C – Laboratory Analytical Report
Appendix D – Time vs. Concentration Graphs

1.0 Introduction

On March 17, 2011, Richardson Smith Gardner & Associates (RSG) personnel performed the required semi-annual ground water monitoring event at the Davidson County MSW Phase 2 – Area 1 Landfill. This sampling event satisfies the requirements of the monitoring program for this site under 15A NCAC 13B.1600. The following report summarizes the monitoring event, sampling procedures, field and laboratory results, statistical analysis, and ground water characterization as required by NC Solid Waste Regulations. Also included are time versus concentration graphs, and the laboratory analytical report.

2.0 Site Geology

The Davidson County Landfill facility is located in the Piedmont Physiographic Province of North Carolina. More specifically, the Geologic Map of North Carolina (1985) indicates that the site lies within, but at the western margin of, the Carolina Slate Belt. This belt includes predominantly volcanic and sedimentary rocks of Late Proterozoic to Cambrian age that have been metamorphosed and intruded by numerous igneous plutons. The boundary zone between the Carolina Slate Belt and the adjacent Charlotte Belt is known as the Gold Hill/Silver Hill shear zone. The most detailed mapping of the area was published by the US Geological Survey in the Geologic Map of Charlotte by Goldsmith, Milton and Horton (1988). This mapping indicates that the site vicinity is underlain by two stratigraphic units: metavolcanic rocks, and metamorphosed granodiorite.

The metavolcanic rocks include mafic, intermediate and felsic volcanic rocks, rocks from the Flat Swamp Member of the Cid Formation, and metavolcanic rocks of the Battleground Formation. The Battleground Formation is characterized as a quartz-sericite schist and phyllite. It contains subordinate beds of quartz-pebble conglomerate, quartzite, kyanite or sillmanite quartzite and manganiferous schist. The metamorphosed granodiorite occurs in the central portion of the proposed Phase 2 area. This unit is locally porphyritic.

3.0 Davidson County Phase 2 MSW Landfill

3.1 Sampling Procedures

Groundwater sampling was performed at 10 wells (MW-1, MW-2, MW-3S, MW-3D, MW-4S, MW-4D, MW-5, MW-6S, MW-8 & MW-9) shown on **Figure 1**. Monitoring wells MW-7 and MW-6d could not be sampled due to insufficient water. Field Data Sheets are included in **Appendix A**, and boring logs for these wells are included in **Appendix B**. Sampling procedures followed the protocols set forth in the site's Water Quality Monitoring Plan[1]. Each well was gauged to determine ground water depth and then purged of a minimum of three well volumes or until dry. The wells were purged and allowed to stabilize prior to sample collection. Ground water purging and sample collections were performed using a factory sealed Teflon™ bailer. During the

[1] Davidson County Landfill Water Quality Monitoring Plan, Richardson Smith Gardner & Associates, February 2007.

sampling process, each well was inspected for signs of damage or unusual conditions. None were noted with the exception of one well lock that was replaced.

Field measurements of temperature, pH, and conductivity were taken at each well and surface water sampling location. Monitoring well boring logs are included in **Appendix B**. 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 laboratory. Field blanks were also collected for quality control purposes.

3.2 Field and Laboratory Results

All samples were transported to the laboratory facility under proper chain of custody analyzed at the specified Solid Waste Section Practical Quantitation Limits (SWSLs) for Appendix I constituents[2]. The laboratory analysis is included in **Appendix C**.

Ground water and field measurements are included as **Tables 1 and 2,** respectively. Eight (8) inorganic constituents (barium, cadmium, cobalt, copper, total chromium, lead, vanadium and zinc) were detected above the Solid Waste Section Practical Quantitation Limits (SWSLs) in six (6) wells (MW-1s, MW-2, MW-4S, MW-5, MW-6S and MW-9). Of these, two (2) inorganic constituents:

- cadmium (MW-9); and
- vanadium (MW-1, MW-4S, MW-5, MW-6S and MW-9)

were detected above the 15A NCAC 2L.0200 (2L) / Ground Water Protection (GWP) standards.

Laboratory analysis of ground water indicated no detectable concentrations of organic constituents in any of the wells. The laboratory results are summarized in **Table 3**, and are included in **Appendix C**.

Surface water sampling was conducted at three (3) points (SW-1, SW-2, SW-3), with the results included in **Table 3**. No constituents were detected above the SWSL limit.

A leachate sample was also collected, and the detected results from this sample are included in **Table 4**.

3.3 Statistical Analysis

Statistical analysis of the laboratory data indicated statistically significant increases of two (2) constituents: cadmium (MW-4S and MW-9) and vanadium (MW-5, MW-6S and MW-9). The statistical analysis results are summarized in **Table 5**.

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

3.4 2L/MCL Statistical Analysis

For wells that showed statistically significant differences from background concentrations, additional analysis was performed. To perform the analysis, the respective 2L standard or MCL was determined for each parameter with statistically significant results. Each compliance well with statistical significance was re-analyzed against the lower of the 2L or MCL standard as a Ground Water Protection Standard (GWPS). The statistical results for this additional analysis are presented in **Table 4**. An upper tolerance limit higher than the GWPS was considered to be a statistically significant result. This analysis indicated statistically significant results for cadmium (MW-4S and MW-9). The results are summarized in **Table 5**.

4.0 Site Ground Water Characterization

A potentiometric surface map was prepared for the 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:

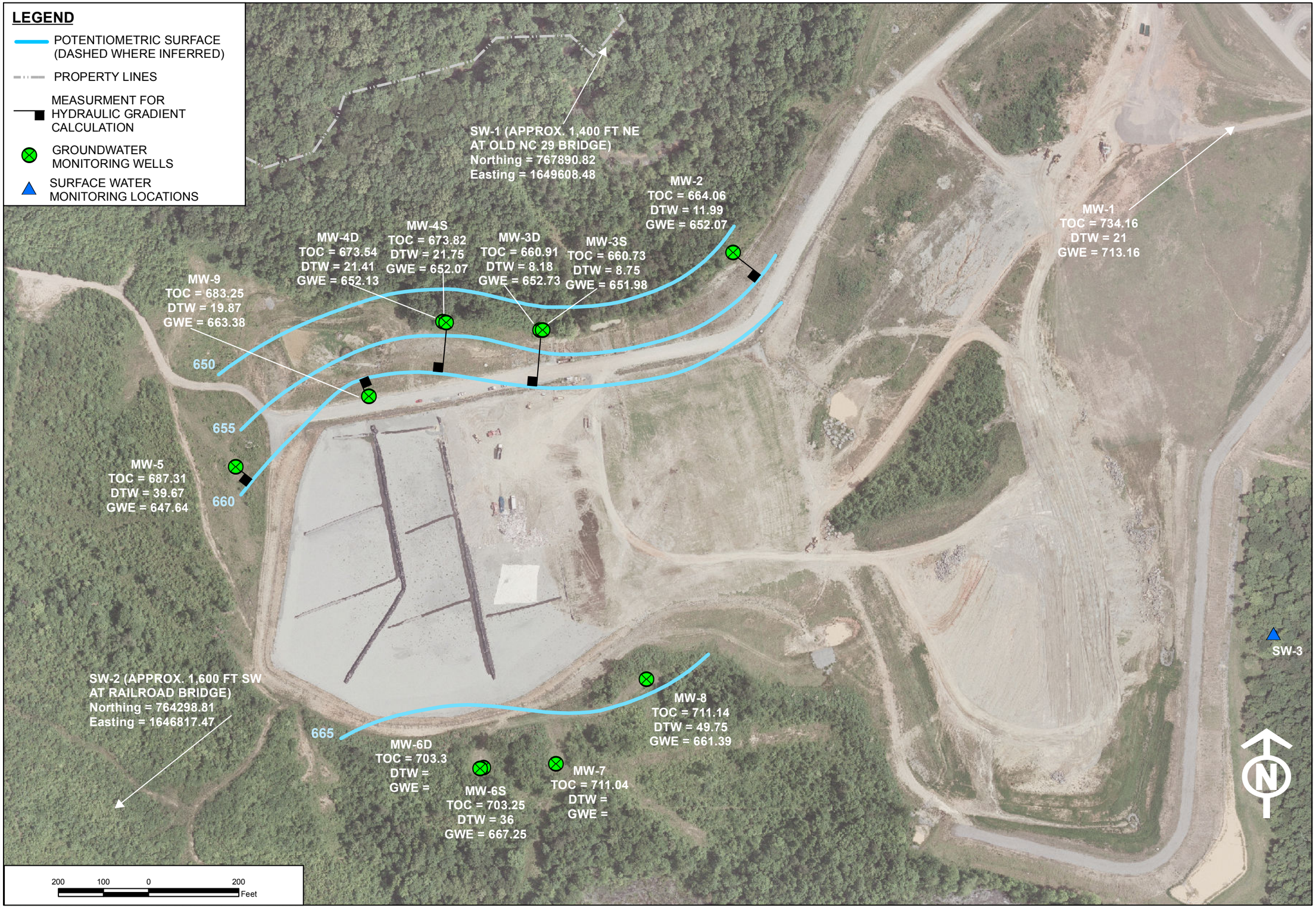
K = hydraulic conductivity
I = ground water gradient
n = porosity

Ground water velocities at the lined Phase 2 MSW landfill ranged from 0.018 feet/day (MW-2) to 0.958 feet/day (MW-9). These calculations are included in **Table 6**. The data indicates that ground water underneath the lined MSW landfill is flowing generally to the north and northwest towards Rich Fork Creek. This is consistent with ground water flow patterns previously seen at this site. The potentiometric surface map is attached as **Figure 1**.

5.0 Conclusions

The results presented from the groundwater monitoring wells associated with the Phase 2 Area 1 landfill indicate detections of inorganic constituents which are likely due to naturally occurrences of these constituents in the soil and rock formations. Although turbidity could not be measured during this event, suspended solids in ground water samples can yield “biased high” results. Due to the naturally occurring nature of the inorganic constituents detected it is likely the elevated concentrations are due to suspended solids in the samples and not indicative of impact from the landfill. In general, detected ground water concentrations at the site have remained stable. The next ground water monitoring event will be completed in October 2011. The results of this event will be reported to NCDENR upon completion of statistical analysis of laboratory data.

