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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 County Phase 2 MSW landfill | 1242 Old Highway 29 Thomasville, NC 27360 | 29-06 | .1600 | 9-22-2011 |

**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 Smyth | 12/30/11 | Affix NC Licensed/ Professional Geologist Seal

Signature | Date

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

12/30/11

14 N. Boylan Avenue Raleigh, NC 27603

Facility Representative Address

C-0828

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

Revised 6/2009

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# Ground Water Monitoring Report

## Fall 2011 Monitoring Event

## Davidson County
## MSW Phase 2 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

**December 2011**

RICHARDSON SMITH GARDNER
& ASSOCIATES
ENGINEERING & GEOLOGICAL
SERVICES

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

Prepared for:

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

RSG Project No. **DAVDCO 08-3**

Joan A. Smyth, P.G.
Senior Hydrogeologist

**December 2011**

RICHARDSON SMITH GARDNER
& ASSOCIATES
ENGINEERING & GEOLOGICAL
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**Davidson County MSW Phase 2 Landfill**

**Ground Water Monitoring Report**
**Fall 2011 Monitoring Event**

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# 1.0 INTRODUCTION

Richardson Smith Gardner & Associates, Inc. (RSG) was contracted by Davidson County to perform their semi-annual ground water monitoring event at the Davidson County Phase 2 MSW Landfill, permit number 29-06, as required by 15A NCAC 13B .1600. Sampling was conducted September 22, 2011. The following report summarizes the event sampling procedures, field and laboratory results, and ground water characterization as required by NC Solid Waste Regulations. Summary tables, a potentiometric map, statistical analysis and the laboratory analytical report are also included.

# 2.0 SITE GEOLOGY

The Davidson County Landfill facility is located in the Piedmont Physiographic Province of North Carolina approximately three and a half miles northeast of the City of Lexington, NC. The Geologic Map of North Carolina (*USGS*, 1985) indicates that the site lies at the western margin of the Carolina Slate Belt; an area of 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 site vicinity is underlain by volcanic rocks from the Flat Swamp Member of the Cid Formation and metavolcanic rocks of the Battleground Formation.

# 3.0 MONITORING EVENT

## 3.1 Sampling Locations

Groundwater sampling was performed at eight wells (MW-2, MW-3S, MW-3D, MW-4D, MW-5, MW-6S, MW-8 and MW-9). Monitoring wells MW-1, MW-4S, MW-6D and MW-7 are reported as "Missing" in the Environment 1 (E1) lab report, and were not sampled due to insufficient water. Two surface water locations (SW-1 and SW-2) were sampled for this event. SW-3 was not sampled because it was dry. A trip blank was submitted for quality control purposes. Sampling locations are shown on **Figure 1**.

## 3.2 Sampling Procedures

Sampling procedures followed the protocols set forth in the site's Water Quality Monitoring Plan and the North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities (North Carolina Department of Environment and Natural Resources, Division of Waste Management). Each well was gauged to determine ground water depth and then purged three to five well volumes or until dry. Ground water elevations are provided in **Table 1**. Ground water purging and sample collection was performed using a factory sealed teflon bailer.

Field measurements for pH, specific conductivity, turbidity and temperature, were recorded for each well and surface water sampling location. Field parameter data is summarized in **Table 2**. Field data sheets are included in **Appendix A.**

Environment 1, Inc. (NC Laboratory Certification # 10) provided laboratory prepared sample containers for

the specified analytical procedures. Ground water samples were properly preserved, placed on ice and transported to the laboratory facility within the specified hold times for each analysis.

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

## 4.0 FIELD AND LABORATORY RESULTS

Samples were transported to Environment 1, Inc., a North Carolina certified laboratory (NC Wastewater ID #10) and analyzed for the Appendix I VOCs via EPA Test Method 8260B and metals via EPA Test Method 200.8. Leachate samples were also analyzed for BOD using method SM5210B, COD using method HACH8000, Total Suspended Residue via method SM2540D, Ammonia Nitrogen as N via EPA Test Method 350.1, Nitrate Nitrogen as N via EPA Test Method 353.2, Total Phosphorus as P via EPA Test Method 365.4 and Sulfate using method SM426C. The laboratory report is included in **Appendix C**.

Seven inorganic constituents (barium, cobalt, copper, total chromium, lead, vanadium and zinc) were detected above the Solid Waste Section Practical Quantitation Limits (SWSLs). Six wells (MW-2, MW-3D, MW-5, MW-6S, MW-8 and MW-9) reported detections of one or more inorganic constituents above the SWSL. Three inorganic constituents:

- cobalt (MW-2, MW-5, MW-6S, MW-8 and MW-9);
- cadmium (MW-2, MW-6S, MW-8 and MW-9); and
- vanadium (MW-2, MW-3S, MW-3D, MW-4D, MW-5, MW-6S, MW-8 and MW-9)

were detected above their respective 15A NCAC 2L.0200 (2L) or Ground Water Protection (GWP) standards. Cobalt in MW-5, MW-6S and MW-9; total chromium in MW-2, MW-6S, MW-8 and MW-9; and vanadium in MW-5, MW-6S and MW-9 were reported above both their SWSL and 2L or GWP Standard.

No organic constituents were detected above the SWSL or 2L standard. No surface water samples reported detections above the 2B standard.

Additionally, one leachate sample was collected from the leachate storage tank on-site. This sample was analyzed for Appendix I constituents. Leachate sample results are included as **Table 4**.

## 5.0 STATISTICAL ANALYSIS

Richardson Smith Gardner & Associates (RSG) reviewed the laboratory data from this event to evaluate trends, examine major site changes and establish statistical significance while considering differences between up and down gradient wells. Data entry and analysis was performed using the Chempoint and Chemstat statistical software package developed specifically for RCRA Subtitle D sites (Starpoint Software, Cincinnati, OH). Chemstat follows EPA and DWM protocols for approved statistical analysis methods for groundwater data.

Event data was added to the existing database and reviewed to evaluate the most appropriate analysis methods and check for outliers or erroneous results. Statistical analysis was performed on

inorganic constituent using non-parametric testing methods in instances where there is a high percentage of non-detects, otherwise, Poisson Prediction Limits was used.

Statistical analysis was performed for barium, cobalt, copper, chromium, lead, vanadium and zinc where a non J-qualified detection was reported. No wells were found to have significant concentrations for these metals. Results are summarized in **Table 5**.

## 6.0 GROUND WATER CHARACTERIZATION

A potentiometric surface map was created 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 0.012 feet/day (MW-2) to 0.706 feet/day (MW-9). Calculations are included in **Table 6**. Groundwater flows underneath the lined Phase 2 MSW landfill generally north and northwest towards Rich Fork Creek. Flow velocity and direction are consistent with those previously reported. The potentiometric surface map is attached as **Figure 1**.

## 7.0 CONCLUSIONS

Laboratory results indicate the water quality at the Davidson County Phase 2 Landfill is generally consistent with reported historical detections. Inorganic constituent detections are likely due to natural occurrence and their presence in the soil and rock formations, not impact from the landfill. Turbidity may have also been a factor for several sampling locations. In general, detected ground water concentrations at the site have remained stable. The next ground water monitoring event will be performed in March 2012. The results will be reported to NCDENR in accordance with 15A NCAC 13B.

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# Figures

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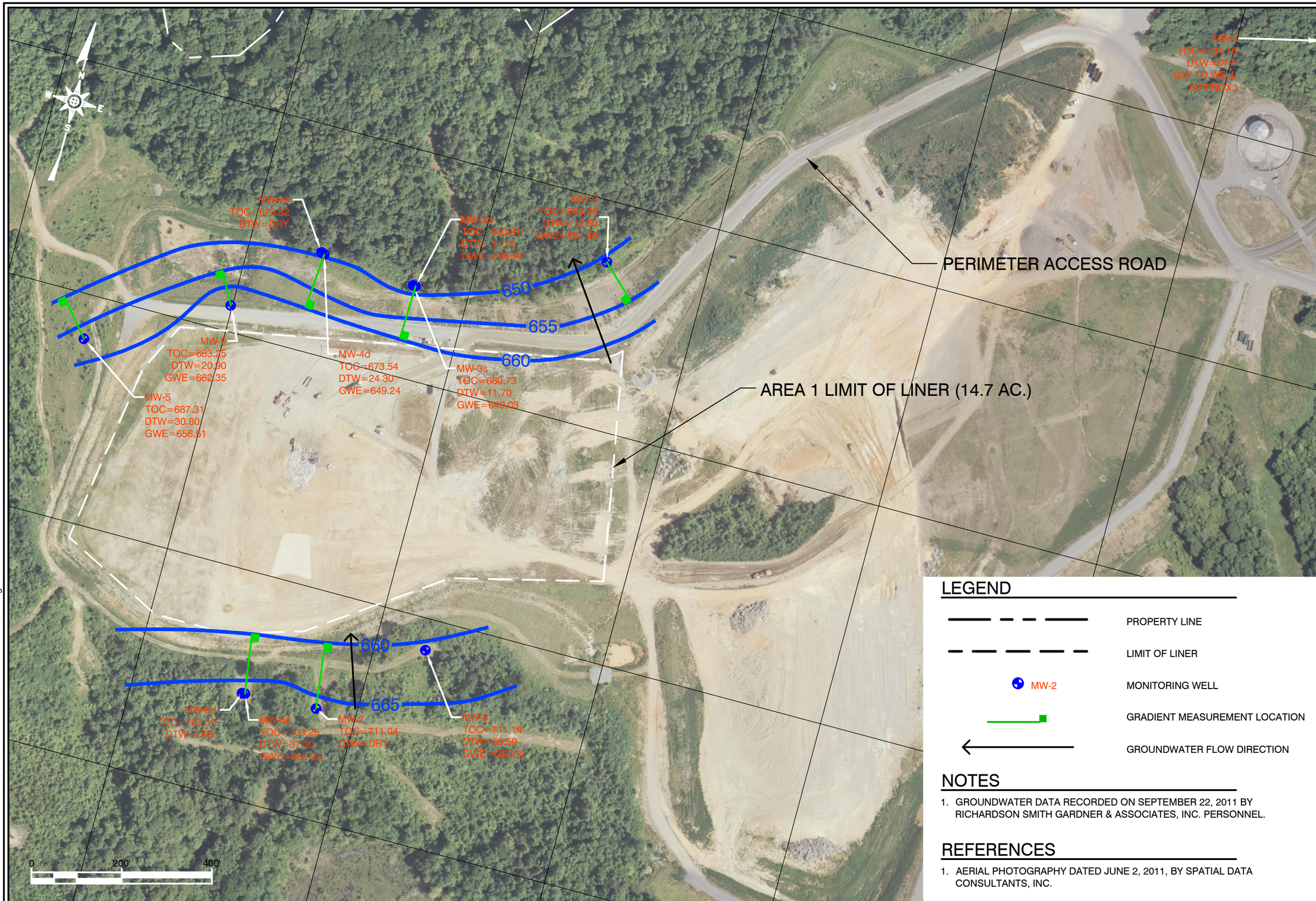


