

Ground Water Monitoring Report

Spring 2012 Monitoring Event

**Davidson County
Holly Grove Landfill
Lexington, North Carolina
NC Solid Waste Permit # 29-02**

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

June 2012



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Davidson County Holly Grove Landfill

**Ground Water Monitoring Report
Spring 2012 Monitoring Event**

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1.0 INTRODUCTION

Richardson Smith Gardner & Associates, Inc. (RSG) was contracted by Davidson County to execute their semi-annual ground water monitoring at the Davidson County Closed Holly Grove Landfill, permit number 29-02, as required by 15A NCAC 13B .0600. Sampling was conducted March 29, 2012. This 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 and the laboratory analytical report are also included.

Three landfills are currently monitored under permit 29-02, as the Holly Grove Landfill, due to their waste margins close proximity to one another. Areas 1 and 2, located in the Holly Grove Landfill, were unlined municipal solid waste facilities owned and operated by Davidson County Integrated Solid Waste. The third area, the Scarlett Landfill located west of Areas 1 and 2, is a private landfill originally owned and operated by Mr. Scarlett, then owned by Ms. Virginia White who sold the Scarlett property to Hale Artificier Inc in 2001; it is currently used to house storage containers.

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 SUMMARY OF MONITORING EVENT

3.1 Sampling Locations

The Holly Grove groundwater monitoring network includes fifteen monitoring wells (MW-1A, MW-2, MW-3A, MW-5, MW-6, MW-8, MW-9, MW-10, MW11, MW-12, MW-13, MW-14, MW-15, MW-16 and MW-17) and three surface water locations (SW-1, SW-2 and SW-3). Monitoring well MW-7 was previously removed from the monitoring network therefore, was not sampled for this event. SW-3 was not sampled because it was dry. A trip blank (TB) was submitted for quality control purposes.

The background well for the Holly Grove site is also the background well for the Phase 1 lined Davidson County Landfill (Permit 29-06). Since that well is located in the Phase 1 area, it was sampled and reported with the Phase 1 wells (Environment 1 Report ID# 6038). The background well was recorded in the Phase 1 report as MW-1S, and that data is included herein under its original name MW-4.

A map illustrating the sampling locations is provided as **Figure 1**.

3.2 Sampling Procedure

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, 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.

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.

Sampling wells and locations were inspected and found to be in good condition and free of obstructions.

4.0 FIELD AND LABORATORY RESULTS

Field measurements for pH, specific conductivity 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**.

Samples were transported to Environment 1, Inc., Greenville, NC, 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. The laboratory analytical report is included as **Appendix B**.

4.1 Inorganic Analysis

Six inorganic constituents: barium (MW-1A, MW-2, MW-6, MW-9, MW-10, MW-13 and MW-17), cobalt (MW-1A, MW-9, MW-10 and MW-13), copper (MW-15), total chromium (MW-6 and MW-15), selenium (MW-13) and zinc (MW-6, MW-9 and MW-15) were detected above the Solid Waste Section Practical Quantitation Limits (SWSLs). Only the detections for chromium in MW6 and MW-15 were also detected above their 15A NCAC 2L.0200 (2L) standard. Most inorganic detections were reported as “J-qualified” non-quantifiable results by the laboratory. An inorganic detection summary is presented as **Table 3**.

No surface water samples had detections reported above their respective NCAC 2B Standard for Class C waters (2B Standard).

4.21 Organic Analysis

Eleven organic constituents (1,1-dichloroethane, 1,2-dichloroethane, 1,2-dichloropropane, 1,4-dichlorobenzene, benzene, chlorobenzene, chloroethane, cis-1,2 dichloroethene, trichlorofluoromethane, trichloroethene and vinyl chloride) detected above the Solid Waste Section Practical Quantitation Limits (SWSLs). Six organic constituents were detected above their 15A NCAC 2L 0200 Groundwater Standard (2L Standard) or Groundwater Protection (GWP) Standard:

- 1,1-dichloroethane (MW-1A, MW-6, MW-8, MW-12 and MW-17);
- 1,2-dichloroethane (MW-1A);
- 1,2-dichloropropane (MW-1A);
- 1,4-dichlorobenzene (MW-13);
- benzene (MW-1A, MW-9, and MW-13); and
- vinyl chloride (MW-1A, MW-2, and MW-12).