Figures



RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

FIGURE NO.	1
FILE NAME	david_p2
SCALE:	AS SHOWN
PROJECT NO.	DAVDCO-4
CHECKED BY:	J.A.S.
DRAWN BY:	D.M.M.
DATE:	MAY 2011

TITLE:

DAVIDSON COUNTY
Phase 2 Landfill
POTENTIOMETRIC SURFACE MAP
SPRING 2011

C:\gw\davidson sp 2011\potentiometric map data\david_p2.mxd 5/13/2011 3:06:35 PM

Tables

By: DMM
Date: 4/28/2011

Table 1
Ground Water Elevations
Davidson County Phase 2 Landfill
3/17/2011

Well	Northing	Easting	TOC Elevation (feet)	Depth to Water (feet)	Water Level Elev (feet)
MW-1	767416.7610	1651389.0830	734.16	21	713.16
MW-2	766376.8072	1649303.3872	664.06	11.99	652.07
MW-3S	766204.9705	1648875.8572	660.73	8.75	651.98
MW-3D	766204.6283	1648881.1437	660.91	8.18	652.73
MW-4S	766223.2813	1648660.2736	673.82	21.75	652.07
MW-4D	766220.6778	1648667.3780	673.54	21.41	652.13
MW-5	765901.6002	1648200.9255	687.31	39.67	647.64
MW-6S	765234.1084	1648749.7961	703.25	36	667.25
MW-6D	765233.1390	1648743.0790	703.30	Dry	Dry
MW-7	765242.8464	1648910.6331	711.04	Dry	Dry
MW-8	765430.5188	1649111.6524	711.14	49.75	661.39
MW-9	766057.5112	1648496.3934	683.25	19.87	663.38

Notes: Velocity Calculated from V=K*I/n where:
V = velocity
K = Hydraulic Conductivity
I = Gradient
n = Porosity
Hydraulic Conductivity data from slug tests performed in 1994
Porosity values assumed from Groundwater & Wells (Driscoll)
Survey Data collected by Surveying Solutions, P.C.
-- = insufficent water to sample

By: DMM
Date: 4/28/2011

Table 2
Field Parameters
Davidson County Phase 2 Landfill
3/17/2011

Well	pH (Std. Units)	Conductivity (umhos)	Temp. (celsius)	Turbidity (NTU)
MW-1	7.0	930.0	15	NM
MW-2	7.7	180.0	12	NM
MW-3S	7.4	220.0	11.0	NM
MW-3D	7.8	270.0	10	NM
MW-4S	6.9	210.0	13	NM
MW-4D	6.7	230.0	14	NM
MW-5	7.1	120.0	13	NM
MW-6S	7.5	300.0	13	NM
MW-6D	Dry	Dry	Dry	Dry
MW-7	Dry	Dry	Dry	Dry
MW-8	7.5	300.0	14.0	NM
MW-9	6.9	190.0	15.0	NM
SW-1	7.8	150.0	9.0	NM
SW-2	7.6	180.0	10.0	NM
SW-3	7.6	180.0	11	NM

Notes: Data Collected by Don Misenheimer and Lindsay Quant of RSG Engineers Inc.
NM- Not Measured due to meter malfunction

By: DMM
Date: 4/29/2011

Table 3
Detected Inorganic & Organic Constituents
Davidson County Phase 2 Landfill
3/17/2011

Parameter	SWSL	2L or GWP	MW-1	MW-2	MW-3D	MW-3S	MW-4D	MW-4S	MW-5	MW-6D	MW-6S	MW-7	MW-8	MW-9	SW-1	SW-2	SW-3
Inorganic Constituents																	
antimony			ND	ND	ND	ND	ND	ND	ND	NM	ND	NM	ND	ND	ND	0.18 J	0.16 J
arsenic	10	50	1 J	0.61 J	0.5 J	0.22 J	0.38 J	2.5 J	0.48 J	NM	1.2 J	NM	0.48 J	1.0 J	0.29 J	0.42 J	0.25 J
barium	100	2000	**350**	31.8 J	26.1 J	26.1 J	39.9 J	**553**	41.9 J	NM	**359**	NM	4.7 J	84.4 J	23.6 J	32.3 J	32.4 J
beryllium	1	4	0.31 J	0.08 J	ND	ND	ND	0.44 J	0.14 J	NM	0.29 J	NM	ND	0.21 J	ND	ND	ND
cadmium	1	1.75	0.46 J	0.15 J	0.21 J	0.21 J	0.05 J	0.24 J	0.07 J	NM	0.13 J	NM	ND	**2**	0.04 J	0.04 J	ND
cobalt	10	70	**25**	3.2 J	0.76 J	0.76 J	0.09 J	**29**	6.3 J	NM	**12**	NM	1.1 J	**10**	0.59 J	0.43 J	0.40 J
copper	10	1000	**439**	**16**	1.8 J	1.8 J	0.37 J	**625**	**24**	NM	**88**	NM	3.2 J	**34**	1.8 J	2.1 J	2.4 J
chromium, total	10	50	**17**	**16**	3.1 J	3.1 J	ND	**40**	5.6 J	NM	**18**	NM	4.0 J	**13**	0.52 J	0.48 J	0.44 J
lead	10	15	8.4 J	1.7 J	0.23 J	0.23 J	0.05 J	**11**	3.4 J	NM	4.4 J	NM	0.62 J	3.1 J	2.3 J	0.50 J	0.48 J
nickel	50	100	23.2 J	4.5 J	0.94 J	0.94 J	0.46 J	25 J	6.7 J	NM	12.1 J	NM	2.3 J	3.7 J	0.52 J	1.0 J	1.0 J
selenium	10	50	ND	ND	0.3 J	0.3 J	ND	ND	ND	NM	0.57 J	NM	ND	ND	ND	ND	ND
silver	10	17.5	0.32 J	0.08 J	ND	ND	ND	0.43 J	0.05 J	NM	0.08 J	NM	ND	0.07 J	ND	ND	ND
thallium	5	0.28	0.21 J	ND	ND	ND	0.16 J	0.29 J	0.11 J	NM	0.14 J	NM	ND	0.04 J	ND	ND	ND
vanadium	25	3.5	**169**	21.7 J	12.7 J	12.7 J	9.2 J	**412**	**27**	NM	**51**	NM	10 J	**39**	4.5 J	2.3 J	2.1 J
zinc	10	1050	**135**	7.8 J	3.4 J	3.4 J	0.73 J	**241**	**33**	NM	**113**	NM	1.7 J	**22**	9.3 J	3.8 J	4.1 J
Organic Constituents																	
Acetone	100	6000	ND	ND	ND	ND	ND	21.1 J	11.7 J	NM	15.4 J	NM	ND	ND	ND	ND	ND

SWSL	-	Solid Waste Section Limits
GWP	-	Ground Water Protection Standard
ND	-	Not detected
Shading	-	Levels above 2L standard or no 2L standard
Bold Letters	-	Constituent detected above SWSL limit

J	-	Constituents detected below SWSL limit
NS	-	Not sampled
	-	All units are in ug/L.
	-	Data Analyzed by Environment 1, Inc.

* Trip blank contained 9.2 J of Acetone.

By: DMM
Date: 4/29/2011

Table 4
Davidson County Phase 2 Landfill
Leachate Analytical Data
3/17/2011

Parameter	Unit	Leachate
1,1-Dichloroethane	ug/l	1.9 J
1,2-Dichloroethane	ug/l	4.9
1,4-Dichlorobenzene	ug/l	4.7
2-Butanone	ug/l	2110
2-Hexanone	ug/l	23 J
4-Methyl-2-Pentanone	ug/l	51
Acetone	ug/l	1570
Ammonia Nitrogen as N	ug/l	119000
Antimony	ug/l	2.0 J
Arsenic	ug/l	6.8 J
Barium	ug/l	289
Benzene	ug/l	9.6
Beryllium	ug/l	0.24 J
BOD	ug/l	830000
Cadmium	ug/l	0.44 J
Chloroethane	ug/l	4.4 J
Chloromethane	ug/l	1
Cis-1,2-Dichloroethene	ug/l	5
Cobalt	ug/l	13
COD	ug/l	1084000
Copper	ug/l	25
Ethylbenzene	ug/l	16.8
Lead	ug/l	4.3 J
Methylene Chloride	ug/l	30.2
Nickel	ug/l	38.9
Selenium	ug/l	9.3 J
Silver	ug/l	0.07 J
Styrene	ug/l	1.6
Sulfate	ug/l	9.5 J
Tetrachloroethene	ug/l	0.8 J
Toluene	ug/l	312
Total Chromium	ug/l	27
Total Phosphorus as P	ug/l	520
Total Suspended Residue	ug/l	536000
trans-1,2-Dichloroethene	ug/l	5.4
Trichloroethene	ug/l	3.4
Vanadium	ug/l	32
Vinyl Chloride	ug/l	10.3
Xylenes	ug/l	48
Zinc	ug/l	246

By: DMM
Date: 5/10/2011

Table 5
Davidson County Landfill Phase 2
Statistical Analysis Summary
3/17/2011

Location	Parameter	Result (mg/l)	Detection Limit (mg/l)	Test Units	%ND	CL	Test	Statistically Significant?	2L/MCL statistical analysis	Method for MCL analysis
MW-9	Cadmium	2	1.75	ug/l	0	99%	PPL	Y	Y	MCL PTI (1992)
MW-4S	Vanadium	412	50	ug/l	0	99%	PPL	Y	Y	MCL PTI (1992)
MW-5	Vanadium	27	50	ug/l	0	99%	PPL	N		
MW-6S	Vanadium	51	50	ug/l	0	99%	PPL	N		
MW-9	Vanadium	39	50	ug/l	0	99%	PPL	N		

Highlighting indicates statistical significance.
Upgradient well : MW -1s

By: DMM
Date: 5/10/2011

Table 6
Aquifer Conductivity and Velocity
Davidson County Phase 2 Landfill
3/17/2011

Well Number	Aquifer	Conductivity (ft/day)	Conductivity (ft/min)	Assumed Porosity (n)	Gradient (I)	Velocity (ft/day)
MW-1	Sandy Silt	1.61E-03	1.12E-06	0.18	NA	NA
MW-2	Sandy Silt	6.75E-02	4.69E-05	0.18	0.047	1.76E-02
MW-3s	Sand	8.60E-02	5.97E-05	0.20	0.069	2.97E-02
MW-3d	Granite	3.42E-02	2.38E-05	0.10	NA	NA
MW-4s	Sandy Silt	6.22E-02	4.32E-05	0.18	0.064	2.21E-02
MW-4d	Diorite	7.55E+00	5.24E-03	0.10	NA	NA
MW-5	Clayey Silt	4.31E-01	2.99E-04	0.18	0.055	1.32E-01
MW-6s	Sand and Gravel	4.64E-01	3.22E-04	0.22	0.035	7.38E-02
MW-6d	Diorite	NA	NA	NA	NA	NA
MW-7	Diorite	NA	NA	NA	NA	NA
MW-8	Diorite	4.90E-01	3.40E-04	0.10	0.132	6.47E-01
MW-9	Diorite	7.20E-01	5.00E-04	0.10	0.133	9.58E-01

NA = Well had insufficient water to perform Slug Test.
Porosity assumed based upon soil type from monitoring well boring log.
Velocity Calculated by equation V = KI/n
Gradient for bedrock wells assumed to be the same as for unconsolidated aquifer in
Gradient calculated from Spring 2011 potentiometric surface.