## LEGEND

- PROPERTY LINE
- LIMIT OF LINER
- MW-2 — MONITORING WELL
- GRADIENT MEASUREMENT LOCATION
- GROUNDWATER FLOW DIRECTION

## NOTES

1. GROUNDWATER DATA RECORDED ON SEPTEMBER 22, 2011 BY RICHARDSON SMITH GARDNER & ASSOCIATES, INC. PERSONNEL.

## REFERENCES

1. AERIAL PHOTOGRAPHY DATED JUNE 2, 2011, BY SPATIAL DATA CONSULTANTS, INC.

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| | |
|---|---|
| FIGURE NO. | 1 |
| FILE NAME | DAVDCO-B0657 |
| SCALE: | AS SHOWN |
| PROJECT NO. | DAVDCO-A |
| CHECKED BY: | |
| DRAWN BY: | C.T.J. |
| DATE: | Dec. 2011 |

TITLE: POTENTIOMETRIC MAP FALL 2011
DAVIDSON COUNTY MSW
PHASE 2 LANDFILL

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# Tables

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By: MG
Date: 11/28/2011

# Table 1
## Ground Water Elevations
## Davidson County Phase 2 Landfill
## 9/22/2011

| Well | Northing | Easting | TOC Elevation (feet) | Depth to Water (feet) | Water Level Elev (feet) |
|---|---|---|---|---|---|
| MW-1 | 767416.7610 | 1651389.0830 | 734.16 | DRY | NA |
| MW-2 | 766376.8072 | 1649303.3872 | 664.06 | 12.6 | 651.46 |
| MW-3S | 766204.9705 | 1648875.8572 | 660.73 | 11.7 | 649.03 |
| MW-3D | 766204.6283 | 1648881.1437 | 660.91 | 11.0 | 649.91 |
| MW-4S | 766223.2813 | 1648660.2736 | 673.82 | DRY | <649.82 |
| MW-4D | 766220.6778 | 1648667.3780 | 673.54 | 24.3 | 649.24 |
| MW-5 | 765901.6002 | 1648200.9255 | 687.31 | 30.8 | 656.51 |
| MW-6S | 765234.1084 | 1648749.7961 | 703.25 | 37.3 | 665.95 |
| MW-6D | 765233.1390 | 1648743.0790 | 703.30 | DRY | <660.00 |
| MW-7 | 765242.8464 | 1648910.6331 | 711.04 | DRY | <670.90 |
| MW-8 | 765430.5188 | 1649111.6524 | 711.14 | 50.5 | 660.64 |
| MW-9 | 766057.5112 | 1648496.3934 | 683.25 | 20.90 | 662.35 |

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
NA - water table elevation not available as well was found to be dry.

By: MG
Date: 12/13/2011

**Table 2**
**Field Parameters**
**Davidson County Phase 2 Landfill**
**9/22/2011**

| Well | pH (Std. Units) | Conductivity (umhos) | Temp. (celsius) |
|---|---|---|---|
| MW-2 | 8.8 | 200 | 18 |
| MW-3S | 7.7 | 230 | 16 |
| MW-3D | 7.6 | 280 | 16 |
| MW-4D | 7.4 | 250 | 16 |
| MW-5 | 7.6 | 120 | 15 |
| MW-6S | 7.8 | 470 | 16 |
| MW-8 | 7.6 | 310 | 15 |
| MW-9 | 8.5 | 190 | 17 |
| SW-1 | 8.3 | 210 | 20 |
| SW-2 | 8.3 | 350 | 20 |

Notes: Data Collected by Don Misenheimer and Lindsay Quant of RSG Engineers Inc.
SW-3 was dry therefore field parameters were not collected fo the September event.

By: MG
Date: 11/23/2011

**Table 3**
**Detected Inorganic & Organic Constituents**
**Davidson County Phase 2 Landfill**
**9/22/2011**

| Parameter | SWSL | 2L or GWP | 2B | MW-2 | MW-3S | MW-3D | MW-4D | MW-5 | MW-6S | MW-8 | MW-9 | SW-1 | SW-2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Inorganic Constituents** | | | | | | | | | | | | | |
| antimony | 6 | 1 § | 640 | ND | ND | ND | ND | ND | ND | ND | ND | 0.25 J | 0.34 J |
| arsenic | 10 | 10 | 10 | 0.3 J | ND | 0.27 J | ND | 0.43 J | 1.3 J | 0.52 J | 3.2 J | 0.6 J | 0.47 J |
| barium | 100 | 700 | 2000000 | 21 J | 24.7 J | 42.8 J | 41.2 J | 62.5 J | **458** | 8.3 J | **256** | 47.1 J | 42.4 J |
| beryllium | 1 | 4 § | 6.5 | ND | ND | ND | ND | 0.24 J | 0.4 J | 0.06 J | 0.87 J | ND | ND |
| cadmium | 1 | 2 | 2 | 0.23 J | 0.69 J | 0.13 J | 0.28 J | 0.15 J | 0.16 J | 0.1 J | 0.69 J | 0.04 J | ND |
| cobalt | 10 | 1 § | 270 | 2.4 J | 0.98 J | 0.43 J | 0.11 J | **10** | **15** | 2.6 J | **16** | 2.1 J | 0.76 J |
| copper | 10 | 1000 | 7 | 9.3 J | 0.99 J | 0.63 J | 0.77 J | **35** | **108** | 8.6 J | **63** | 4.7 J | 2.8 J |
| chromium, total | 10 | 10 | 50 | **12** | 1.2 J | ND | ND | 9 J | **35** | **11** | **25** | 2.3 J | 0.32 J |
| lead | 10 | 15 | 25 | 0.94 J | 0.22 J | 0.12 J | 0.09 J | 6.2 J | 6.6 J | 1.7 J | **11** | 2.5 J | 0.47 J |
| nickel | 50 | 100 | 88 | 3.7 J | 1.3 J | 0.66 J | 0.8 J | 10.8 J | 13.9 J | 6 J | 7.7 J | 2.5 J | 3.1 J |
| selenium | 10 | 20 | 5 | 0.35 J | 0.81 J | 0.68 J | 0.26 J | ND | 0.91 J | 0.87 J | 1.5 J | ND | 0.3 J |
| silver | 10 | 20 | 0.06 | 0.06 J | 0.10 J | 0.05 J | ND | 0.04 J | 0.1 J | 0.05 J | 0.24 J | 0.04 J | ND |
| thallium | 5.5 | 0.28 § | 0.47 | 0.03 J | ND | 0.23 J | ND | 0.04 J | 0.2 J | 0.28 J | 0.23 J | 0.06 J | 0.05 J |
| vanadium | 25 | 0.3 § | NE | 14.7 J | 8.2 J | 2.1 J | 9.7 J | **41** | **57** | 13.5 J | **97** | 7.1 J | 2.9 J |
| zinc | 10 | 1000 | 50 | **12** | 2.8 J | **12** | 3.6 J | **57** | **178** | 6.7 J | **75** | **12** | 5.9 J |
| **Organic Constituents** | | | | | | | | | | | | | |
| Acetone | 100 | 6000 | 2000 | ND | ND | ND | ND | 16.4 J | ND | ND | ND | ND | ND |

| | | |
|---|---|---|
| SWSL | - | Solid Waste Section Quantitation Limits |
| 2L | - | Groundwater Standards (15A NCAC 2L 0200) |
| 2B | - | NCAC 2B Standard for Class C waters |
| MDL | - | Method Detection Limit |
| Shading | - | Detection above 2L or GWP standard |
| Bold Letters | - | Constituents detected above SWSL |
| J | - | Detected between MDL and SWSL limit |
| ND | - | Not detected at or above MDL |

Table units are presented in ug/l.
Lab data analysis by Environment 1, Inc. report dated 10/17/2011, ID#6059 A.

By: MG
Date: 11/23/2011

# Table 4
## Davidson County Phase 2 Landfill
## Leachate Analytical Data
## 9/22/2011

| Parameter | Unit | Leachate |
|---|---|---|
| 1,1-Dichloroethane | ug/l | 2.5 J |
| 1,2-Dichloroethane | ug/l | **2.2** |
| 1,2-Dichloropropane | ug/l | 0.5 J |
| 1,4-Dichlorobenzene | ug/l | **5.7** |
| 2-Butanone | ug/l | **919** |
| 2-Hexanone | ug/l | 4.5 J |
| 4-Methyl-2-Pentanone | ug/l | 11.1 J |
| Acetone | ug/l | **590** |
| Ammonia Nitrogen as N | mg/l | **478** |
| Antimony | ug/l | 2.8 J |
| Arsenic | ug/l | 3.6 J |
| Barium | ug/l | **317** |
| Benzene | ug/l | **20.5** |
| Cadmium | ug/l | 0.49 J |
| Chlorobenzene | ug/l | 0.5 J |
| Chloroethane | ug/l | 8.5 J |
| Cis-1,2-Dichloroethene | ug/l | 0.9 J |
| Cobalt | ug/l | 9.8 J |
| COD | mg/l | **994** |
| Copper | ug/l | **22** |
| Ethylbenzene | ug/l | **28** |
| Lead | ug/l | 1.2 J |
| Nickel | ug/l | **74** |
| Nitrate Nitrogen as N | mg/l | 0.1 J |
| Selenium | ug/l | 5.4 J |
| Silver | ug/l | 0.12 J |
| Styrene | ug/l | 0.2 J |
| Sulfate | mg/l | 46.3 J |
| Thallium | ug/l | 0.1 J |
| Toluene | ug/l | **189** |
| Total Chromium | ug/l | **16** |
| Total Phosphorus as P | mg/l | **1.37** |
| Total Suspended Residue | mg/l | **138** |
| trans-1,2-Dichloroethene | ug/l | **6** |
| Vanadium | ug/l | **27** |
| Vinyl Chloride | ug/l | **9.9** |
| Xylenes | ug/l | **68.4** |
| Zinc | ug/l | **454** |

J-values are estimated concentrations detected below the SWSL.
Bold values are detected above the SWSL.