Detected organic constituents are shown in **Table 4**.

No organic constituents were detected in surface water samples.

5.0 GROUNDWATER 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 in the uppermost aquifer at the Holly Grove Landfill ranged from 0.011 feet/day (MW-3A) to 0.966 feet/day (MW-13) and averaging 0.463 feet/day. Calculations are included in **Table 5**.

Groundwater elevations indicate the flow direction is generally south and southwest across the site; which is consistent with historically reported ground water flow patterns. The potentiometric surface map is included as **Figure 1**.

6.0 CONCLUSIONS

Overall reported detections remain consistent with historically reported results. Monitoring event results indicate detections of both inorganic and organic constituents above the SWSL and 2L or GWP Standard. Inorganic detections (barium, cobalt, copper, chromium, selenium and zinc) can be attributed to natural occurrence in the soils in this area of North Carolina and/or sample turbidity and are not due to landfill impact. Both chlorinated and volatile organic compounds were detected across the site. However, total organic detections have decreased since fall 2010. No 2B exceedances were reported for this event.

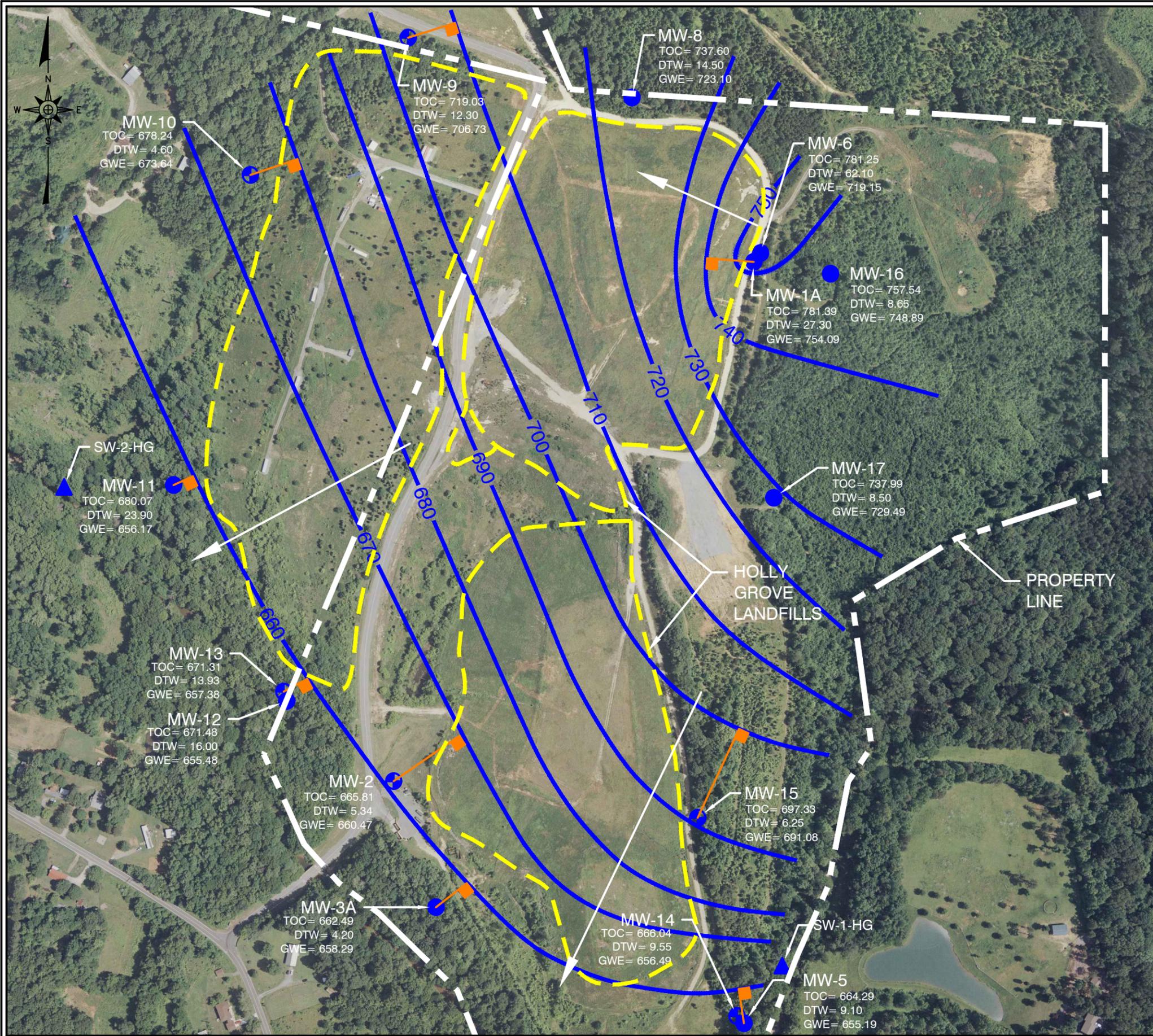
The next ground water monitoring event is tentatively scheduled for September 2012. Sampling results will be reported to NCDENR with laboratory analysis.