Appendix A

Field Data Sheets

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (PZ) **Date:** 3·17·11

Well ID: MW-1 **Initials:** MD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

O.K.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

O.K.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

O.K.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (P2) **Date:** 3.17.11

Well ID: MW-2 **Initials:** AD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

O.K.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

O.K.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

O.K.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (PZ) **Date:** 3·17·11

Well ID: MW-35 **Initials:** MD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

o.k.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (PZ) **Date:** 3.17.11
Well ID: MW-3d **Initials:** MD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

o.k.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: Davidson (P2) Date: 3-17-11

Well ID: MW-4s Initials: TD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

o.k.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: Davidson (P2) **Date:** 3-17-11

Well ID: MW-4d **Initials:** MD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

o.k.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (P2) **Date:** 3·17·11

Well ID: MW-5 **Initials:** MD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

o.k.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (PZ) **Date:** 3·17·11

Well ID: MW-65 **Initials:** MD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

o.k.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (P2) **Date:** 3·17·11

Well ID: MW-6d **Initials:** MD

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

o.k.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (PZ) **Date:** 3·17·11

Well ID: MW-7 **Initials:** [illegible]

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

ok.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (P2) **Date:** 3·17·11
Well ID: MW-8 **Initials:** ND

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

o.k.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.	✓	
B. Steel case is present and upright.	✓	
C. Steel case is not movable and cemented in.	✓	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	✓	
E. Well tag is present with pertinent information.	✓	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	✓	
G. No evidence of tampering is present.	✓	
H. Lock operates properly.	✓	
I.		

Comments/ items addressed or to be addressed:

o.k.

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

o.k.

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

Groundwater Monitoring Well Inspection Checklist

This checklist is provided to inform our clients about the health and maintenance of their groundwater monitoring wells. This checklist provides no information pertaining to groundwater quality, but focuses on the physical characteristics of the well and its vicinity.

Site: DAVIDSON (P2) Date: 3.17.11

Well ID: MW-9 Initials: M

Please mark the aproprate box for the following areas of concern. If you answer NO, please explain in the comment box.

1. Well Vicinity	YES	NO
A. Well is assessable and surrounding area is safe for employees.	✓	
B. Vicinity is free of potential contaminants.	✓	
C. Dead trees, etc. not in danger of falling and damaging wells.	✓	
D. Well is in the same location as on field maps.	✓	
E.		

Comments/ items addressed or to be addressed:

O.K.

2. Concrete Apron and Steel Case	YES	NO
A. Concrete apron is present and in good condition.		
B. Steel case is present and upright.		
C. Steel case is not movable and cemented in.		
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.		
E. Well tag is present with pertinent information.		
F. Well numbers are prominently displayed (Reflective address numbers, etc.).		
G. No evidence of tampering is present.		
H. Lock operates properly.		
I.		

NA

Comments/ items addressed or to be addressed:

WELL IS FLUSH MOUNT

3. PVC Riser	YES	NO
A. Monitoring cap is present and provides a tight seal.	✓	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	✓	
C. Riser is not loose/ easily moved.	✓	
D. Riser does not appear cracked, broken, or brittle.	✓	
E. No visual sign of external contamination entering well through riser.	✓	
F.		

Comments/ items addressed or to be addressed:

O.K

Appendix B

Monitoring Well Information

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER **MW-1**

PROJECT NAME: **Davidson County Landfill**
LOCATION: **Davidson County**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/25/08** DATE COMPLETED: **3/25/08**

TOTAL DEPTH: **20 ft.**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)		
Time		
Date		

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
0.0		SS		HSA	SILT: Dry brown silt.		0.0	
1.0							1.0	
2.0							2.0	
3.0							3.0	
4.0							4.0	
5.0	7,10,11	SS	18"		SANDY SILT: Moist gray and white sandy silt with Fe oxidation. High organic content at 15 ft. Some dark gray gravel at 20 ft. B.T. at 20ft.		5.0	
6.0							6.0	
7.0							7.0	
8.0							8.0	
9.0							9.0	
10.0	8,10,13	SS	16"				10.0	
11.0							11.0	
12.0							12.0	
13.0							13.0	
14.0							14.0	
15.0	38,50/4	SS	6"				15.0	
16.0							16.0	
17.0							17.0	
18.0							18.0	
19.0							19.0	
20.0							20.0	

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

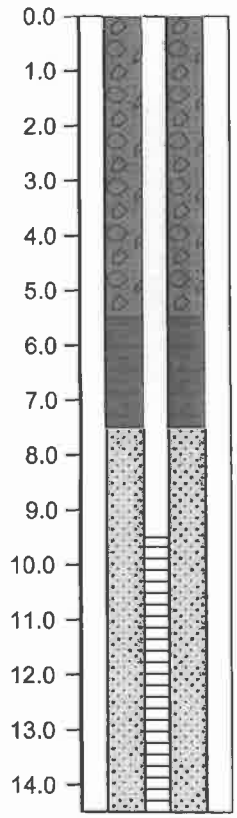
BOREHOLE NUMBER **MW-2** Page 1 of 1

PROJECT NAME: **Davidson County - Phase 2**
LOCATION: **Lexington, NC**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **8/12/08** DATE COMPLETED: **8/12/08**

TOTAL DEPTH: **14.5**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)	13.06	
Time	11:00 am	
Date	8/12/08	

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY
0.0				HSA	SILT: Dry dark brown silt with samll quarz fragments and black mottles.	
1.0						
2.0						
3.0						
4.0						
5.0	10,12,15	SS	18"		SANDY SILT: Moist sandy silt with partially weathered andesite and Fe spotting.	
6.0						
7.0						
8.0						
9.0						
10.0	8,17,23	SS	18"			
11.0						
12.0						
13.0		Grab			GRANITE: Dry, partially weathered granite. B.T. @ 14.5 feet.	
14.0						



Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER **MW-3D** Page 1 of 1

PROJECT NAME: **Davidson County Landfill**
LOCATION: **Davidson County**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA**
FIELD PARTY: **Daivd Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/26/08** DATE COMPLETED: **3/26/08**

TOTAL DEPTH: **40.5 ft.**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

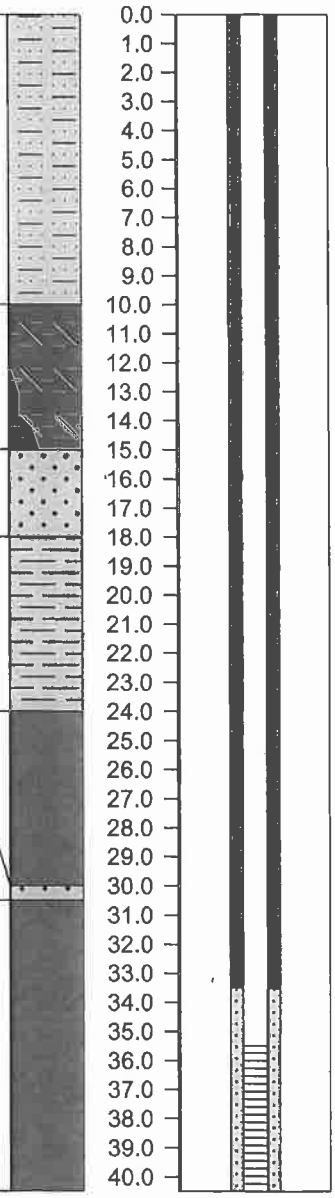
STATIC WATER LEVEL (TOC)		
Depth (ft)		
Time		
Date		

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION
0.0–5.0				HSA	CLAYEY SAND: Upper 9" is gray to red brown wet clayey silt with organics. Bottom 3" is dry compacted clay with fine grained sandy silty clay with Fe spots.
5.0–6.0	3,3,5	SS	18"		
6.0–10.0					
10.0–11.0	11,13,17	SS	10"		CLAY AND SAND: Gray clay and fine grained sand conglomerate, with large organic material. Some Fe oxidation with bottom 5" wet.
11.0–15.0					
15.0–16.0	3,7,5	SS	8"		SAND: Course grained wet gray sand with quartz gravel.
16.0–18.0					
18.0–21.0	50/3	SS	4"		SANDY SILT: Wet course grained sticky gray sandy silt. A.R. 24 ft.
21.0–24.0					
24.0–29.0		SS		AH	GRANITE: Weathered boulder.
29.0–30.0					SAND: 6" thick fine to coarse sand layer.
30.0–35.0		Grab			GRANITE: Weathered granite, wet. B.T. 40.5 ft.
35.0–40.0		Grab			
40.0		Grab			

LITHOLOGY

DEPTH

WELL INSTALLATION



Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

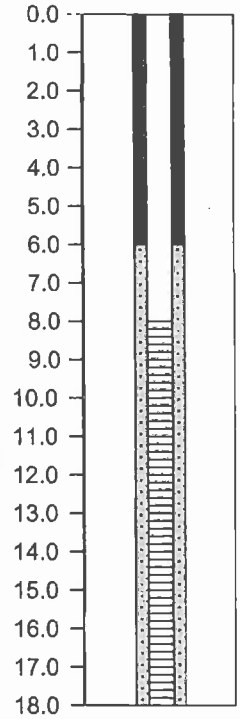
BOREHOLE NUMBER **MW-3s** Page 1 of 1

PROJECT NAME: **Davidson County**
LOCATION: **Davidson County Landfill**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/24/08** DATE COMPLETED: **3/24/08**

TOTAL DEPTH: **18 ft.**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)	6.21	
Time	1:10pm	
Date	3/27/08	

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY
0.0		SS		HSA	CLAYEY SILT: Upper 9" is grAy to red brown wet clayey silt with organics. Bottom 3" is dry, compacted clay; and fine grained sandy silty clay with Fe spots.	
1.0						
2.0						
3.0						
4.0						
5.0	3,3,5	SS	18"			
6.0						
7.0						
8.0						
9.0						
10.0	11,13,17	SS	10"		CLAY AND SAND: Gray clay and fine grained sand conglomerate with large organic material. Some Fe oxidation, with bottom 5" wet.	
11.0						
12.0						
13.0						
14.0						
15.0	3,7,5	SS	8"		SAND: Course grained wet gray sand with quartz gravel. B.T. 18 ft.	
16.0						
17.0						
18.0						



DEPTH WELL INSTALLATION

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER **MW-4D**

PROJECT NAME: **Davidson County**
LOCATION: **Davidson County Landfill**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA and AH**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/26/08** DATE COMPLETED: **3/26/08**