By: MG
Date: 12/13/2011

**Table 5**
**Davidson County Landfill Phase 2**
**Statistical Analysis Summary**
**9/22/2011**

| Location | Parameter | Result (mg/l) | Detection Limit (mg/l) | Test Units | %ND | CL | Test | Statistically Significant? |
|---|---|---|---|---|---|---|---|---|
| MW-6S | Barium | 458000 | 20 | ug/l | 7.4 | 99% | PPL | N |
| MW-9 | Barium | 256000 | 20 | ug/l | 7.4 | 99% | PPL | N |
| MW-5 | Cobalt | 10000 | 30 | ug/l | 3.7 | 99% | PPL | N |
| MW-6S | Cobalt | 15000 | 30 | ug/l | 3.7 | 99% | PPL | N |
| MW-9 | Cobalt | 16000 | 30 | ug/l | 3.7 | 99% | PPL | N |
| MW-5 | Copper | 35000 | 20 | ug/l | 0 | 99% | PPL | N |
| MW-6S | Copper | 108000 | 20 | ug/l | 0 | 99% | PPL | N |
| MW-9 | Copper | 63000 | 20 | ug/l | 0 | 99% | PPL | N |
| MW-2 | Chromium | 12000 | 40 | ug/l | 2.77 | 99% | PPL | N |
| MW-6S | Chromium | 35000 | 40 | ug/l | 2.77 | 99% | PPL | N |
| MW-8 | Chromium | 11000 | 40 | ug/l | 2.77 | 99% | PPL | N |
| MW-9 | Chromium | 25000 | 40 | ug/l | 2.77 | 99% | PPL | N |
| MW-9 | Lead | 11000 | 20 | ug/l | 11.11 | 99% | PPL | N |
| MW-5 | Vanadium | 41000 | 140 | ug/l | 0 | 99% | PPL | N |
| MW-6S | Vanadium | 57000 | 140 | ug/l | 0 | 99% | PPL | N |
| MW-9 | Vanadium | 97000 | 140 | ug/l | 0 | 99% | PPL | N |
| MW-2 | Zinc | 12000 | 240 | ug/l | 2.22 | 99% | PPL | N |
| MW-3D | Zinc | 12000 | 240 | ug/l | 2.22 | 99% | PPL | N |
| MW-5 | Zinc | 57000 | 240 | ug/l | 2.22 | 99% | PPL | N |
| MW-6S | Zinc | 178000 | 240 | ug/l | 2.22 | 99% | PPL | N |
| MW-9 | Zinc | 75000 | 240 | ug/l | 2.22 | 99% | PPL | N |

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

RICHARDSON SMITH GARDNER & ASSOCIATES
ENGINEERING & GEOLOGICAL SERVICES

By: MG
Date: 12/13/2011

# Table 6
## Aquifer Conductivity and Velocity
## Davidson County Phase 2 Landfill
## 9/22/2011

| 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 | 0.032 | 0.012 |
| MW-3s | Sand | 8.60E-02 | 5.97E-05 | 0.20 | 0.085 | 0.037 |
| 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 | NA | NA |
| 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 | 0.054 | 0.130 |
| MW-6s | Sand and Gravel | 4.64E-01 | 3.22E-04 | 0.22 | 0.051 | 0.108 |
| 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 | 0.035 | 0.174 |
| MW-9 | Diorite | 7.20E-01 | 5.00E-04 | 0.10 | 0.098 | 0.706 |

NA = Well had insufficient water to perform Slug Test, or insuffienent data to complete calculation.
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 Fall 2011 potentiometric surface.

# Appendix A

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# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-1_____** **Initials:___DMM_____**

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

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-2_____** **Initials:___DMM_____**

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

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-3s_____** **Initials:___DMM_____**

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. | X | |
| B. Vicinity is free of potential contaminants. | X | |
| C. Dead trees, etc. not in danger of falling and damaging wells. | X | |
| D. Well is in the same location as on field maps. | X | |
| E. | | |

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-3d_____** **Initials:___DMM_____**

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. | X | |
| B. Vicinity is free of potential contaminants. | X | |
| C. Dead trees, etc. not in danger of falling and damaging wells. | X | |
| D. Well is in the same location as on field maps. | X | |
| E. | | |

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-4s_____** **Initials:___DMM_____**

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. | X | |
| B. Vicinity is free of potential contaminants. | X | |
| C. Dead trees, etc. not in danger of falling and damaging wells. | X | |
| D. Well is in the same location as on field maps. | X | |
| E. | | |

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-4d_____** **Initials:___DMM_____**

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. | X | |
| B. Vicinity is free of potential contaminants. | X | |
| C. Dead trees, etc. not in danger of falling and damaging wells. | X | |
| D. Well is in the same location as on field maps. | X | |
| E. | | |

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-5_____** **Initials:___DMM_____**

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

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-6s_____** **Initials:___DMM_____**

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. | X | |
| B. Vicinity is free of potential contaminants. | X | |
| C. Dead trees, etc. not in danger of falling and damaging wells. | X | |
| D. Well is in the same location as on field maps. | X | |
| E. | | |

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-6d_____** **Initials:___DMM_____**

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. | X | |
| B. Vicinity is free of potential contaminants. | X | |
| C. Dead trees, etc. not in danger of falling and damaging wells. | X | |
| D. Well is in the same location as on field maps. | X | |
| E. | | |

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-7_____** **Initials:___DMM_____**

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

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-8_____** **Initials:___DMM_____**

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

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# 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 Phase 2 Landfill** **Date:__9/22/11_____**

**Well ID:____MW-9_____** **Initials:___DMM_____**

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

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

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

Comments/ items addressed or to be addressed:

# Appendix B

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**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

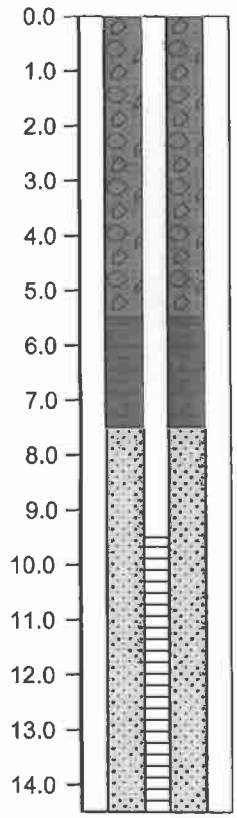
BOREHOLE NUMBER **MW-2** Page 1 of 1

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 | | | | | | |



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# 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:

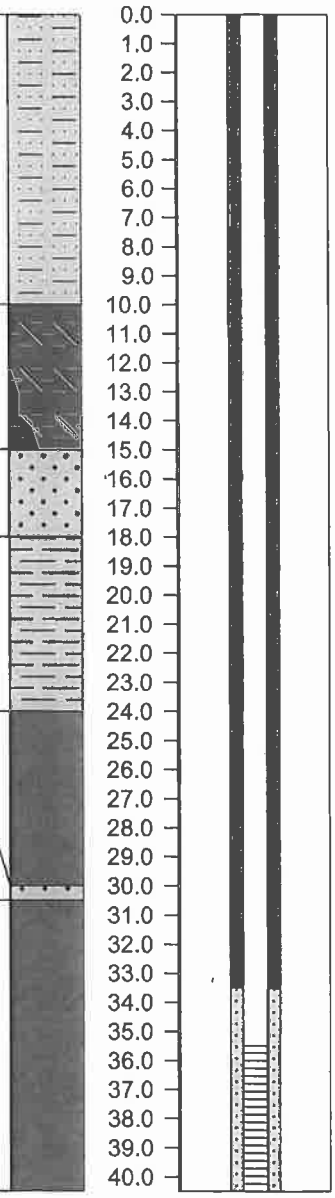
| STATIC WATER LEVEL (TOC) | | |
|---|---|---|
| Depth (ft) | | |
| Time | | |
| Date | | |

| 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



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# FIELD BOREHOLE LOG

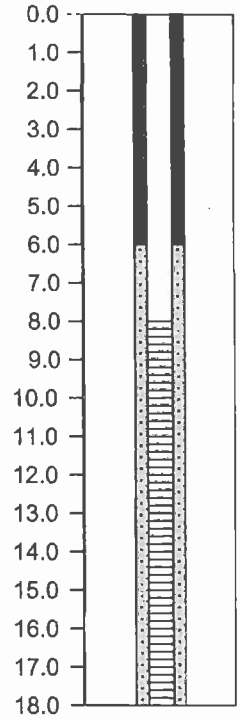
BOREHOLE NUMBER **MW-3s** Page 1 of 1

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

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# 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 | |

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# FIELD BOREHOLE LOG

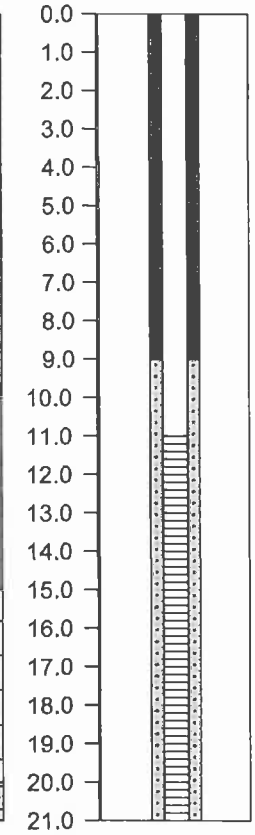
BOREHOLE NUMBER **MW-4s** Page 1 of 1

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

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# FIELD BOREHOLE LOG

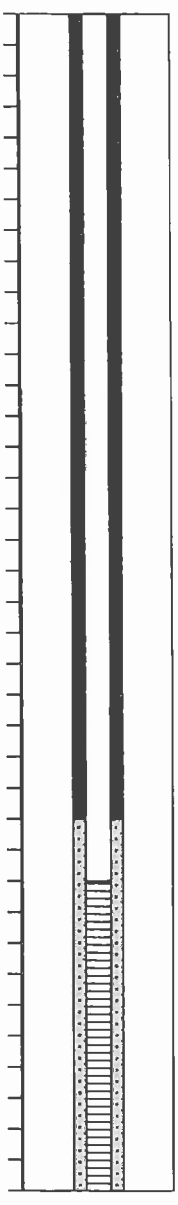
BOREHOLE NUMBER **MW-5** 

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 | |



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# 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 | |

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# 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 | |

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# 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" | | | | | |

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# 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