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Figures

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LEGEND:

- MW-1A EXISTING MONITORING WELL
- MW-5 BEDROCK MONITORING WELL
- SW-2 EXISTING SURFACE WATER MONITORING STATION
- 710 GROUNDWATER SURFACE CONTOUR
- PROPERTY LINE (SHOWN AS WHITE ON MAP)
- WASTE BOUNDARY
- MEASUREMENT FOR HYDRAULIC GRADIENT CALCULATION
- DIRECTION OF GROUNDWATER FLOW
- TOC TOP OF CASING ELEVATION
- DTW DEPTH TO WATER MEASUREMENT
- GWE GROUNDWATER ELEVATION

NOTE

1. GROUNDWATER DATA RECORDED ON MARCH 27, 2012 BY RICHARDSON SMITH GARDNER & ASSOCIATES, INC. PERSONNEL.



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FIGURE NO.	1	FILE NAME	DAVDCO-B0694
SCALE:	AS SHOWN	PROJECT NO.	DAVDCO-1
CHECKED BY:	M.M.G.	DATE:	Jun. 2012
DRAWN BY:	C.T.J.		

TITLE:
 POTENTIOMETRIC SURFACE MAP
 SPRING 2012
 CLOSED HOLLY GROVE LANDFILL
 DAVIDSON COUNTY, NC

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Tables

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Table 1
Ground Water Elevations
Davidson County Holly Grove Landfill
03/29/12

Well	Northing	Easting	Top of Casing	Depth to Water	Water Table Elevation
MW-1a	761805.92	1652937.78	781.39	27.30	754.09
MW-2	760300.50	1651891.20	665.81	5.34	660.47
MW-3a	759934.68	1652014.48	662.49	4.20	658.29
MW-4*	763311.06	1650889.31	736.20	54.97	681.23
MW-5	759598.21	1652909.22	664.29	9.10	655.19
MW-6	761831.31	1652957.39	781.25	62.10	719.15
MW-8	762282.39	1652584.06	737.60	14.50	723.10
MW-9	762456.06	1651933.56	719.03	12.30	706.73
MW-10	762057.74	1651474.85	678.24	4.60	673.64
MW-11	761158.90	1651252.18	680.07	23.90	656.17
MW-12	760532.63	1651580.20	671.48	16.00	655.48
MW-13	760559.79	1651571.95	671.31	13.93	657.38
MW-14	762282.39	1652584.06	666.04	9.55	656.49
MW-15	760193.97	1652774.91	697.33	6.25	691.08
MW-16	761771.23	1653160.68	757.54	8.65	748.89
MW-17	761121.95	1652995.87	737.99	8.50	729.49

* MW-4 is the same well as MW-1 associated with Davidson County Phase 1 Lined Landfill.