TOTAL DEPTH: **37 ft.**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)		
Time		
Date		

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
0.0		SS		HSA	SILT: Dry reddish brown silt with Mn mottling.		0.0	
1.0							1.0	
2.0							2.0	
3.0							3.0	
4.0							4.0	
5.0	6,9,11	SS	18"				5.0	
6.0							6.0	
7.0							7.0	
8.0							8.0	
9.0							9.0	
10.0	8,10,15	SS	18"		CLAYEY SILT: Dry brownish yellow clayey silt, with slight red tint and Mn mottling.		10.0	
11.0							11.0	
12.0							12.0	
13.0							13.0	
14.0							14.0	
15.0	46,33,45	SS	9"		SILTY CLAY: Upper 4" is dry gray and dark reddish brown, lower 5" is Gray/white fine grained silt.		15.0	
16.0							16.0	
17.0							17.0	
18.0							18.0	
19.0					SANDY CLAY: Small amounts of dry white/gray granite from partially weathered rock. A.R. at 21 ft.		19.0	
20.0	50/2	SS	2"				20.0	
21.0				AH	DIORITE: Dry diorite fracture at 36 ft.		21.0	
22.0							22.0	
23.0							23.0	
24.0							24.0	
25.0		Grab					25.0	
26.0							26.0	
27.0							27.0	
28.0							28.0	
29.0							29.0	
30.0		Grab					30.0	
31.0							31.0	
32.0							32.0	
33.0							33.0	
34.0							34.0	
35.0		Grab					35.0	
36.0							36.0	
37.0							37.0	

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

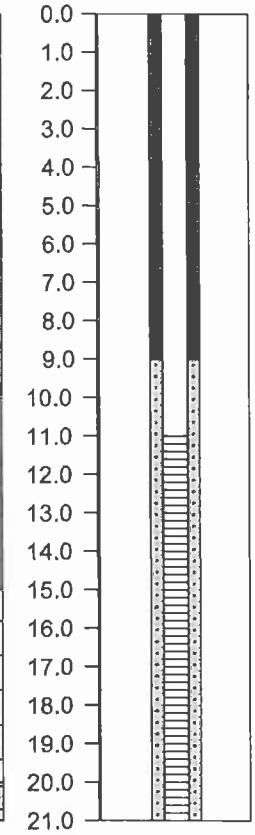
BOREHOLE NUMBER **MW-4s** Page 1 of 1

PROJECT NAME: **Davidson County**
LOCATION: **Davidson County Landfill**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/24/08** DATE COMPLETED: **3/24/08**

TOTAL DEPTH: **21**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)	18.97	
Time	1:30pm	
Date	3/27/08	

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY
0.0		SS		HSA	SILT: Dry reddish brown silt with Mn mottles.	
1.0						
2.0						
3.0						
4.0						
5.0	6,9,11	SS	18"			
6.0						
7.0						
8.0						
9.0						
10.0	8,10,15	SS	18"		CLAYEY SILT: dry brownish yellow clayey silt, with slight red tint and Mn mottles.	
11.0						
12.0						
13.0						
14.0						
15.0	46,33,45	SS	9"		SILTY CLAY: Upper 4" is dry gray and dark reddish brown, lower 5" is gray/white fine grained silt.	
16.0						
17.0						
18.0						
19.0					SANDY SILT: Dry white/gray with small amounts of granite from partially weathered rock. A.R. at 21ft.	
20.0	50/2	SS	2"			
21.0						



DEPTH | WELL INSTALLATION

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

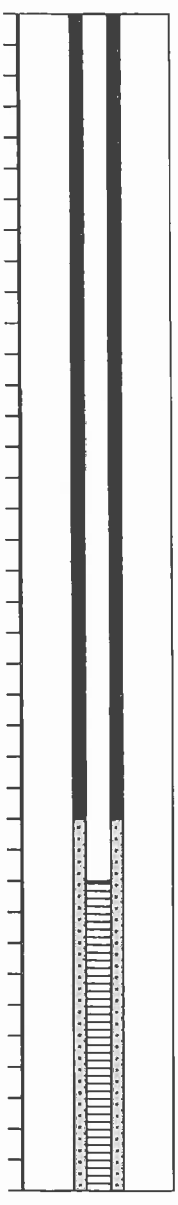
BOREHOLE NUMBER **MW-5**

PROJECT NAME: **Davidson County**
LOCATION: **Davidson County Landfill**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/24/08** DATE COMPLETED: **3/24/08**

TOTAL DEPTH: **38 ft.**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)	27.77	
Time	1:40pm	
Date	3/27/08	

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
0.0		SS	18"	HSA	SILTY CLAY: Dry red silty clay		0.0	
5.0	3,9,7	SS	14"				5.0	
10.0	6,9,14	SS	17"		CLAY AND SAND: Upper 4" red clay, middle 8" white and brown fine grained sand with organics, bottom 5" white/ gray clay silt.		10.0	
15.0	4,4,7	SS	14"		CLAYEY SILT: Moist white and gray clayey silt with Fe oxidation incremental banding from 45 degrees to parallel respectively. Brown sand observed at 36 ft. B.T. at 38 ft.		15.0	
20.0	5,10,15	SS	16"				20.0	
25.0	13,20,27	SS	10"				25.0	
30.0	9,17,27	SS	12"				30.0	
35.0	27,26,50/6	SS	14"				35.0	
38.0							38.0	



Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER **MW-6D**

PROJECT NAME: **Davidson County Landfill**
LOCATION: **Davidson County**
DRILLING CO: **Engineering Tectoncis, P.A.**
DRILLING METHOD: **HSA and AH**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/27/08** DATE COMPLETED: **3/27/08**

TOTAL DEPTH: **70.5 ft.**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)		
Time		
Date		

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
0.0				HSA	SANDY SILT: Brownish fine grained yellow sandy silt with Mn spots in upper 10". Lower portion is white/ gray compacted fine grained sandy silt quartz fragments increase in size with depth. Increased percent of Fe banding and oxidation with depth.		0.0	
5.0	28,37,50/1	SS	13"				5.0	
10.0	20,36,31	SS	17"				10.0	
15.0	23,36,50/6	SS	14"				15.0	
20.0	32,44,50/5	SS	18"				20.0	
25.0	50/5	SS	18"		SILT: Upper 14" is sticky wet viscous silt with Fe oxidation. Lower 4" hard compact gray/white silt.		25.0	
30.0	29,32,50/4	SS	12"		SANDY SILT: Brownish yellow sandy silt with Fe oxidation and quartz bands at 45 degree angles.		30.0	
35.0	28,50/5	SS	10"		GRAVEL AND SAND: Upper 4" wet gravel with large rock with medium grained sand. Lower 6" poorly sorted, mostly white silty		35.0	
37.0							37.0	

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER **MW-6D**

PROJECT NAME: **Davidson County Landfill**
LOCATION: **Davidson County**
DRILLING CO: **Engineering Tectoncis, P.A.**
DRILLING METHOD: **HSA and AH**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/27/08** DATE COMPLETED: **3/27/08**

TOTAL DEPTH: **70.5 ft.**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)		
Time		
Date		

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
37.0					sand, with quartz fragments.		37.0	
38.0							38.0	
39.0							39.0	
40.0	41,42,50/6	SS	5"		SILT AND SAND: Upper 2" wet silty gray sand. Bottom 3" dry white and gray sandy silt with black and Fe spots.		40.0	
41.0							41.0	
42.0							42.0	
43.0							43.0	
44.0							44.0	
45.0	19,27,50	SS	14"		SANDY SILT: Gray and light red sandy silt with Fe oxidation bands.		45.0	
46.0							46.0	
47.0							47.0	
48.0							48.0	
49.0					SILTY SAND: Wet white and gray silty sand with dark brown coarse sand. A.R. at 51 ft.		49.0	
50.0	50/2	SS	50/2"				50.0	
51.0				AH	GRANITE: Weathered granite		51.0	
52.0							52.0	
53.0							53.0	
54.0							54.0	
55.0		Grab					55.0	
56.0							56.0	
57.0							57.0	
58.0							58.0	
59.0							59.0	
60.0		Grab					60.0	
61.0							61.0	
62.0							62.0	
63.0							63.0	
64.0							64.0	
65.0		Grab					65.0	
66.0							66.0	
67.0					DIORITE: Large fracture at 68' produced a lot of water. B.T. at 70.5 ft.		67.0	
68.0							68.0	
69.0							69.0	
70.0							70.0	

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER **MW-6s** Page 1 of 1

PROJECT NAME: **Davidson County**
LOCATION: **Davidson County Landfill**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/25/08** DATE COMPLETED: **3/25/08**

TOTAL DEPTH: **40 ft.**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)	33.60	
Time	2:00pm	
Date	3/27/08	

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
0.0–5.0				HSA	SANDY SILT: Brownish fine grained yellow sandy silt with Mn spots in upper 10". Lower portion is white/ gray compacted fine grained sand with silt quartz fragments, increase in size with depth. Increased percent of Fe banding and oxidation with depth.			
5.0–6.0	28,37,50/1	SS	13"					
6.0–10.0								
10.0–11.0	20,36,31	SS	17"					
11.0–15.0								
15.0–16.0	23,36,50/6	SS	14"					
16.0–20.0								
20.0–21.0	32,44,50/5	SS	18"					
21.0–25.0								
25.0–26.0	50/5	SS	18"		SILT: Upper 14" is sticky wet viscous silt with Fe oxidation. Lower 4" hard compact gray/white silt.			
26.0–30.0								
30.0–31.0	29,32,50/4	SS	12"		SANDY SILT: Moist brownish yellow sandy silt, with Fe oxidation and quartz bands at 45 degree angles.			
31.0–35.0								
35.0–36.0	28,50/5	SS	10"		GRAVEL AND SAND: Moist brownish yellow sandy silt, with Fe oxidation and quartz banks at 45 degree angles.			
36.0–40.0					SANDY SILT: Upper 2" is wet silty gray sand. Bottom 3" is dry white & gray sandy silt, with black and Fe oxidation spots. B.T. at 40 ft.			
40.0–41.0	42,50/6	SS	5"					

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER **MW-7** Page 1 of 1

PROJECT NAME: **Davidson County Landfill**
LOCATION: **Holy Springs, NC**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA and AH**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/24/08** DATE COMPLETED: **3/25/08**

TOTAL DEPTH: **37.4**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)		
Time		
Date		