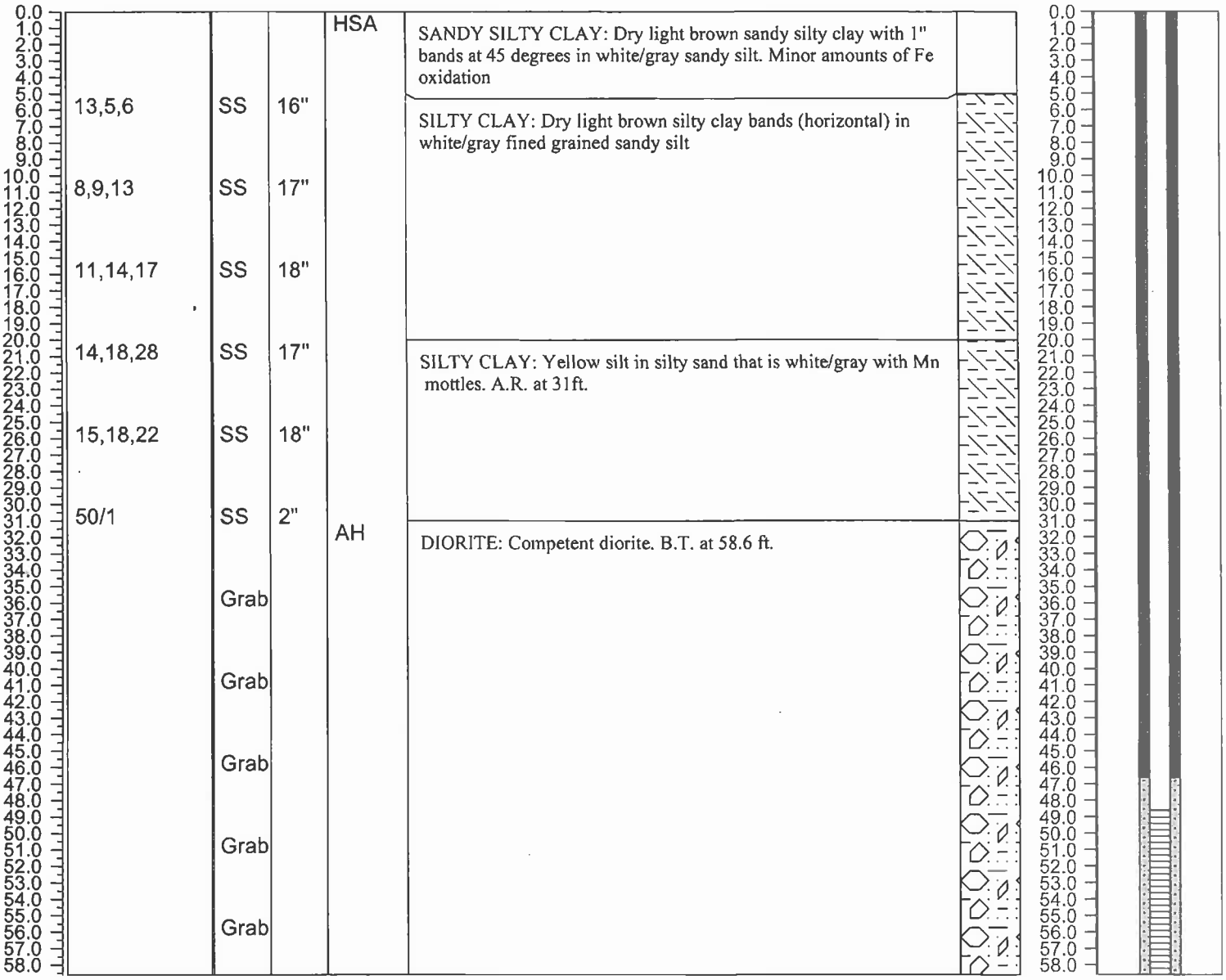
BOREHOLE NUMBER **MW-8** 

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

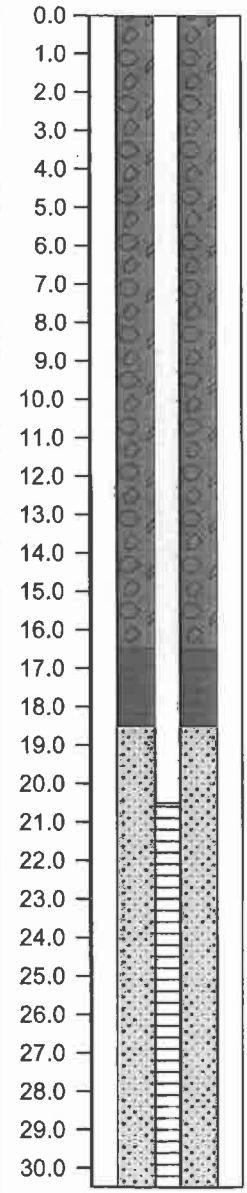
BOREHOLE NUMBER **MW-9** Page 1 of 1

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

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# Appendix C

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Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

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

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

ID#: 6059

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

DATE COLLECTED: 09/22/11
DATE REPORTED : 10/17/11

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 | Missing | --- U | --- U | --- U | Missing | 10/04/11 | CMF | EPA200.8 |
| Arsenic, ug/l | 0.10 | 10.0 | Missing | 0.30 J | --- U | 0.27 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Barium, ug/l | 0.02 | 100.0 | Missing | 21.0 J | 24.7 J | 42.8 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Beryllium, ug/l | 0.02 | 1.0 | Missing | --- U | --- U | --- U | Missing | 10/04/11 | CMF | EPA200.8 |
| Cadmium, ug/l | 0.02 | 1.0 | Missing | 0.23 J | 0.69 J | 0.13 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Cobalt, ug/l | 0.03 | 10.0 | Missing | 2.4 J | 0.98 J | 0.43 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Copper, ug/l | 0.02 | 10.0 | Missing | 9.3 J | 0.99 J | 0.63 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Total Chromium, ug/l | 0.04 | 10.0 | Missing | 12 | 1.2 J | --- U | Missing | 10/04/11 | CMF | EPA200.8 |
| Lead, ug/l | 0.02 | 10.0 | Missing | 0.94 J | 0.22 J | 0.12 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Nickel, ug/l | 0.04 | 50.0 | Missing | 3.7 J | 1.3 J | 0.66 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Selenium, ug/l | 0.20 | 10.0 | Missing | 0.35 J | 0.81 J | 0.68 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Silver, ug/l | 0.02 | 10.0 | Missing | 0.06 J | 0.10 J | 0.05 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Thallium, ug/l | 0.02 | 5.5 | Missing | 0.03 J | --- U | 0.23 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Vanadium, ug/l | 0.14 | 25.0 | Missing | 14.7 J | 8.2 J | 2.1 J | Missing | 10/04/11 | CMF | EPA200.8 |
| Zinc, ug/l | 0.24 | 10.0 | Missing | 12 | 2.8 J | 12 | Missing | 10/04/11 | 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: 09/22/11
DATE REPORTED : 10/17/11

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 | 10/04/11 | CMF | EPA200.8 |
| Arsenic, ug/l | 0.10 | 10.0 | --- U | 0.43 J | 1.3 J | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Barium, ug/l | 0.02 | 100.0 | 41.2 J | 62.5 J | 458 | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Beryllium, ug/l | 0.02 | 1.0 | --- U | 0.24 J | 0.40 J | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Cadmium, ug/l | 0.02 | 1.0 | 0.28 J | 0.15 J | 0.16 J | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Cobalt, ug/l | 0.03 | 10.0 | 0.11 J | 10 | 15 | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Copper, ug/l | 0.02 | 10.0 | 0.77 J | 35 | 108 | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Total Chromium, ug/l | 0.04 | 10.0 | --- U | 9.0 J | 35 | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Lead, ug/l | 0.02 | 10.0 | 0.09 J | 6.2 J | 6.6 J | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Nickel, ug/l | 0.04 | 50.0 | 0.80 J | 10.8 J | 13.9 J | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Selenium, ug/l | 0.20 | 10.0 | 0.26 J | --- U | 0.91 J | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Silver, ug/l | 0.02 | 10.0 | --- U | 0.04 J | 0.10 J | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Thallium, ug/l | 0.02 | 5.5 | --- U | 0.04 J | 0.20 J | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Vanadium, ug/l | 0.14 | 25.0 | 9.7 J | 41 | 57 | Missing | Missing | 10/04/11 | CMF | EPA200.8 |
| Zinc, ug/l | 0.24 | 10.0 | 3.6 J | 57 | 178 | Missing | Missing | 10/04/11 | 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: 09/22/11
DATE REPORTED : 10/17/11

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 | | 10/04/11 | CMF | EPA200.8 |
| Arsenic, ug/l | 0.10 | 10.0 | 0.52 J | 3.2 J | | 10/04/11 | CMF | EPA200.8 |
| Barium, ug/l | 0.02 | 100.0 | 8.3 J | 256 | | 10/04/11 | CMF | EPA200.8 |
| Beryllium, ug/l | 0.02 | 1.0 | 0.06 J | 0.87 J | | 10/04/11 | CMF | EPA200.8 |
| Cadmium, ug/l | 0.02 | 1.0 | 0.10 J | 0.69 J | | 10/04/11 | CMF | EPA200.8 |
| Cobalt, ug/l | 0.03 | 10.0 | 2.6 J | 16 | | 10/04/11 | CMF | EPA200.8 |
| Copper, ug/l | 0.02 | 10.0 | 8.6 J | 63 | | 10/04/11 | CMF | EPA200.8 |
| Total Chromium, ug/l | 0.04 | 10.0 | 11 | 25 | | 10/04/11 | CMF | EPA200.8 |
| Lead, ug/l | 0.02 | 10.0 | 1.7 J | 11 | | 10/04/11 | CMF | EPA200.8 |
| Nickel, ug/l | 0.04 | 50.0 | 6.0 J | 7.7 J | | 10/04/11 | CMF | EPA200.8 |
| Selenium, ug/l | 0.20 | 10.0 | 0.87 J | 1.5 J | | 10/04/11 | CMF | EPA200.8 |
| Silver, ug/l | 0.02 | 10.0 | 0.05 J | 0.24 J | | 10/04/11 | CMF | EPA200.8 |
| Thallium, ug/l | 0.02 | 5.5 | 0.28 J | 0.23 J | | 10/04/11 | CMF | EPA200.8 |
| Vanadium, ug/l | 0.14 | 25.0 | 13.5 J | 97 | | 10/04/11 | CMF | EPA200.8 |
| Zinc, ug/l | 0.24 | 10.0 | 6.7 J | 75 | | 10/04/11 | CMF | EPA200.8 |

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

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

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MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA, NC 27526

CLIENT ID: 6059

ANALYST: MAO
DATE COLLECTED: 09/22/11
DATE REPORTED: 10/17/11



REVIEWED BY:

## VOLATILE ORGANICS
## EPA METHOD 8260B

| PARAMETERS, ug/l | MDL | SWSL | 09/28/11 MW-2 | 09/29/11 MW-3S | 09/29/11 MW-3D | 09/29/11 MW-4D | 09/29/11 MW-5 |
|---|---|---|---|---|---|---|---|
| | Date Analyzed: | | | | | | |
| 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 | 16.40 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: 09/22/11
DATE REPORTED: 10/17/11