Table 2
Field Parameters
Davidson County Holly Grove Landfill
03/29/12

Well	pH (std units)	Sp. Conductivity (uMhos)	Temperature (degrees C)	Turbidity (NTU)
MW-1a	6.68	182	15.3	5.09
MW-2	6.36	1100	15.7	7.42
MW-3A	7.57	670	17.1	6.67
MW-4*	6.17	700	17.3	2.71
MW-5	6.24	230	14.8	63.4
MW-6	8.26	950	14.3	684
MW-8	7.28	112	15.2	4.4
MW-9	6.42	133	13.4	23
MW-10	6.8	225	13.6	28.8
MW-11	6.54	180	15.4	3.15
MW-12	6.91	264	16.2	5.88
MW-13	6.45	319	15.7	7.83
MW-14	6.89	220	15.5	54.8
MW-15	6.34	180	15.7	680
MW-16	7.51	820	16.4	14.3
MW-17	6.38	680	16.8	9.09
SW-1	7.8	250	15.7	6.1
SW-2	7.86	210	16.6	17.9
SW-3	7.2	460	16.5	2.44

Note: * MW-4 is the same well as MW-1 associated with Davidson County Phase 1 Lined Landfill.
Data Collected RSG Engineers Inc. personel Don Misenheimer.

Table 3
Detected Inorganic Parameters
Davidson County Holly Grove Landfill
03/29/12

Constituent	MDL	SWSL	2L or GWP	2B	MW-1A	MW-2	MW-3A	MW-4*	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	SW-1	SW-2	SW-3	
Antimony	0.14	6	1 ⁵	640	<0.14	<0.14	<0.14	<0.14	<0.14	0.15 J	<0.14	<0.14	0.16 J	<0.14	<0.14	0.37 J	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Arsenic	0.10	10	10	10	0.66 J	<0.10	<0.10	0.25 J	<0.10	0.78 J	0.43 J	1.0 J	2.6 J	0.93 J	2.5 J	4.7 J	0.48 J	0.38 J	0.71 J	0.33 J	0.46 J	0.39 J	0.26 J	0.26 J
Barium	0.02	100	700	2000000	272	153	18.3 J	34.5 J	26.8 J	104	31.9 J	170	175	75.6 J	66.9 J	182	35.9 J	69.5 J	30.9 J	181	19.8 J	17.8 J	61.6 J	61.6 J
Beryllium	0.02	1	4 ⁵	6.5	<0.02	<0.02	<0.02	<0.02	<0.02	0.06 J	<0.02	0.06 J	<0.02	<0.02	<0.02	<0.02	<0.02	0.16 J	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cadmium	0.02	1	2	2	0.46 J	0.10 J	0.08 J	0.09 J	0.05 J	0.46 J	0.08 J	0.13 J	0.11 J	0.16 J	0.21 J	0.11 J	<0.02	0.06 J	0.04 J	0.23 J	<0.02	<0.02	<0.02	<0.02
Cobalt	0.03	10	1 ⁵	270	11	9.3 J	0.19 J	0.52 J	0.76 J	2.8 J	0.47 J	13	14	2.0 J	0.55 J	17	1.1 J	9.1 J	0.38 J	4.9 J	0.32 J	0.23 J	0.99 J	0.99 J
Copper	0.02	10	1000	7	1.5 J	2.0 J	0.61 J	1.8 J	2.5 J	10.0	0.95 J	7.2 J	4.1 J	2.9 J	1.9 J	3.1 J	8.5 J	14	0.59 J	1.3 J	1.6 J	1.7 J	1.2 J	1.2 J
Total Chromium	0.04	10	10	50	<0.04	0.22 J	<0.04	0.29 J	0.85 J	15	0.76 J	4.8 J	0.51 J	<0.04	0.15 J	0.98 J	2.1 J	20	0.14 J	<0.04	0.16 J	0.14 J	0.22 J	0.22 J
Lead	0.02	10	15	25	0.13 J	0.10 J	0.08 J	0.23 J	0.21 J	4.0 J	0.12 J	0.60 J	0.26 J	0.09 J	0.53 J	0.45 J	0.21 J	1.2 J	10	0.14 J	0.25 J	0.21 J	0.13 J	0.13 J
Nickel	0.04	50	100	88	4.5 J	3.5 J	1.0 J	1.4 J	1.8 J	4.2 J	2.1 J	8.1 J	22.0 J	9.4 J	7.1 J	25.0 J	1.4 J	13.3 J	1.4 J	1.3 J	2.1 J	2.1 J	2.8 J	2.8 J
Selenium	0.20	10	20	5	0.44 J	0.82 J	0.54 J	0.89 J	<0.20	0.44 J	0.80 J	0.37 J	7.5 J	3.1 J	8.6 J	12	0.36 J	<0.20	1.00 J	0.37 J	<0.20	<0.20	0.30 J	0.30 J
Silver	0.02	10	20	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05 J	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Thallium	0.02	5.5	0.28 ⁵	0.47	<0.02	<0.02	0.20 J	0.27 J	0.18 J	0.11 J	0.03 J	0.03 J	0.27 J	0.09 J	0.20 J	0.04 J	<0.02	0.05 J	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Vanadium	0.14	25	0.3 ⁵	NE	12.2 J	1.2 J	2.6 J	3.1 J	4.0 J	13.9 J	8.8 J	6.4 J	3.0 J	1.3 J	2.0 J	5.9 J	8.3 J	20.5 J	2.4 J	11.2 J	1.2 J	1.2 J	1.2 J	1.2 J
Zinc	0.24	10	1000	50	2.6 J	3.0 J	1.1 J	2.3 J	5.7 J	26	2.3 J	12	3.3 J	4.0 J	2.8 J	4.0 J	3.5 J	26	1.9 J	5.8 J	5.5 J	5.6 J	12	12