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
0.0				HSA	SANDY SILT: Dry white and gray compacted sandy silt with Fe oxidation. Minor gravel fragments with depth. A.R. at 18 ft.		0.0	
1.0							1.0	
2.0							2.0	
3.0							3.0	
4.0							4.0	
5.0	13,23,31	SS	18"				5.0	
6.0							6.0	
7.0							7.0	
8.0							8.0	
9.0							9.0	
10.0	23,50/6	SS	12"				10.0	
11.0							11.0	
12.0							12.0	
13.0							13.0	
14.0							14.0	
15.0	16,23,34	SS	18"				15.0	
16.0							16.0	
17.0							17.0	
18.0		Grab		AH	DIORITE: Very competent diorite		18.0	
19.0							19.0	
20.0							20.0	
21.0							21.0	
22.0		Grab					22.0	
23.0							23.0	
24.0							24.0	
25.0							25.0	
26.0							26.0	
27.0		Grab					27.0	
28.0							28.0	
29.0							29.0	
30.0							30.0	
31.0							31.0	
32.0		Grab					32.0	
33.0							33.0	
34.0							34.0	
35.0							35.0	
36.0							36.0	
37.0		Grab					37.0	

Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

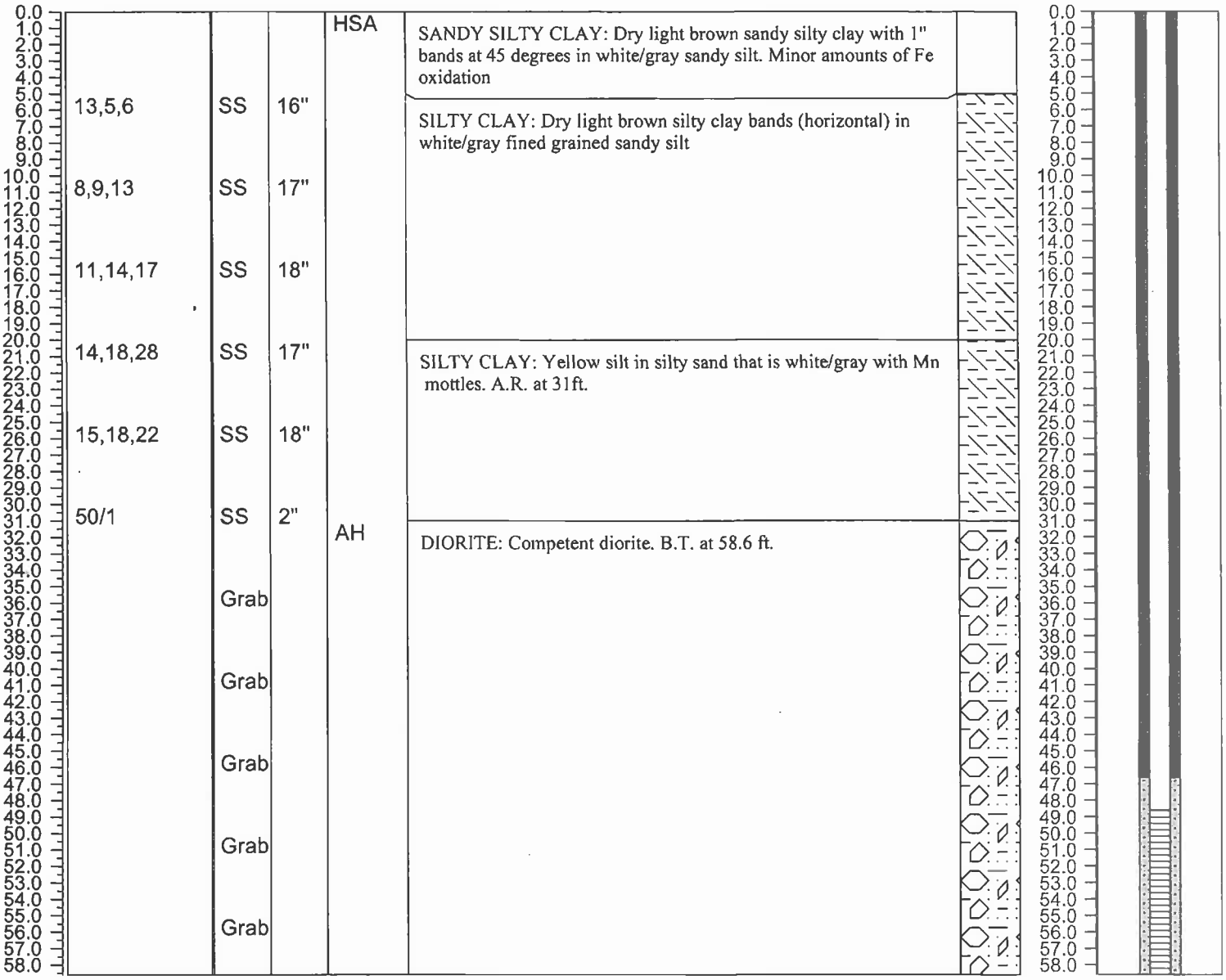
BOREHOLE NUMBER **MW-8**

PROJECT NAME: **Davidson County Landfill**
LOCATION: **Davidson County**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA and AH**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **3/24/08** DATE COMPLETED: **3/25/08**

TOTAL DEPTH: **58.6**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)	46.58	
Time	10:45am	
Date	4/3/08	

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
0.0–5.0				HSA	SANDY SILTY CLAY: Dry light brown sandy silty clay with 1" bands at 45 degrees in white/gray sandy silt. Minor amounts of Fe oxidation			
6.0	13,5,6	SS	16"		SILTY CLAY: Dry light brown silty clay bands (horizontal) in white/gray fined grained sandy silt			
11.0	8,9,13	SS	17"					
16.0	11,14,17	SS	18"					
21.0	14,18,28	SS	17"		SILTY CLAY: Yellow silt in silty sand that is white/gray with Mn mottles. A.R. at 31ft.			
26.0	15,18,22	SS	18"					
31.0	50/1	SS	2"	AH	DIORITE: Competent diorite. B.T. at 58.6 ft.			
36.0		Grab						
41.0		Grab						
46.0		Grab						
51.0		Grab						
56.0		Grab						



Richardson Smith Gardner and Assoc
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

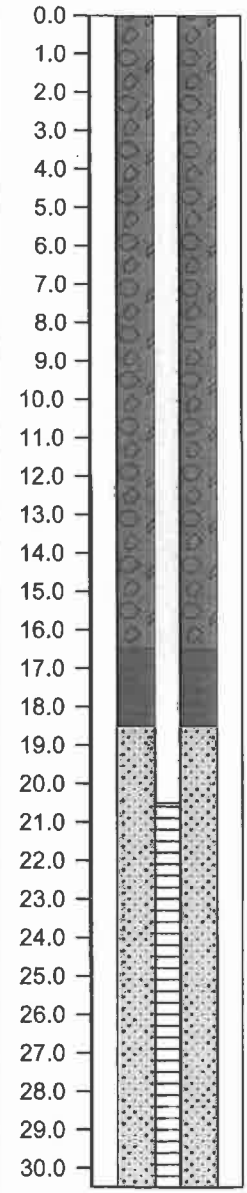
BOREHOLE NUMBER **MW-9** Page 1 of 1

PROJECT NAME: **Davidson County - Phase 2**
LOCATION: **Lexington, NC**
DRILLING CO: **Engineering Tectonics, P.A.**
DRILLING METHOD: **HSA/AH**
FIELD PARTY: **David Barron**
GEOLOGIST: **Clark Wipfield**
DATE BEGUN: **8/12/08** DATE COMPLETED: **8/14/08**

TOTAL DEPTH: **30.5**
GROUND SURFACE ELEVATION:
TOP OF CASING ELEVATION:

STATIC WATER LEVEL (TOC)		
Depth (ft)	19.35	
Time	2:30 pm	
Date	8/14/08	

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY
0.0				HSA	SAND: Dry brown fine grained sand.	
1.0						
2.0						
3.0						
4.0						
5.0		Grab				
6.0						
7.0						
8.0						
9.0						
10.0		Grab				
11.0						
12.0						
13.0						
14.0						
15.0	50/0	SS	0"		DIORITE: Dry partially weathered diorite, with water at 21ft. Some brown/red silt with cutting at 20 feet. B.T. at 30.5 feet.	
16.0						
17.0						
18.0						
19.0						
20.0		Grab				
21.0						
22.0						
23.0						
24.0						
25.0		Grab				
26.0						
27.0						
28.0						
29.0						
30.0		Grab		AH		



NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David Barron
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave St.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW1
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4-3-08
TIME COMPLETED 4-7-08 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 51 11.4107
LONGITUDE 80 10 34.8794
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY- is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 20.0'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 14.1 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From +3.0	To 10.0	Ft.	2"	Sch 40	PVC
From	To	Ft.			
From	To	Ft.			

7. GROUT:

	Depth		Material	Method
From 6.0'	To 8.0	Ft.	Bentonite	Tremie
From 0.0	To 6.0	Ft.	Portland	Pump
From	To	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 10.0	To 20.0	Ft.	2" in.	.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 8.0	To 20.0	Ft.	#3	SAND
From	To	Ft.		
From	To	Ft.		

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days: Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

919 828 2899

REC'D AUG 28 2008

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David BARRON
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave ST.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW#2
WELL CONSTRUCTION PERMIT#(if applicable)
OTHER ASSOCIATED PERMIT #(if applicable)

3. WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)
DATE DRILLED 8-11-08
TIME COMPLETED 8-15-08 AM ☒ PM ☐

4. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1160 old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☒ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE
LONGITUDE
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1160 old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 14.0
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 13.0 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

7. CASING:

From	To	Ft.	Diameter	Thickness/ Weight	Material
+3'	4'		2"	sch 40	PVC

8. GROUT:

From	To	Ft.	Material	Method
0	2.0		Portland	Tremie
2.0	3.0		Bentonite	Tremie

9. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
4.0	14.0		2" in.	.010 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
3.0	14.0		#3	SAND

11. DRILLING LOG

From	To	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 8-20-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
DAVID BARRON
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 3/07

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David BARRON
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 VARGRAVE ST.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW # 35
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 3-31
TIME COMPLETED 4-1 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 50 58.13561
LONGITUDE 80 11 05.49742
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY - is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 18.0
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 7.93 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

From	To	Ft.	Diameter	Thickness/ Weight	Material
+3	8.0		2"	Sch 40	PVC

7. GROUT:

From	To	Ft.	Material	Method
6.0	8.0		Bentonite	Tremie
0.0	6.0		Portland	Pump

8. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
8.0	18.0		2" in.	.010 in.	PVC
			in.	in.	
			in.	in.	

9. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
6.0	18.0		#3	SAND

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
David BARRON
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days: Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David Barron
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave St.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW 3D
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4-9
TIME COMPLETED 4-11 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 50 58.13562
LONGITUDE 80 11 05.4984
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY- is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 40.5
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 7.82 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

From	To	Ft.	Diameter	Thickness/Weight	Material
+3	35.5		2"	Sch 40	PVC
0.0	24		4"	Sch 40	PVC

7. GROUT:

From	To	Ft.	Material	Method
31.5	33.5		Bentonite	Tremie
0.0	31.5		Portland	Pump

8. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
35.5	40.5		2" in.	.010 in.	PVC
			in.	in.	
			in.	in.	

9. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
38.5	40.5		#3	SAND

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days: Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:

David Barron
Well Contractor (individual) Name

Eng. Tectonics
Well Contractor Company Name

STREET ADDRESS 1720 Vargrave St.

W-Salem N.C. 27107
City or Town State Zip Code

(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) MW4s

STATE WELL PERMIT#(if applicable)

DWQ or OTHER PERMIT #(if applicable)

WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-31

TIME COMPLETED 4-1 AM ☒ PM ☐

3. WELL LOCATION:

CITY: Thomasville COUNTY Davidson

1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)

LATITUDE 35 50 58.29283
LONGITUDE 80 11 08.13518

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Davidson Co. Landfill

STREET ADDRESS 1242 old Hwy 29

Thomasville N.C. 27360-0024
City or Town State Zip Code

CONTACT PERSON Charlie Brushwood

MAILING ADDRESS 1242 old Hwy 29

Thomasville N.C. 27360-0024
City or Town State Zip Code

(336) 242-2284
Area code - Phone number

5. WELL DETAILS:

a. TOTAL DEPTH: 21.0

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒

c. WATER LEVEL Below Top of Casing: 18.6 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

From	To	From	To

6. CASING:

From	To	Ft.	Diameter	Thickness/ Weight	Material
+3	11.0		2"	Sch 40	PVC

7. GROUT:

From	To	Ft.	Material	Method
7.0	9.0		Bentonite	Tremie
0.0	7.0		Portland	Pump

8. SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
11.0	21.0		2" in.	.010 in.	PVC
			in.	in.	
			in.	in.	

9. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
9.0	21.0		#3	SAND

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days; Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David Barron
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave St.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW 4D
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4-9
TIME COMPLETED 4-11 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 50 58.29291
LONGITUDE 80 11 08.13521
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY - is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 37.0
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 18.2 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From +3	To 27.0	Ft.	2"	Sch 40	PVC
From 0.0	To 21.5	Ft.	4"	Sch 40	PVC
From	To	Ft.			

7. GROUT:

	Depth		Material	Method
From 28.0	To 30.0	Ft.	Bentonite	Tremie
From 0.0	To 28.0	Ft.	Portland	Pump
From	To	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 32.0	To 37.0	Ft.	2" in.	.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 30.0	To 37.0	Ft.	#3	SAND
From	To	Ft.		
From	To	Ft.		

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days; Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David Barron
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave St.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW#5
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4-1
TIME COMPLETED 4-8 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 50 55.0341
LONGITUDE 80 11 13.66395
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY- is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 38.0
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 27.47 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From +3'	To 28	Ft.	2"	Sch 40	PVC
From	To	Ft.			
From	To	Ft.			

7. GROUT:

	Depth		Material	Method
From 24.0	To 26.0	Ft.	Bentonite	Tremie
From 0.0	To 24.0	Ft.	Portland	Pump
From	To	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 28.0	To 38.0	Ft.	2" in.	.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 26.0	To 38.0	Ft.	#3	SAND
From	To	Ft.		
From	To	Ft.		

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days: Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 588.

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David Barron
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave St.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code - Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW65
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4-8
TIME COMPLETED 4-10 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 50 48.51500
LONGITUDE 80 11 06.89024
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY - is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 40.0
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 31.9 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From +3	To 30.0	Ft.	2"	Sch 40	PVC
From	To	Ft.			
From	To	Ft.			

7. GROUT:

	Depth		Material	Method
From 26.0	To 28.0	Ft.	Bentonite	Tremie
From 0.0	To 26.0	Ft.	Portland	Pump
From	To	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 30.0	To 40.0	Ft.	2" in.	.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 28.0	To 40.0	Ft.	#3	SAND
From	To	Ft.		
From	To	Ft.		

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days: Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David Barron
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave St.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code - Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW 60
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4-8
TIME COMPLETED 4-10 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 50 48.51500
LONGITUDE 80 11 06.89030
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY- is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 70.5
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 32.12 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

From	To	Depth	Diameter	Thickness/Weight	Material
+3.0	65.5	Ft.	2"	Sch 40	PVC
0.0	51.0	Ft.	4"	Sch 40	PVC
		Ft.			

7. GROUT:

From	To	Depth	Material	Method
61.5	63.5	Ft.	Bentonite	Tremie
		Ft.	Portland	Pump
		Ft.		

8. SCREEN:

From	To	Depth	Diameter	Slot Size	Material
65.5	70.5	Ft.	2" in.	.010 in.	PVC
		Ft.	in.	in.	
		Ft.	in.	in.	

9. SAND/GRAVEL PACK:

From	To	Depth	Size	Material
63.5	70.5	Ft.	#3	SAND
		Ft.		
		Ft.		

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days: Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David Barron
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave St.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW #7
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4-4-08
TIME COMPLETED 4-8-08 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 50 48.6102
LONGITUDE 80 11 04.88235
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY- is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 37'-4"
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 28'.6 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

From	To	Depth Ft.	Diameter	Thickness/ Weight	Material
+3	37.4		2"	Sch 40	PVC

7. GROUT:

From	To	Depth Ft.	Material	Method
23.4	25.4		Bentonite	Tremie
0.0	23.4		Portland	Pump

8. SCREEN:

From	To	Depth Ft.	Diameter in.	Slot Size in.	Material
[redacted]	37.4		2"	.010	PVC
27.4					

9. SAND/GRAVEL PACK:

From	To	Depth Ft.	Size	Material
[redacted]	37.4		#3	SAND
25.4				

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days: Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David Barron
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave St.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code - Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW #8
STATE WELL PERMIT#(if applicable)
DWQ or OTHER PERMIT #(if applicable)
WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4-4-08
TIME COMPLETED 4-9-08 AM ☒ PM ☐

3. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1242 Old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE 35 50 50.57123
LONGITUDE 80 11 02.42828
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY - is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 Old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 58'-6"
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 48.49 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 3' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From To From To
From To From To
From To From To

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From +3.0	To 48.6	Ft.	2"	Sch 40	PVC
From	To	Ft.			
From	To	Ft.			

7. GROUT:

	Depth		Material	Method
From 44.6	To 46.6	Ft.	Bentonite	Tremie
From 0.0	To 44.6	Ft.	Portland	Pump
From	To	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 48.6	To 58.6	Ft.	2" in.	.010 in.	PVC
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 46.6	To 58.6	Ft.	#3	SAND
From	To	Ft.		
From	To	Ft.		

10. DRILLING LOG

From	To	Formation Description

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 4-11-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
David Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days: Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

REC'D AUG 28 2008

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

1. WELL CONTRACTOR:
David BARRON
Well Contractor (Individual) Name
Eng. Tectonics
Well Contractor Company Name
STREET ADDRESS 1720 Vargrave ST.
W-Salem N.C. 27107
City or Town State Zip Code
(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) MW+9
WELL CONSTRUCTION PERMIT#(if applicable)
OTHER ASSOCIATED PERMIT #(if applicable)

3. WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐ Irrigation ☐ Other ☐ (list use)
DATE DRILLED 8-14-08
TIME COMPLETED 8-19-08 AM ☒ PM ☐

4. WELL LOCATION:
CITY: Thomasville COUNTY Davidson
1160 old Hwy 29 27360-0024
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)
LATITUDE
LONGITUDE
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY- is the name of the business where the well is located.
FACILITY ID #(if applicable)
NAME OF FACILITY Davidson Co. Landfill
STREET ADDRESS 1160 old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
CONTACT PERSON Charlie Brushwood
MAILING ADDRESS 1242 old Hwy 29
Thomasville N.C. 27360-0024
City or Town State Zip Code
(336) 242-2284
Area code - Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 30.50
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 20.0 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS Flush FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): METHOD OF TEST
f. DISINFECTION: Type Amount
g. WATER ZONES (depth):
From 20.5 To 30.5 From To
From To From To
From To From To

7. CASING:

From	To	Depth Ft.	Diameter	Thickness/ Weight	Material
0	20.5		2"	sch 40	PVC

8. GROUT:

From	To	Depth Ft.	Material	Method
0	15.5		Portland	Tremie
15.5	18.5		Bentonite	Tremie

9. SCREEN:

From	To	Depth Ft.	Diameter	Slot Size	Material
20.5	30.5		2" in.	.010 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

From	To	Depth Ft.	Size	Material
18.5	30.5		#3	Sand

11. DRILLING LOG

From	To	Formation Description

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

David Barron 8-20-08
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
DAVID BARRON
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 3/07

Appendix C

Laboratory Analytical Report

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#: 6059

DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA ,NC 27526

DATE COLLECTED: 03/17/11
DATE REPORTED : 04/07/11

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-1	MW-2	MW-3S	MW-3D	MW-4S	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.14	6.0	--- U	--- U	--- U	--- U	--- U	03/28/11	CMF	EPA200.8
Arsenic, ug/l	0.10	10.0	1.00 J	0.61 J	0.22 J	0.50 J	2.5 J	03/28/11	CMF	EPA200.8
Barium, ug/l	0.02	100.0	350	31.8 J	26.1 J	38.9 J	553	03/28/11	CMF	EPA200.8
Beryllium, ug/l	0.02	1.0	0.31 J	0.08 J	--- U	--- U	0.44 J	03/28/11	CMF	EPA200.8
Cadmium, ug/l	0.02	1.0	0.46 J	0.15 J	0.21 J	0.15 J	0.24 J	03/28/11	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	25	3.2 J	0.76 J	0.76 J	29	03/28/11	CMF	EPA200.8
Copper, ug/l	0.02	10.0	439	16	1.8 J	2.6 J	625	03/28/11	CMF	EPA200.8
Total Chromium, ug/l	0.04	10.0	17	16	3.1 J	0.48 J	40	03/28/11	CMF	EPA200.8
Lead, ug/l	0.02	10.0	8.4 J	1.7 J	0.23 J	0.43 J	11	03/28/11	CMF	EPA200.8
Nickel, ug/l	0.04	50.0	23.2 J	4.5 J	0.94 J	0.97 J	25.0 J	03/28/11	CMF	EPA200.8
Selenium, ug/l	0.20	10.0	--- U	--- U	0.30 J	--- U	--- U	03/28/11	CMF	EPA200.8
Silver, ug/l	0.02	10.0	0.32 J	0.08 J	--- U	--- U	0.43 J	03/28/11	CMF	EPA200.8
Thallium, ug/l	0.02	5.5	0.21 J	--- U	--- U	--- U	0.29 J	03/28/11	CMF	EPA200.8
Vanadium, ug/l	0.14	25.0	169	21.7 J	12.7 J	11.2 J	412	03/28/11	CMF	EPA200.8
Zinc, ug/l	0.24	10.0	135	7.8 J	3.4 J	18	241	03/28/11	CMF	EPA200.8