REVIEWED BY: _____

## VOLATILE ORGANICS
## EPA METHOD 8260B

| PARAMETERS, ug/l | MDL | SWSL | Date Analyzed: 09/29/11 MW-6S | 09/29/11 MW-8 | 09/29/11 MW-9 | 09/29/11 Trip Blank |
|---|---|---|---|---|---|---|
| 1. Chloromethane | 0.77 | 1.0 | --- U | --- U | --- U | --- U |
| 2. Vinyl Chloride | 0.63 | 1.0 | --- U | --- U | --- U | --- U |
| 3. Bromomethane | 0.67 | 10.0 | --- U | --- U | --- U | --- U |
| 4. Chloroethane | 0.48 | 10.0 | --- U | --- U | --- U | --- U |
| 5. Trichlorofluoromethane | 0.24 | 1.0 | --- U | --- U | --- U | --- U |
| 6. 1,1-Dichloroethene | 0.17 | 5.0 | --- U | --- U | --- U | --- U |
| 7. Acetone | 9.06 | 100.0 | --- U | --- U | --- U | --- U |
| 8. Iodomethane | 0.26 | 10.0 | --- U | --- U | --- U | --- U |
| 9. Carbon Disulfide | 0.23 | 100.0 | --- U | --- U | --- U | --- U |
| 10. Methylene Chloride | 0.64 | 1.0 | --- U | --- U | --- U | --- U |
| 11. trans-1,2-Dichloroethene | 0.23 | 5.0 | --- U | --- U | --- U | --- U |
| 12. 1,1-Dichloroethane | 0.20 | 5.0 | --- U | --- U | --- U | --- U |
| 13. Vinyl Acetate | 0.20 | 50.0 | --- U | --- U | --- U | --- U |
| 14. Cis-1,2-Dichloroethene | 0.25 | 5.0 | --- U | --- U | --- U | --- U |
| 15. 2-Butanone | 2.21 | 100.0 | --- U | --- U | --- U | --- U |
| 16. Bromochloromethane | 0.27 | 3.0 | --- U | --- U | --- U | --- U |
| 17. Chloroform | 0.25 | 5.0 | --- U | --- U | --- U | --- U |
| 18. 1,1,1-Trichloroethane | 0.19 | 1.0 | --- U | --- U | --- U | --- U |
| 19. Carbon Tetrachloride | 0.22 | 1.0 | --- U | --- U | --- U | --- U |
| 20. Benzene | 0.24 | 1.0 | --- U | --- U | --- U | --- U |
| 21. 1,2-Dichloroethane | 0.27 | 1.0 | --- U | --- U | --- U | --- U |
| 22. Trichloroethene | 0.23 | 1.0 | --- U | --- U | --- U | --- U |
| 23. 1,2-Dichloropropane | 0.21 | 1.0 | --- U | --- U | --- U | --- U |
| 24. Bromodichloromethane | 0.21 | 1.0 | --- U | --- U | --- U | --- U |
| 25. Cis-1,3-Dichloropropene | 0.24 | 1.0 | --- U | --- U | --- U | --- U |
| 26. 4-Methyl-2-Pentanone | 1.19 | 100.0 | --- U | --- U | --- U | --- U |
| 27. Toluene | 0.23 | 1.0 | --- U | --- U | --- U | --- U |
| 28. trans-1,3-Dichloropropene | 0.28 | 1.0 | --- U | --- U | --- U | --- U |
| 29. 1,1,2-Trichloroethane | 0.25 | 1.0 | --- U | --- U | --- U | --- U |
| 30. Tetrachloroethene | 0.17 | 1.0 | --- U | --- U | --- U | --- U |
| 31. 2-Hexanone | 1.57 | 50.0 | --- U | --- U | --- U | --- U |
| 32. Dibromochloromethane | 0.24 | 3.0 | --- U | --- U | --- U | --- U |
| 33. 1,2-Dibromoethane | 0.26 | 1.0 | --- U | --- U | --- U | --- U |
| 34. Chlorobenzene | 0.30 | 3.0 | --- U | --- U | --- U | --- U |
| 35. 1,1,1,2-Tetrachloroethane | 0.22 | 5.0 | --- U | --- U | --- U | --- U |
| 36. Ethylbenzene | 0.21 | 1.0 | --- U | --- U | --- U | --- U |
| 37. Xylenes | 0.68 | 5.0 | --- U | --- U | --- U | --- U |
| 38. Dibromomethane | 0.28 | 10.0 | --- U | --- U | --- U | --- U |
| 39. Styrene | 0.19 | 1.0 | --- U | --- U | --- U | --- U |
| 40. Bromoform | 0.20 | 3.0 | --- U | --- U | --- U | --- U |
| 41. 1,1,2,2-Tetrachloroethane | 0.26 | 3.0 | --- U | --- U | --- U | --- U |
| 42. 1,2,3-Trichloropropane | 0.43 | 1.0 | --- U | --- U | --- U | --- U |
| 43. 1,4-Dichlorobenzene | 0.39 | 1.0 | --- U | --- U | --- U | --- U |
| 44. 1,2-Dichlorobenzene | 0.32 | 5.0 | --- U | --- U | --- U | --- U |
| 45. 1,2-Dibromo-3-Chloropropane | 0.34 | 13.0 | --- U | --- U | --- U | --- U |
| 46. Acrylonitrile | 2.72 | 200.0 | --- U | --- U | --- U | --- U |
| 47. trans-1,4-Dichloro-2-Butene | 0.42 | 100.0 | --- U | --- U | --- U | --- U |

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

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

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

# CHAIN OF CUSTODY RECORD



**CLIENT:** 6059 **Week:** 39

**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 OR ug/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) | | | | | | 02 | 02 | 02 | 02 |
| CONTAINER TYPE, P/G | | | | | | P | G | G | G |
| CHEMICAL PRESERVATION | | | | | | A | E | E | E |
| MW-1 | 9/22/11 | Dry | | | 4 | | | | |
| MW-2 | 9/22/11 | 10:23a | | | 3 | | | | |
| MW-3S | 9/22/11 | Dry | | | 3 | | | | |
| MW-3D | 9/22/11 | 10:57a | | | 3 | | | | |
| MW-4S | 9/22/11 | 11:00a | | | 3 | | | | |
| MW-4D | 9/22/11 | 10:47a | | | 3 | | | | |
| MW-5 | 9/22/11 | 11:11a | | | 3 | | | | |
| MW-6S | 9/22/11 | 11:30a | | | 4 | | | | |
| MW-6D | 9/22/11 | Dry | | | 3 | | | | |
| MW-7 | 9/22/11 | Dry | | | 3 | | | | |
| MW-8 | 9/22/11 | 11:22a | | | 3 | | | | |

Switch

PARAMETERS

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

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

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

SAMPLES COLLECTED BY: (Please Print) LAQ & DMM

SAMPLES RECEIVED IN LAB AT 02 °C

| RELINQUISHED BY (SIG.) (SAMPLER) | DATE/TIME | RECEIVED BY (SIG.) | DATE/TIME |
|---|---|---|---|
| [signature] | 9/22/11 2:00p | [signature] | 9/23 8:00 |
| RELINQUISHED BY (SIG.) | DATE/TIME | RECEIVED BY (SIG.) | DATE/TIME |
| RELINQUISHED BY (SIG.) | DATE/TIME | RECEIVED BY (SIG.) | DATE/TIME |

COMMENTS: Spoke w/ Don MW4S Dry not MW3S.

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

№ 222572

**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: 39**

**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 |
| | | | | | | | | | | | | | | | | | | | | | | A - NONE D - NAOH |
| | | | | | | | | | | | | | | | | | | | | | | B - $HNO_3$ E - HCL |
| | | | | | | | | | | | | | | | | | | | | | | C - $H_2SO_4$ F - ZINC ACETATE |
| | | | | | | | | | | | | | | | | | | | | | | G - NA THIOSULFATE |
| | | | | | | | | | | | | | | | | | | | | | | PARAMETERS |
| SAMPLE LOCATION | COLLECTION DATE | COLLECTION TIME | TOTAL CHLORINE, mg/l OR ug/l AT COLLECTION | TEMPERATURE, °C AT COLLECTION | # OF CONTAINERS | Metals | EPA 8260B | 8260 Dup. 1 | 8260 Dup. 2 | | | | | | | | | | | | |
| MW-9 | 9/22/11 | 10:32a | | | 3 | | | | | | | | | | | | | | | | | |
| Trip Blank | | | | | 2 | | | | | | | | | | | | | | | | | |

CLASSIFICATION:
- [ ] WASTEWATER (NPDES)
- [ ] DRINKING WATER
- [ ] DWQ/GW
- [X] SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY
Y N

SAMPLES COLLECTED BY: (Please Print)
LAQ & DMM

SAMPLES RECEIVED IN LAB AT 0.2 °C

| RELINQUISHED BY (SIG.) (SAMPLER) | DATE/TIME | RECEIVED BY (SIG.) | DATE/TIME |
|---|---|---|---|
| [signature] | 9/22/11 2:00p | [signature] | 9/23 800 |
| 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.

№ 222571

FORM #5

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: 09/22/11
DATE REPORTED : 10/17/11

REVIEWED BY:

| PARAMETERS | MDL | SWSL | SW-1 | SW-2 | SW-3 | Leachate | Analysis Date | Analyst | Method Code |
|---|---|---|---|---|---|---|---|---|---|
| BOD, mg/l | 2.0 | 2.0 | | | | --- U | 09/23/11 | TRB | SM5210B |
| COD, mg/l | 20.0 | 20.0 | | | | 994 | 09/27/11 | TRB | HACH8000 |
| Total Suspended Residue, mg/l | 1.0 | 1.0 | | | | 138 | 09/23/11 | MEL | SM2540D |
| Ammonia Nitrogen as N, mg/l | 0.04 | 0.04 | | | | 478 | 09/27/11 | ANO | EPA350.1 |
| Nitrate Nitrogen as N, mg/l | 0.03 | 10.0 | | | | 0.10 J | 09/23/11 | ANO | EPA353.2 |
| Total Phosphorus as P, mg/l | 0.04 | 0.04 | | | | 1.37 | 09/29/11 | SEJ | EPA365.4 |
| Sulfate, mg/l | 5.0 | 250.0 | | | | 46.3 J | 09/30/11 | TRB | SM426C |
| Antimony, ug/l | 0.14 | 6.0 | 0.25 J | 0.34 J | Missing | 2.8 J | 10/04/11 | CMF | EPA200.8 |
| Arsenic, ug/l | 0.10 | 10.0 | 0.60 J | 0.47 J | Missing | 3.6 J | 10/04/11 | CMF | EPA200.8 |
| Barium, ug/l | 0.02 | 100.0 | 47.1 J | 42.4 J | Missing | 317 | 10/04/11 | CMF | EPA200.8 |
| Beryllium, ug/l | 0.02 | 1.0 | --- U | --- U | Missing | --- U | 10/04/11 | CMF | EPA200.8 |
| Cadmium, ug/l | 0.02 | 1.0 | 0.04 J | --- U | Missing | 0.49 J | 10/04/11 | CMF | EPA200.8 |
| Cobalt, ug/l | 0.03 | 10.0 | 2.1 J | 0.76 J | Missing | 9.8 J | 10/04/11 | CMF | EPA200.8 |
| Copper, ug/l | 0.02 | 10.0 | 4.7 J | 2.8 J | Missing | 22 | 10/04/11 | CMF | EPA200.8 |
| Total Chromium, ug/l | 0.04 | 10.0 | 2.3 J | 0.32 J | Missing | 16 | 10/04/11 | CMF | EPA200.8 |
| Lead, ug/l | 0.02 | 10.0 | 2.5 J | 0.47 J | Missing | 1.2 J | 10/04/11 | CMF | EPA200.8 |
| Nickel, ug/l | 0.04 | 50.0 | 2.5 J | 3.1 J | Missing | 74 | 10/04/11 | CMF | EPA200.8 |
| Selenium, ug/l | 0.20 | 10.0 | --- U | 0.30 J | Missing | 5.4 J | 10/04/11 | CMF | EPA200.8 |
| Silver, ug/l | 0.02 | 10.0 | 0.04 J | --- U | Missing | 0.12 J | 10/04/11 | CMF | EPA200.8 |
| Thallium, ug/l | 0.02 | 5.5 | 0.06 J | 0.05 J | Missing | 0.10 J | 10/04/11 | CMF | EPA200.8 |
| Vanadium, ug/l | 0.14 | 25.0 | 7.1 J | 2.9 J | Missing | 27 | 10/04/11 | CMF | EPA200.8 |
| Zinc, ug/l | 0.24 | 10.0 | 12 | 5.9 J | Missing | 454 | 10/04/11 | 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: 09/22/11
DATE REPORTED: 10/17/11