- SWSL - Solid Waste Section Quantitation Limits
- 2L - Groundwater Standards (15A NCAC 2L 0200)
- GWP - Groundwater Protection Standards (noted by ⁵)
- 2B - NCAC 2B Standard for Class C waters
- MDL - Method Detection Limit
- Shading - Detection above 2L standard or GWP standard
- Bold Letters - Constituents detected above SWSL
- J - Detected between MDL and SWSL limit
- < MDL - Constituent not detected above the MDL value

*MW-4 is also known as MW-1S for the Phase 1 lined landfill.

Table units are presented in ug/l.

Lab data analysis by Environment 1, Inc. report dated 04/17/2012, ID#6037A.

Table 4
Detected Organic Parameters
Davidson County Holly Grove Landfill
03/29/12

Parameter	SWSL	2L	MDL	MW-1A	MW-2	MW-3A	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17
1,1-dichloroethane	5	6	0.20	25.6	0.30 J	4.00 J	7.9	14.8	<0.20	<0.20	2.50 J	11.7	2.40 J	2.00 J	0.30 J	<0.20	11.7
1,1-dichloroethene	5	7	0.17	0.20 J	<0.17	<0.17	<0.17	0.20 J	<0.17	<0.17	<0.17	0.90 J	<0.17	<0.17	<0.17	<0.17	<0.17
1,2-dichlorobenzene	5	20	0.32	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32	0.60 J	0.40 J	1.20 J	<0.32	<0.32	<0.32	<0.32
1,2-dichloroethane	1	0.4	0.27	1.9	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	0.50 J	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-dichloropropane	1	0.6	0.21	3.8	<0.21	<0.21	0.50 J	<0.21	<0.21	<0.21	0.30 J	<0.21	<0.21	<0.21	<0.21	<0.21	0.80 J
1,4-dichlorobenzene	1	6	0.39	4.00	1.80	0.40 J	<0.39	<0.39	3.00	<0.39	1.80	5.30	8.4	<0.39	<0.39	<0.39	<0.39
acetone	100	6000	9.06	11.3 J	<9.06	<9.06	51.60 J	<9.06	<9.06	<9.06	<9.06	<9.06	<9.06	<9.06	<9.06	<9.06	<9.06
benzene	1	1	0.24	4.90	0.30 J	0.30 J	<0.24	0.60 J	1.5	<0.24	0.30 J	<0.24	2.8	<0.24	<0.24	<0.24	<0.24
chlorobenzene	3	50	0.30	0.50 J	3.00	<0.30	<0.30	<0.30	3.70	0.30 J	3.90	3.00	15.8	<0.30	<0.30	<0.30	<0.30
chloroethane	10	3000	0.48	3.30 J	2.20 J	<0.48	<0.48	0.70 J	0.60 J	<0.48	<0.48	8.40 J	42.5	0.50 J	<0.48	<0.48	0.70 J
cis-1,2-dichloroethene	5	70	0.25	41.7	<0.25	0.40 J	1.20 J	0.40 J	0.70 J	<0.25	0.50 J	<0.25	<0.25	<0.25	<0.25	<0.25	2.30 J
trichlorofluoromethane	1	2000	0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	2.9	<0.24	<0.24	<0.24
trans-1,2-dichloroethene	5	100	0.23	0.60 J	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
tetrachloroethene	1	0.7	0.17	0.40 J	<0.17	<0.17	0.60 J	0.50 J	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	0.50 J
trichloroethene	1	3	0.23	1.20	<0.23	<0.23	0.50 J	1.8	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	0.70 J
toluene	1	600	0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	0.30 J	<0.23	<0.23	<0.23	<0.23
vinyl chloride	1	0.03	0.63	2.70	1.00	<0.63	<0.63	<0.63	<0.63	<0.63	0.90 J	2.30	<0.63	<0.63	<0.63	<0.63	<0.63