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#: 6059

DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA ,NC 27526

DATE COLLECTED: 03/17/11
DATE REPORTED : 04/07/11

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-4D	MW-5	MW-6S	MW-6D	MW-7	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.14	6.0	--- U	--- U	--- U	Missing	Missing	03/28/11	CMF	EPA200.8
Arsenic, ug/l	0.10	10.0	0.38 J	0.48 J	1.2 J	Missing	Missing	03/28/11	CMF	EPA200.8
Barium, ug/l	0.02	100.0	39.9 J	41.9 J	359	Missing	Missing	03/28/11	CMF	EPA200.8
Beryllium, ug/l	0.02	1.0	--- U	0.14 J	0.29 J	Missing	Missing	03/28/11	CMF	EPA200.8
Cadmium, ug/l	0.02	1.0	0.05 J	0.07 J	0.13 J	Missing	Missing	03/28/11	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	0.09 J	6.3 J	12	Missing	Missing	03/28/11	CMF	EPA200.8
Copper, ug/l	0.02	10.0	0.37 J	24	88	Missing	Missing	03/28/11	CMF	EPA200.8
Total Chromium, ug/l	0.04	10.0	--- U	5.6 J	18	Missing	Missing	03/28/11	CMF	EPA200.8
Lead, ug/l	0.02	10.0	0.05 J	3.4 J	4.4 J	Missing	Missing	03/28/11	CMF	EPA200.8
Nickel, ug/l	0.04	50.0	0.46 J	6.7 J	12.1 J	Missing	Missing	03/28/11	CMF	EPA200.8
Selenium, ug/l	0.20	10.0	--- U	--- U	0.57 J	Missing	Missing	03/28/11	CMF	EPA200.8
Silver, ug/l	0.02	10.0	--- U	0.05 J	0.08 J	Missing	Missing	03/28/11	CMF	EPA200.8
Thallium, ug/l	0.02	5.5	0.16 J	0.11 J	0.14 J	Missing	Missing	03/28/11	CMF	EPA200.8
Vanadium, ug/l	0.14	25.0	9.2 J	27	51	Missing	Missing	03/28/11	CMF	EPA200.8
Zinc, ug/l	0.24	10.0	0.73 J	33	113	Missing	Missing	03/28/11	CMF	EPA200.8

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#: 6059

DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA ,NC 27526

DATE COLLECTED: 03/17/11
DATE REPORTED : 04/07/11

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-8	MW-9	Trip Blank	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.14	6.0	--- U	--- U		03/28/11	CMF	EPA200.8
Arsenic, ug/l	0.10	10.0	0.48 J	1.0 J		03/28/11	CMF	EPA200.8
Barium, ug/l	0.02	100.0	4.7 J	84.4 J		03/28/11	CMF	EPA200.8
Beryllium, ug/l	0.02	1.0	--- U	0.21 J		03/28/11	CMF	EPA200.8
Cadmium, ug/l	0.02	1.0	--- U	2		03/28/11	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	1.1 J	10		03/28/11	CMF	EPA200.8
Copper, ug/l	0.02	10.0	3.2 J	34		03/28/11	CMF	EPA200.8
Total Chromium, ug/l	0.04	10.0	4.0 J	13		03/28/11	CMF	EPA200.8
Lead, ug/l	0.02	10.0	0.62 J	3.1 J		03/28/11	CMF	EPA200.8
Nickel, ug/l	0.04	50.0	2.3 J	3.7 J		03/28/11	CMF	EPA200.8
Selenium, ug/l	0.20	10.0	--- U	--- U		03/28/11	CMF	EPA200.8
Silver, ug/l	0.02	10.0	--- U	0.07 J		03/28/11	CMF	EPA200.8
Thallium, ug/l	0.02	5.5	--- U	0.04 J		03/28/11	CMF	EPA200.8
Vanadium, ug/l	0.14	25.0	10.0 J	39		03/28/11	CMF	EPA200.8
Zinc, ug/l	0.24	10.0	1.7 J	22		03/28/11	CMF	EPA200.8

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: DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA, NC 27526

REVIEWED BY:

CLIENT ID: 6059

ANALYST: MAO
DATE COLLECTED: 03/17/11
DATE ANALYZED: 03/31/11
DATE REPORTED: 04/07/11

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-1	MW-2	MW-3S	MW-3D	MW-4S
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	21.10 J
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.64	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U	--- U	--- U	--- U	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	--- U	--- 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	--- U	--- 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 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: DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA, NC 27526

CLIENT ID: 6059

ANALYST: MAO
DATE COLLECTED: 03/17/11
DATE ANALYZED: 03/31/11
DATE REPORTED: 04/07/11

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-4D	MW-5	MW-6S	MW-8	MW-9
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	11.70 J	15.40 J	--- U	--- U
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.64	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U	--- U	--- U	--- U	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	--- U	--- 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	--- U	--- 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 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: DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA, NC 27526

CLIENT ID: 6059

ANALYST: MAO
DATE COLLECTED: 03/17/11
DATE ANALYZED: 03/31/11
DATE REPORTED: 04/07/11

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Trip Blank
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	9.20 J
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

ID#: 6059 A

DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA ,NC 27526

DATE COLLECTED: 03/17/11
DATE REPORTED : 04/07/11

REVIEWED BY:

PARAMETERS	MDL	SWSL	SW-1	SW-2	SW-3	Leachate	Analysis Date	Analyst	Method Code
BOD, mg/l	2.0	2.0				830	03/18/11	TRB	SM5210B
COD, mg/l	10.0	10.0				1084	03/22/11	TRB	HACH8000
Total Suspended Residue, mg/l	1.0	1.0				536	03/18/11	MEL	SM2540D
Ammonia Nitrogen as N, mg/l	0.04	0.04				119	03/22/11	ANO	EPA350.1
Nitrate Nitrogen as N, mg/l	0.03	10.0				--- U	03/18/11	MPH	EPA353.2
Total Phosphorus as P, mg/l	0.04	0.04				0.52	03/24/11	TWA	EPA365.4
Sulfate, mg/l	5.0	250.0				9.5 J	03/21/11	TRB	SM426C
Antimony, ug/l	0.14	6.0	--- U	0.18 J	0.16 J	2.0 J	03/28/11	CMF	EPA200.8
Arsenic, ug/l	0.10	10.0	0.29 J	0.42 J	0.25 J	6.8 J	03/28/11	CMF	EPA200.8
Barium, ug/l	0.02	100.0	23.6 J	32.3 J	32.4 J	289	03/28/11	CMF	EPA200.8
Beryllium, ug/l	0.02	1.0	--- U	--- U	--- U	0.24 J	03/28/11	CMF	EPA200.8
Cadmium, ug/l	0.02	1.0	0.04 J	0.04 J	--- U	0.44 J	03/28/11	CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	0.59 J	0.43 J	0.40 J	13	03/28/11	CMF	EPA200.8
Copper, ug/l	0.02	10.0	1.8 J	2.1 J	2.4 J	25	03/28/11	CMF	EPA200.8
Total Chromium, ug/l	0.04	10.0	0.52 J	0.48 J	0.44 J	27	03/28/11	CMF	EPA200.8
Lead, ug/l	0.02	10.0	2.3 J	0.50 J	0.48 J	4.3 J	03/28/11	CMF	EPA200.8
Nickel, ug/l	0.04	50.0	0.52 J	1.0 J	1.0 J	38.9 J	03/28/11	CMF	EPA200.8
Selenium, ug/l	0.20	10.0	--- U	--- U	--- U	9.3 J	03/28/11	CMF	EPA200.8
Silver, ug/l	0.02	10.0	--- U	--- U	--- U	0.07 J	03/28/11	CMF	EPA200.8
Thallium, ug/l	0.02	5.5	--- U	--- U	--- U	--- U	03/28/11	CMF	EPA200.8
Vanadium, ug/l	0.14	25.0	4.5 J	2.3 J	2.1 J	32	03/28/11	CMF	EPA200.8
Zinc, ug/l	0.24	10.0	9.3 J	3.8 J	4.1 J	246	03/28/11	CMF	EPA200.8

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: DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA, NC 27526

CLIENT ID: 6059 A

ANALYST: MAO
DATE COLLECTED: 03/17/11
DATE ANALYZED: 03/31/11
DATE REPORTED: 04/07/11

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	SW-1	SW-2	SW-3	Leachate
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	1.00
2. Vinyl Chloride	0.63	1.0	--- U	--- U	--- U	10.30
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	--- U	--- U	--- U	4.40 J
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	1570.00
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	30.20
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	--- U	--- U	5.40
12. 1,1-Dichloroethane	0.20	5.0	--- U	--- U	--- U	1.90 J
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	--- U	--- U	6.00
15. 2-Butanone	2.21	100.0	--- U	--- U	--- U	2110.00
16. Bromochloromethane	0.27	3.0	--- U	--- U	--- U	--- U
17. Chloroform	0.25	5.0	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U	--- U	--- U	--- U
20. Benzene	0.24	1.0	--- U	--- U	--- U	9.60
21. 1,2-Dichloroethane	0.27	1.0	--- U	--- U	--- U	4.90
22. Trichloroethene	0.23	1.0	--- U	--- U	--- U	3.40
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	51.00 J
27. Toluene	0.23	1.0	--- U	--- U	--- U	312.00
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	0.80 J
31. 2-Hexanone	1.57	50.0	--- U	--- U	--- U	23.00 J
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	16.80
37. Xylenes	0.68	5.0	--- U	--- U	--- U	48.00
38. Dibromomethane	0.28	10.0	--- U	--- U	--- U	--- U
39. Styrene	0.19	1.0	--- U	--- U	--- U	1.60
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	4.70
44. 1,2-Dichlorobenzene	0.32	5.0	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U	--- U	--- U	--- U
46. Acrylonitrile	2.72	200.0	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- U	--- U	--- U	--- U

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

NOTE: Concentrations of Acetone, 2-Butanone & Toluene exceeded the instrument calibration range, however we are reporting the results we obtained.