REVIEWED BY:

## VOLATILE ORGANICS
## EPA METHOD 8260B

| PARAMETERS, ug/l | MDL | SWSL | Date Analyzed: 09/30/11 SW-1 | 09/29/11 SW-2 | 09/30/11 Leachate |
|---|---|---|---|---|---|
| 1. Chloromethane | 0.77 | 1.0 | --- U | --- U | --- U |
| 2. Vinyl Chloride | 0.63 | 1.0 | --- U | --- U | 9.90 |
| 3. Bromomethane | 0.67 | 10.0 | --- U | --- U | --- U |
| 4. Chloroethane | 0.48 | 10.0 | --- U | --- U | 8.50 J |
| 5. Trichlorofluoromethane | 0.24 | 1.0 | --- U | --- U | --- U |
| 6. 1,1-Dichloroethene | 0.17 | 5.0 | --- U | --- U | --- U |
| 7. Acetone | 9.06 | 100.0 | --- U | --- U | 590.00 |
| 8. Iodomethane | 0.26 | 10.0 | --- U | --- U | --- U |
| 9. Carbon Disulfide | 0.23 | 100.0 | --- U | --- U | --- U |
| 10. Methylene Chloride | 0.64 | 1.0 | --- U | --- U | --- U |
| 11. trans-1,2-Dichloroethene | 0.23 | 5.0 | --- U | --- U | 6.00 |
| 12. 1,1-Dichloroethane | 0.20 | 5.0 | --- U | --- U | 2.50 J |
| 13. Vinyl Acetate | 0.20 | 50.0 | --- U | --- U | --- U |
| 14. Cis-1,2-Dichloroethene | 0.25 | 5.0 | --- U | --- U | 0.90 J |
| 15. 2-Butanone | 2.21 | 100.0 | --- U | --- U | 919.00 |
| 16. Bromochloromethane | 0.27 | 3.0 | --- U | --- U | --- U |
| 17. Chloroform | 0.25 | 5.0 | --- U | --- U | --- U |
| 18. 1,1,1-Trichloroethane | 0.19 | 1.0 | --- U | --- U | --- U |
| 19. Carbon Tetrachloride | 0.22 | 1.0 | --- U | --- U | --- U |
| 20. Benzene | 0.24 | 1.0 | --- U | --- U | 20.50 |
| 21. 1,2-Dichloroethane | 0.27 | 1.0 | --- U | --- U | 2.20 |
| 22. Trichloroethene | 0.23 | 1.0 | --- U | --- U | --- U |
| 23. 1,2-Dichloropropane | 0.21 | 1.0 | --- U | --- U | 0.50 J |
| 24. Bromodichloromethane | 0.21 | 1.0 | --- U | --- U | --- U |
| 25. Cis-1,3-Dichloropropene | 0.24 | 1.0 | --- U | --- U | --- U |
| 26. 4-Methyl-2-Pentanone | 1.19 | 100.0 | --- U | --- U | 11.10 J |
| 27. Toluene | 0.23 | 1.0 | --- U | --- U | 189.00 |
| 28. trans-1,3-Dichloropropene | 0.28 | 1.0 | --- U | --- U | --- U |
| 29. 1,1,2-Trichloroethane | 0.25 | 1.0 | --- U | --- U | --- U |
| 30. Tetrachloroethene | 0.17 | 1.0 | --- U | --- U | --- U |
| 31. 2-Hexanone | 1.57 | 50.0 | --- U | --- U | 4.50 J |
| 32. Dibromochloromethane | 0.24 | 3.0 | --- U | --- U | --- U |
| 33. 1,2-Dibromoethane | 0.26 | 1.0 | --- U | --- U | --- U |
| 34. Chlorobenzene | 0.30 | 3.0 | --- U | --- U | 0.50 J |
| 35. 1,1,1,2-Tetrachloroethane | 0.22 | 5.0 | --- U | --- U | --- U |
| 36. Ethylbenzene | 0.21 | 1.0 | --- U | --- U | 28.00 |
| 37. Xylenes | 0.68 | 5.0 | --- U | --- U | 68.40 |
| 38. Dibromomethane | 0.28 | 10.0 | --- U | --- U | --- U |
| 39. Styrene | 0.19 | 1.0 | --- U | --- U | 0.20 J |
| 40. Bromoform | 0.20 | 3.0 | --- U | --- U | --- U |
| 41. 1,1,2,2-Tetrachloroethane | 0.26 | 3.0 | --- U | --- U | --- U |
| 42. 1,2,3-Trichloropropane | 0.43 | 1.0 | --- U | --- U | --- U |
| 43. 1,4-Dichlorobenzene | 0.39 | 1.0 | --- U | --- U | 5.70 |
| 44. 1,2-Dichlorobenzene | 0.32 | 5.0 | --- U | --- U | --- U |
| 45. 1,2-Dibromo-3-Chloropropane | 0.34 | 13.0 | --- U | --- U | --- U |
| 46. Acrylonitrile | 2.72 | 200.0 | --- U | --- U | --- U |
| 47. trans-1,4-Dichloro-2-Butene | 0.42 | 100.0 | --- U | --- U | --- U |

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

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

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

# CHAIN OF CUSTODY RECORD



**CLIENT:** 6059 A **Week: 39**

**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 OR ug/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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHLORINE NEUTRALIZED AT COLLECTION | | | | | | | | | | | | | | | | |
| pH CHECK (LAB) | | | | | | | <2 | | <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 |
| SW-1 | 9/22/11 | 12:21p | | | 4 | | | | | | | | ▒ | ▒ | ▒ | ▒ |
| SW-2 | 9/22/11 | 12:36p | | | 3 | | | | | | | | ▒ | ▒ | ▒ | |
| SW-3 | 9/22/11 | Dry | | | 3 | | | | | | | | ▒ | ▒ | ▒ | |
| Leachate | 9/22/11 | 11:45a | | | 10 | ▒ | ▒ | ▒ | ▒ | ▒ | ▒ | ▒ | ▒ | ▒ | ▒ | |

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) LAQ & DMM

SAMPLES RECEIVED IN LAB AT 0°C °C

| RELINQUISHED BY (SIG.) (SAMPLER) | DATE/TIME | RECEIVED BY (SIG.) | DATE/TIME |
|---|---|---|---|
| [signature] | 9/22/11 2:00p | [signature] | 9/23 800 |
| 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