- SWSL - Solid Waste Section Quantitation Limits
- 2L - Groundwater Standards (15A NCAC 2L 0200)
- MDL - Method Detection Limit
- Shading - Detection above 2L standard
- Bold Letters - Constituents detected above SWSL
- J - Detected between MDL and SWSL limit
- <MDL - Constituent not detected above MDL

Table units are presented in ug/l.
Lab data analysis by Environment 1, Inc. report dated 04/17/2012, ID#6037.

Table 5
Ground Water Velocity Calculations
Holly Grove Landfill - Davidson County
03/29/12

Well Number	Aquifer	Conductivity (ft/day)	Conductivity (ft/min)	Assumed Porosity (n)	Gradient (I)	Velocity (ft/day)
MW-1a	Bedrock	0.415	2.88E-04	0.15	0.101	0.279
MW-2	Unconsolidated	1.440	1.00E-03	0.20	0.038	0.274
MW-3a	Bedrock	0.105	7.27E-05	0.15	0.016	0.011
MW-5	Bedrock	1.814	1.26E-03	0.20	0.048	0.436
MW-7	Bedrock	NA	NA	NA	NA	NA
MW-8	Bedrock	NA	NA	NA	NA	NA
MW-9	Unconsolidated	3.787	2.63E-03	0.20	0.023	0.443
MW-10	Unconsolidated	1.541	1.07E-03	0.20	0.045	0.350
MW-11	Bedrock	1.440	1.00E-03	0.15	0.055	0.525
MW-13	Unconsolidated	5.890	4.09E-03	0.20	0.033	0.966
MW-14	Bedrock	NA	NA	NA	NA	NA
MW-15	Unconsolidated	5.688	3.95E-03	0.20	0.031	0.882

Notes:

Velocity calculated from $V=KI/n$:

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

Hydraulic conductivity data from slug testing
 Porosity estimated from soil types

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Appendix A

Field Data Sheets & Boring Logs

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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 (HGW) Date: 3-28-12
 Well ID: MW-2 Initials: MD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B.	Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C.	Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D.	Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.		<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center;"><i>O.k.</i></p>			

		YES	NO
2. Concrete Apron and Steel Case			
A.	Concrete apron is present and in good condition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B.	Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C.	Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D.	Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.	Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.	Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G.	No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
H.	Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I.		<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p><i>if concrete apron is present, it appears to be buried.</i></p>			

		YES	NO
3. PVC Riser			
A.	Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B.	Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C.	Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D.	Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.	No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.		<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center;"><i>O.k.</i></p>			

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: DAWDSON (HW)