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: 6059 A **Week:** 12

DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA NC 27526

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

CHLORINE NEUTRALIZED AT COLLECTION																				
pH CHECK (LAB)				<2		<2		<2												
CONTAINER TYPE, P/G				P	P	P	P	P	P	P	P	G	G	G						
CHEMICAL PRESERVATION				A	C	A	C	A	C	A	A	E	E	E						
PARAMETERS			TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	BOD	COD	TSR	Ammonia Nitro.	Nitrate	T. Phosphorus	Sulfate	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2					
SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME																		
SW-1	3/17/11	10:57a			4								▒	▒	▒	▒				
SW-2	3/17/11	11:30a			3								▒	▒	▒					
SW-3	3/17/11	11:43a			3								▒	▒	▒					
Leachate	3/17/11	10:26a			10	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒					

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)
LAQ & DMM

SAMPLES RECEIVED IN LAB AT 0.2 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
[signature]	3/17/11 2:30p	[signature]	3/18 8:22
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:

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

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

FORM #5

№ 213053

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: 6059 **Week:** 12

DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA NC 27526

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

CHLORINE NEUTRALIZED AT COLLECTION																			
pH CHECK (LAB)																			
CONTAINER TYPE, P/G																			
CHEMICAL PRESERVATION																			
PARAMETERS				Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2												
				P	G	G	G												
				A	E	E	E												
SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS														
MW-1	3/17/11	11:08a			4	■	■	■	■										
MW-2	3/17/11	10:39a			3	■	■	■											
MW-3S	3/17/11	10:02a			3	■	■	■											
MW-3D	3/17/11	10:05a			3	■	■	■											
MW-4S	3/17/11	9:53a			3	■	■	■											
MW-4D	3/17/11	9:57a			3	■	■	■											
MW-5	3/17/11	9:36a			3	■	■	■											
MW-6S	3/17/11	9:27a			4	■	■	■	■										
MW-6D	Dry				3	■	■	■											
MW-7	Dry				3	■	■	■											
MW-8	3/17/11	9:15a			3	■	■	■											

A - NONE, B - HNO_3, C - H_2SO_4, D - NAOH, E - HCL, 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) LAQ & DMM

SAMPLES RECEIVED IN LAB AT 02 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
[signature]	3/17/11 2:30p	[signature]	3/18 8:39
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:

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

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

FORM #5

№ 213055

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: 6059 **Week: 12**

DAVIDSON COUNTY (PHASE 2)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA NC 27526

(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	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2
CHLORINE NEUTRALIZED AT COLLECTION									
pH CHECK (LAB)						12	12	12	
CONTAINER TYPE, P/G						P	G	G	G
CHEMICAL PRESERVATION						A	E	E	E
MW-9	3/17/11	9:47am			3	▒	▒	▒	
Trip Blank					2		▒	▒	

PARAMETERS

A - NONE
B - HNO_3
C - H_2SO_4
D - NAOH
E - HCL
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)

SAMPLES RECEIVED IN LAB AT (2).2 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
		[signature]	3/18 | 839
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:
Spoke w/ LAB for collection time on MW-9

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

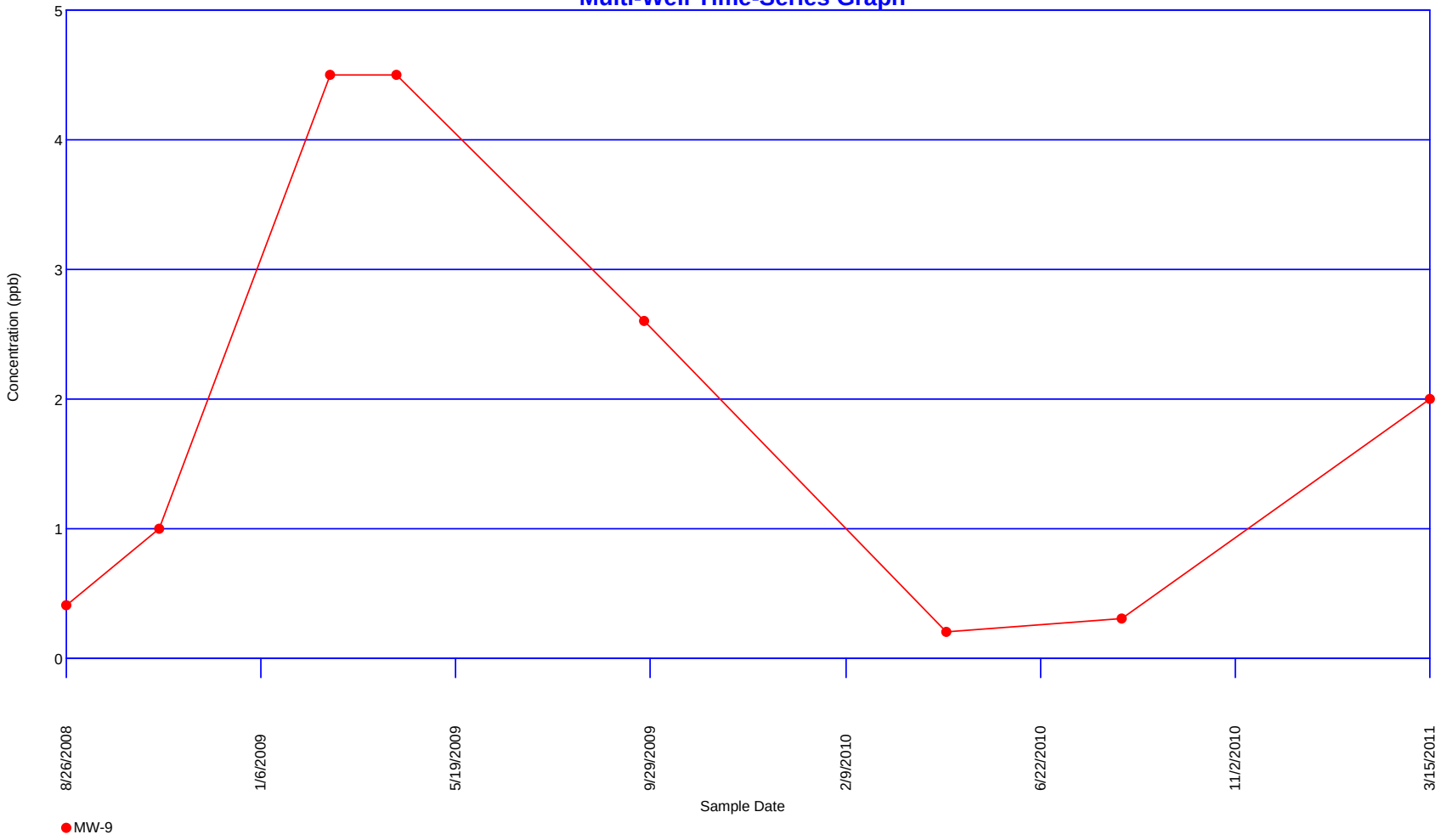
№ 213054

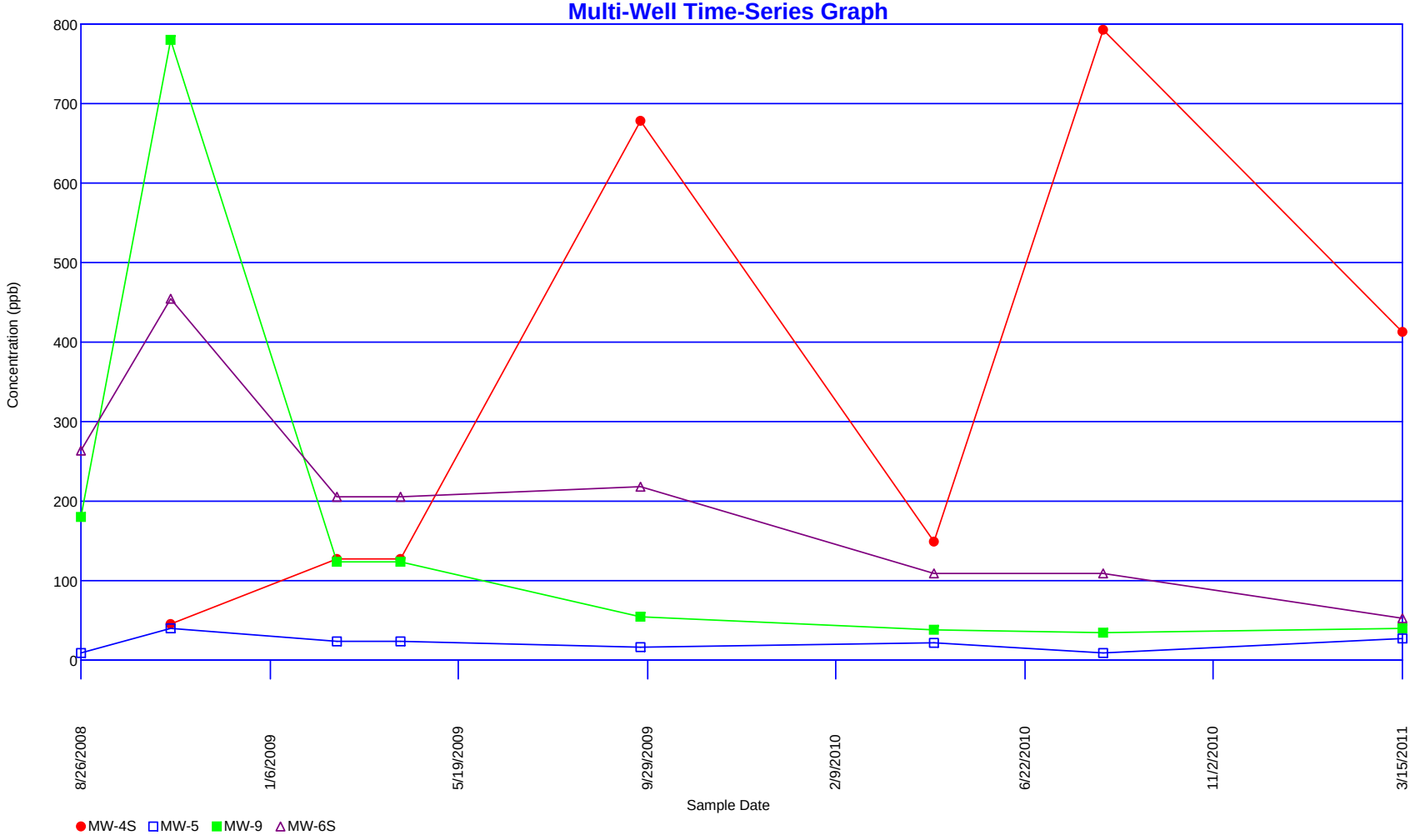
Appendix D

Time Vs. Concentration Graphs

Cadmium

Multi-Well Time-Series Graph



Vanadium

Multi-Well Time-Series Graph