№ 222570

# Appendix D

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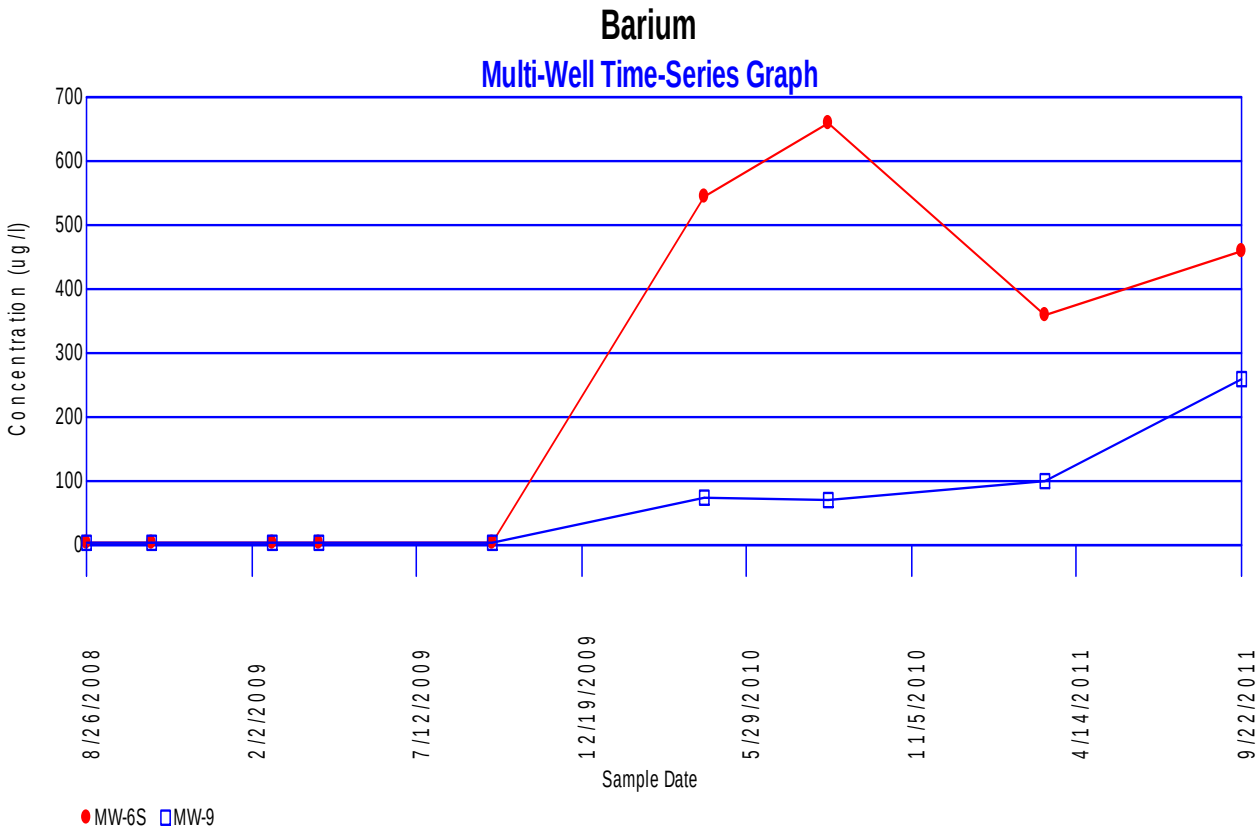
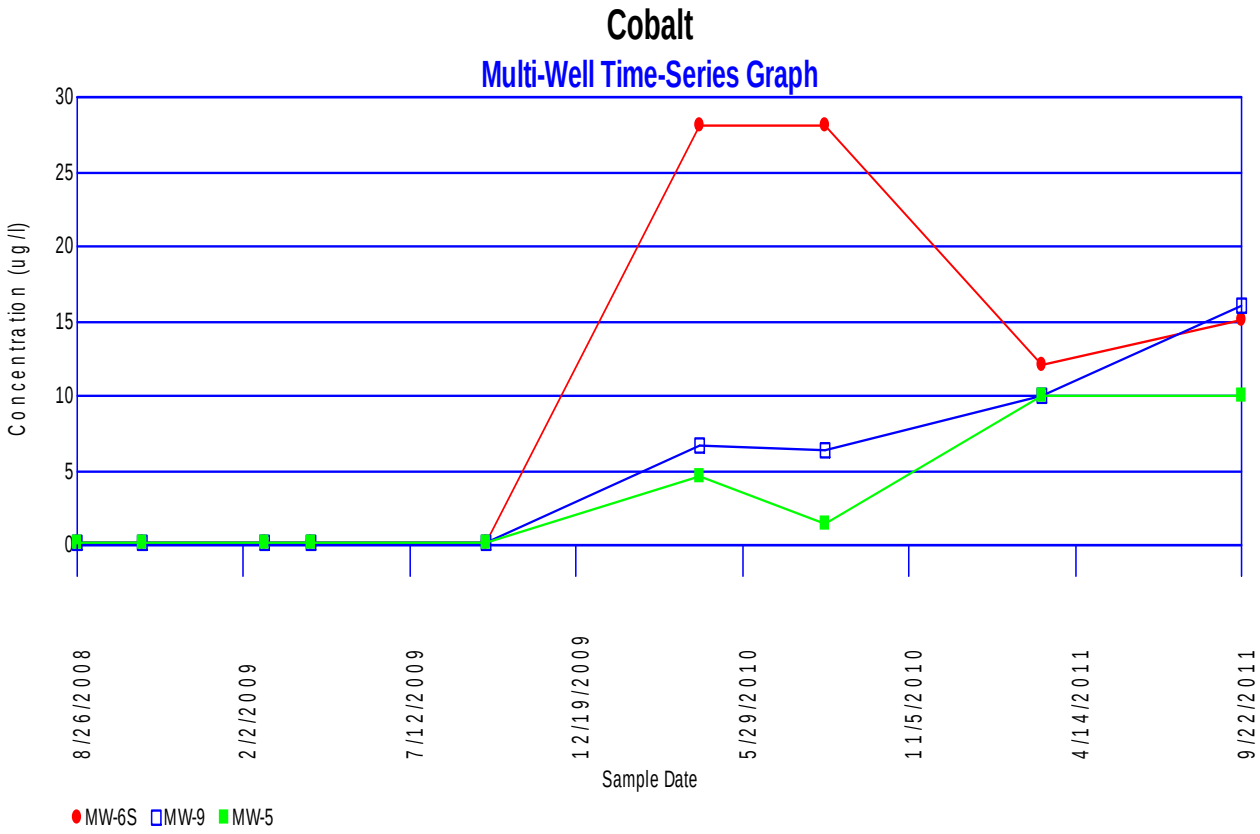
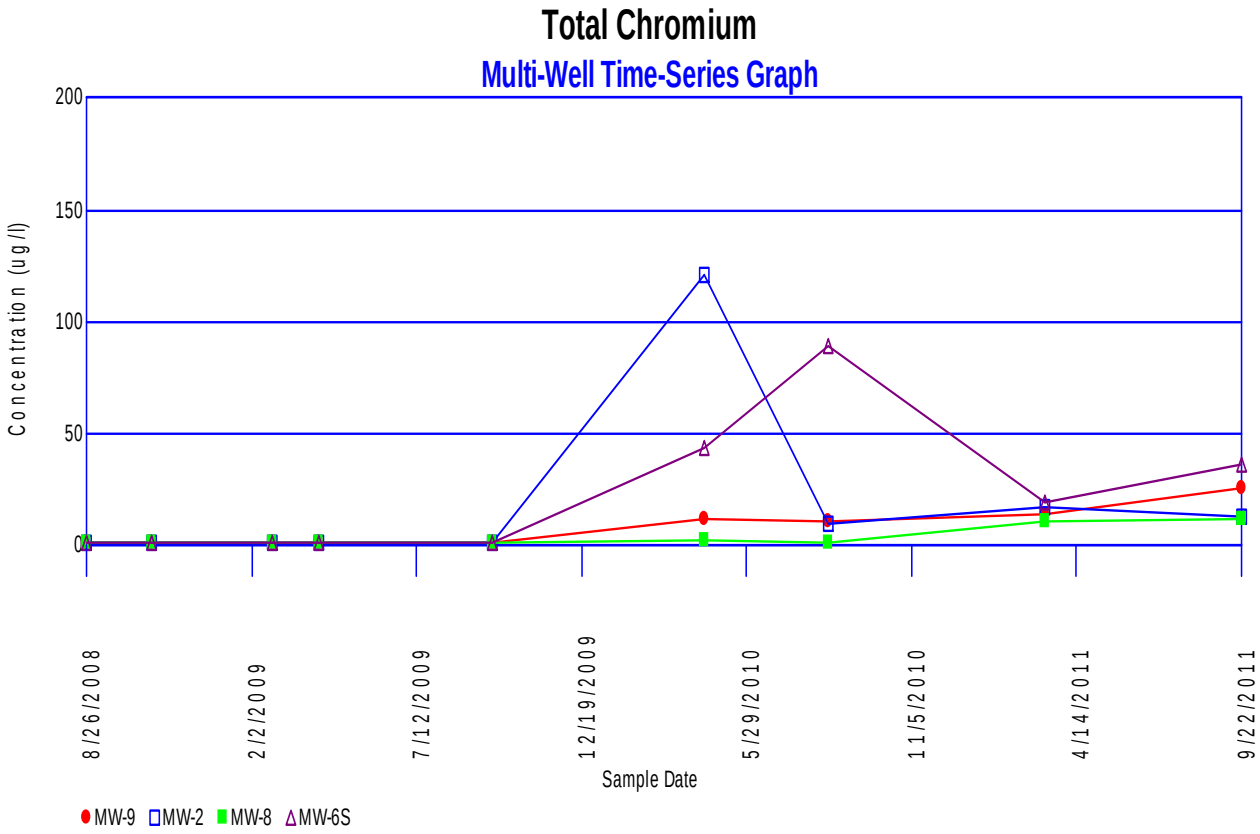
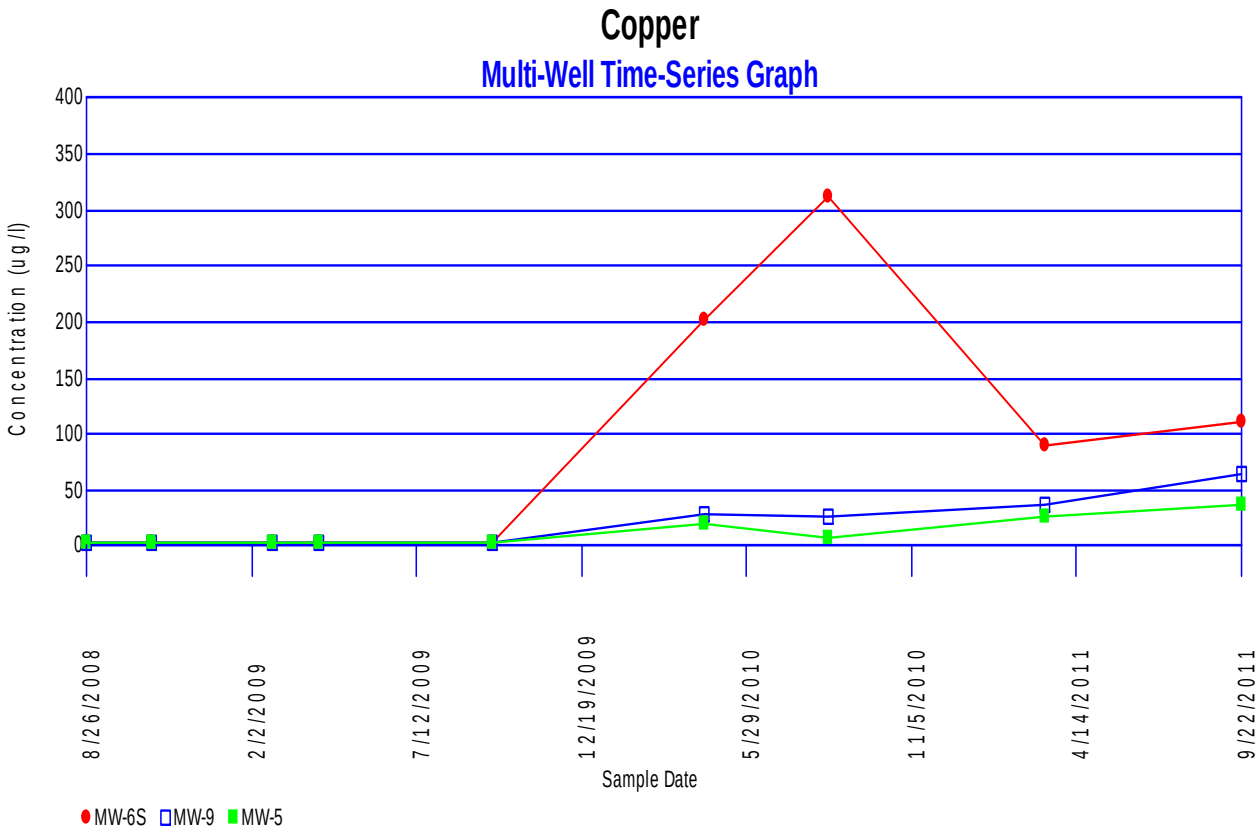
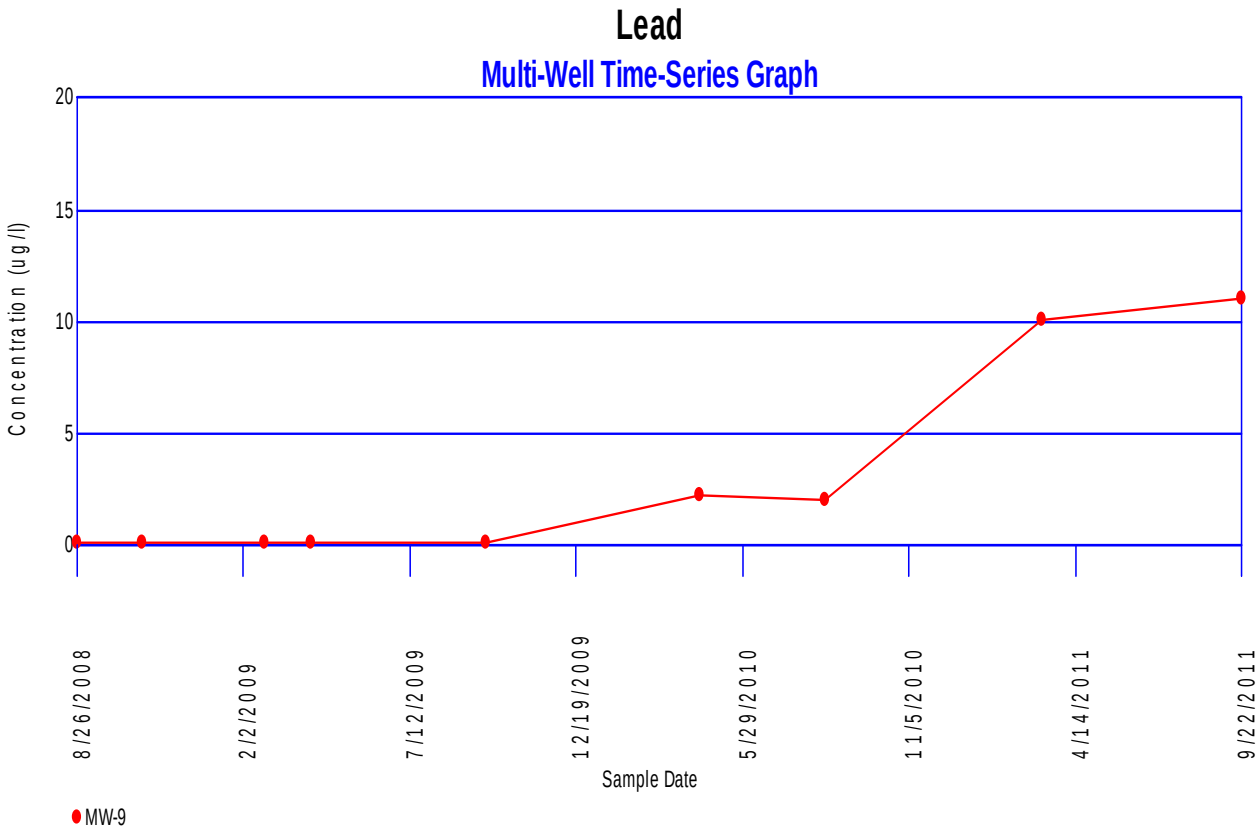
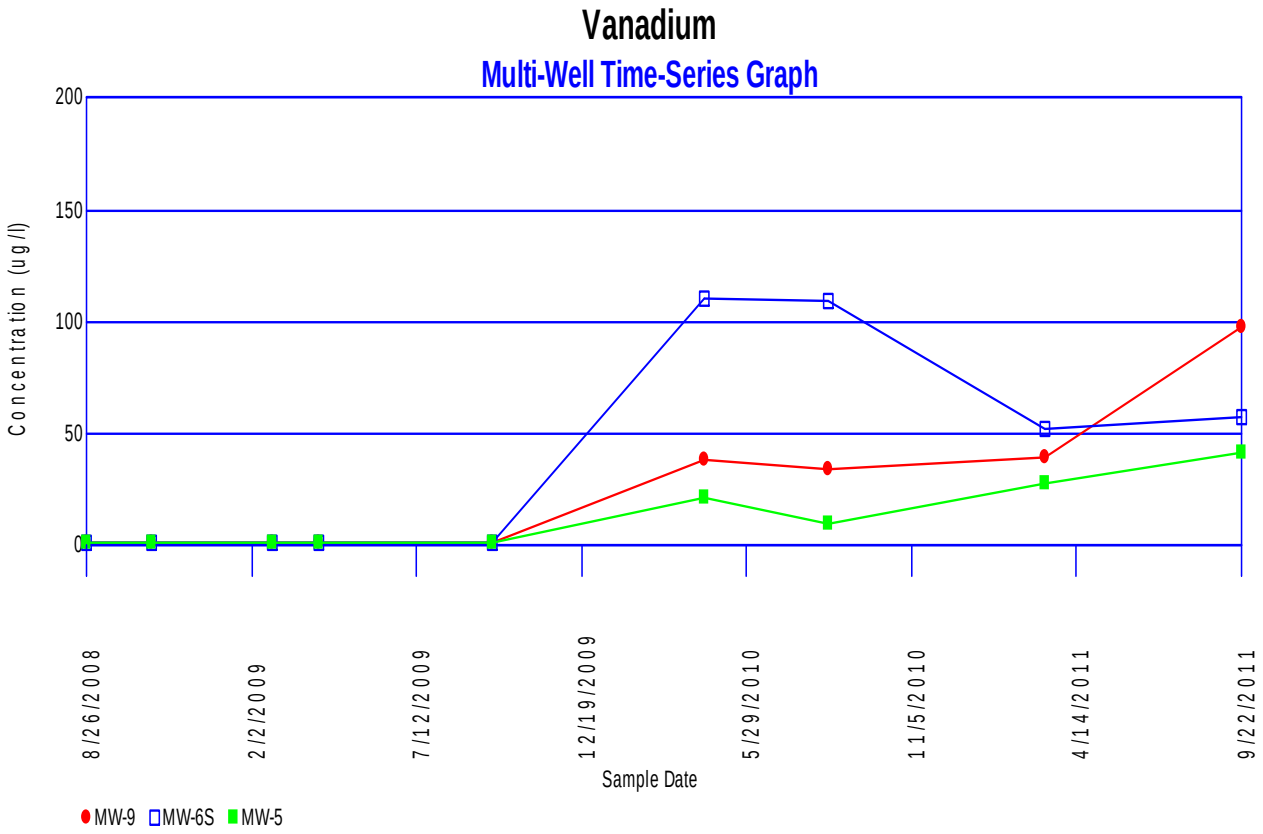