Date: 3-28-12

Well ID: MW-3a

Initials: AD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>		
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>		
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>		
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>		
E.			
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

		YES	NO
2. Concrete Apron and Steel Case			
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>		
B. Steel case is present and upright.	<input checked="" type="checkbox"/>		
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>		
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>		
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>		
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>		
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>		
H. Lock operates properly.	<input checked="" type="checkbox"/>		
I.			
Comments/ items addressed or to be addressed:			
<i>if concrete apron is present, it appears to be buried.</i>			

		YES	NO
3. PVC Riser			
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>		
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>		
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>		
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>		
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>		
F.			
Comments/ items addressed or to be addressed:			
<i>ok.</i>			

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 (HG)

Date: 3-28-12

Well ID: MW-1a

Initials: MD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E.	<input type="checkbox"/>	<input type="checkbox"/>	
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

		YES	NO
2. Concrete Apron and Steel Case			
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
H. Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
I.	<input type="checkbox"/>	<input type="checkbox"/>	
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

		YES	NO
3. PVC Riser			
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F.	<input type="checkbox"/>	<input type="checkbox"/>	
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

Groundwater Monitoring Well Inspection Checklist

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Site: DAVIDSON (HG) Date: 3-28-11
 Well ID: ARRELA MW-5 Initials: TD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed:		
<i>o.k.</i>		

	YES	NO
2. Concrete Apron and Steel Case		
A. Concrete apron is present and in good condition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
H. Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed:		
<i>concrete apron is broken in half with half removed</i>		

	YES	NO
3. PVC Riser		
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed:		
<i>o.k.</i>		

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: Dardson HC
 Well ID: MW-6

Date: 3-28-12
 Initials: AD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center;"><i>o.k.</i></p>		

	YES	NO
2. Concrete Apron and Steel Case		
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
H. Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center;"><i>o.k.</i></p>		

	YES	NO
3. PVC Riser		
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center;"><i>o.k.</i></p>		

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 (H4) Date: 3-28-12
 Well ID: MW-8 Initials: MD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B.	Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C.	Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D.	Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.		<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center;"><i>ok.</i></p>			

		YES	NO
2. Concrete Apron and Steel Case			
A.	Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B.	Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C.	Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D.	Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.	Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.	Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G.	No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
H.	Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I.		<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center;"><i>ok.</i></p>			

		YES	NO
3. PVC Riser			
A.	Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B.	Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C.	Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D.	Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.	No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.		<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center;"><i>ok.</i></p>			

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 (H4)

Date: 3-28-12

Well ID: MW-9

Initials: RD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E.			
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

2. Concrete Apron and Steel Case		YES	NO
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
H. Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
I.			
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

3. PVC Riser		YES	NO
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F.			
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

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 (HG) Date: 3-28-12
 Well ID: MW-10 Initials: JD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>		
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>		
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>		
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>		
E.			
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>			

2. Concrete Apron and Steel Case		YES	NO
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>		
B. Steel case is present and upright.	<input checked="" type="checkbox"/>		
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>		
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>		
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>		
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>		
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>		
H. Lock operates properly.	<input checked="" type="checkbox"/>		
I.			
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>			

3. PVC Riser		YES	NO
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>		
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>		
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>		
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>		
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>		
F.			
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>			

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 (HG)

Date: 3-28-12

Well ID: MW-11

Initials: MD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center; font-size: 1.2em;"><i>o.k.</i></p>			

		YES	NO
2. Concrete Apron and Steel Case			
A. Concrete apron is present and in good condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B. Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="font-size: 1.2em;"><i>dead fallen tree is laying across concrete apron - apron appears to be cracked</i></p>			

		YES	NO
3. PVC Riser			
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align: center; font-size: 1.2em;"><i>o.k.</i></p>			

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 (46) Date: 3-28-12
 Well ID: MW-12 Initials: MD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>		
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>		
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>		
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>		
E.	<input checked="" type="checkbox"/>		
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

2. Concrete Apron and Steel Case		YES	NO
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>		
B. Steel case is present and upright.	<input checked="" type="checkbox"/>		
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>		
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>		
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>		
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>		
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>		
H. Lock operates properly.	<input checked="" type="checkbox"/>		
I.	<input checked="" type="checkbox"/>		
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