Barium
Multi-Well Time-Series Graph
700
600
500
400
300
200
100
0
Concentration (ug/l)
8/26/2008
2/2/2009
7/12/2009
12/19/2009
5/29/2010
11/5/2010
4/14/2011
9/22/2011
Sample Date
MW-6S
MW-9

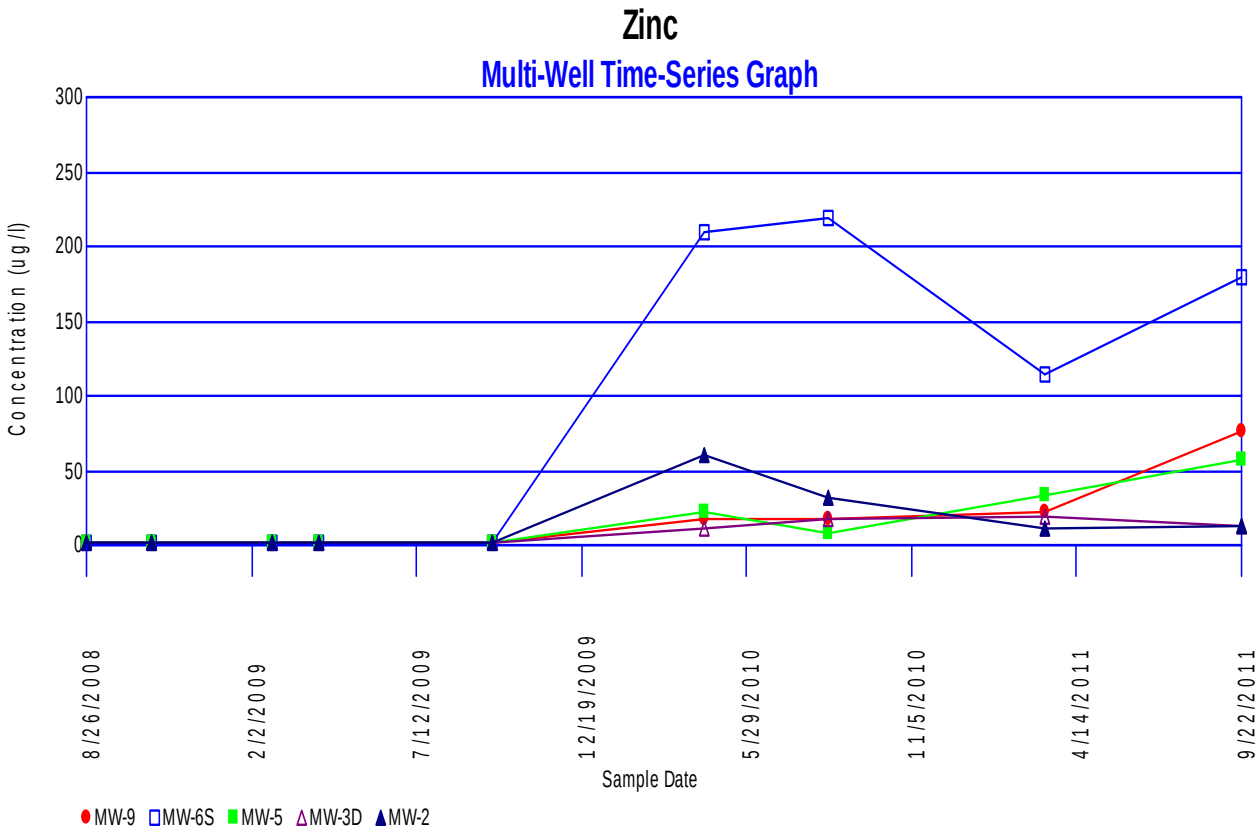

Cobalt
Multi-Well Time-Series Graph
Concentration (ug/l)
30
25
20
15
10
5
0
8/26/2008
2/2/2009
7/12/2009
12/19/2009
5/29/2010
11/5/2010
4/14/2011
9/22/2011
Sample Date
MW-6S
MW-9
MW-5


Total Chromium
Multi-Well Time-Series Graph
200
150
100
50
0
Concentration (ug/l)
8/26/2008
2/2/2009
7/12/2009
12/19/2009
5/29/2010
11/5/2010
4/14/2011
9/22/2011
Sample Date
MW-9
MW-2
MW-8
MW-6S


Copper
Multi-Well Time-Series Graph
Concentration (ug/l)
400
350
300
250
200
150
100
50
0
8/26/2008
2/2/2009
7/12/2009
12/19/2009
5/29/2010
11/5/2010
4/14/2011
9/22/2011
Sample Date
MW-6S
MW-9
MW-5


Lead
Multi-Well Time-Series Graph
20
15
10
5
0
Concentration (ug/l)
8/26/2008
2/2/2009
7/12/2009
12/19/2009
5/29/2010
11/5/2010
4/14/2011
9/22/2011
Sample Date
MW-9


Vanadium
Multi-Well Time-Series Graph
200
150
100
50
0
Concentration (ug/l)
8/26/2008
2/2/2009
7/12/2009
12/19/2009
5/29/2010
11/5/2010
4/14/2011
9/22/2011
Sample Date
MW-9
MW-6S
MW-5


Zinc
Multi-Well Time-Series Graph
300
250
200
150
100
50
0
Concentration (ug/l)
8/26/2008
2/2/2009
7/12/2009
12/19/2009
5/29/2010
11/5/2010
4/14/2011
9/22/2011
Sample Date
MW-9
MW-6S
MW-5
MW-3D
MW-2