3. PVC Riser		YES	NO
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>		
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>		
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>		
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>		
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>		
F.	<input checked="" type="checkbox"/>		
Comments/ items addressed or to be addressed:			
<i>o.k.</i>			

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 (HG) Date: 3.28.12
 Well ID: MW-13 Initials: MD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align:center;"><i>o.k.</i></p>		

	YES	NO
2. Concrete Apron and Steel Case		
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
H. Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align:center;"><i>o.k.</i></p>		

	YES	NO
3. PVC Riser		
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/ items addressed or to be addressed: <p style="text-align:center;"><i>o.k.</i></p>		

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 (HG) Date: 3-28-12
 Well ID: MW-14 Initials: MD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	
E.		
Comments/ items addressed or to be addressed:		
<i>o.k.</i>		

	YES	NO
2. Concrete Apron and Steel Case		
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>	
B. Steel case is present and upright.	<input checked="" type="checkbox"/>	
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>	
H. Lock operates properly.	<input checked="" type="checkbox"/>	
I.		
Comments/ items addressed or to be addressed:		
<i>o.k.</i>		

	YES	NO
3. PVC Riser		
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	
F.		
Comments/ items addressed or to be addressed:		
<i>o.k.</i>		

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 H6
Well ID: MW-15

Date: 3-28-12
Initials: ND

Please mark the appropriate 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.			
B. Vicinity is free of potential contaminants.			
C. Dead trees, etc. not in danger of falling and damaging wells.			
D. Well is in the same location as on field maps.			
E.			
Comments/ items addressed or to be addressed:			

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

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

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 (HW) Date: 3-28-12
 Well ID: MUN-16 Initials: JD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E.		
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>		

	YES	NO
2. Concrete Apron and Steel Case		
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Steel case is present and upright.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
H. Lock operates properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I.		
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>		

	YES	NO
3. PVC Riser		
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
F.		
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>		

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 (44) Date: 3-28-12
 Well ID: MW-17 Initials: MD

Please mark the appropriate 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.	<input checked="" type="checkbox"/>		
B. Vicinity is free of potential contaminants.	<input checked="" type="checkbox"/>		
C. Dead trees, etc. not in danger of falling and damaging wells.	<input checked="" type="checkbox"/>		
D. Well is in the same location as on field maps.	<input checked="" type="checkbox"/>		
E.			
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>			

2. Concrete Apron and Steel Case		YES	NO
A. Concrete apron is present and in good condition.	<input checked="" type="checkbox"/>		
B. Steel case is present and upright.	<input checked="" type="checkbox"/>		
C. Steel case is not movable and cemented in.	<input checked="" type="checkbox"/>		
D. Steel case lid opens and closes correctly with no gaps. Lock can be easily applied.	<input checked="" type="checkbox"/>		
E. Well tag is present with pertinent information.	<input checked="" type="checkbox"/>		
F. Well numbers are prominently displayed (Reflective address numbers, etc.).	<input checked="" type="checkbox"/>		
G. No evidence of tampering is present.	<input checked="" type="checkbox"/>		
H. Lock operates properly.	<input checked="" type="checkbox"/>		
I.			
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>			

3. PVC Riser		YES	NO
A. Monitoring cap is present and provides a tight seal.	<input checked="" type="checkbox"/>		
B. Riser is of appropriate height (has not been cut off too low within the steel case).	<input checked="" type="checkbox"/>		
C. Riser is not loose/ easily moved.	<input checked="" type="checkbox"/>		
D. Riser does not appear cracked, broken, or brittle.	<input checked="" type="checkbox"/>		
E. No visual sign of external contamination entering well through riser.	<input checked="" type="checkbox"/>		
F.			
Comments/ items addressed or to be addressed: <p style="text-align: center;">o.k.</p>			

OWNER: Davidson County Solid Waste Dept.			BORING NUMBER MW-1A		
PROJECT NAME Davidson County Landfill			ARCHITECT-ENGINEER		
SITE LOCATION Holly Grove, NC		JOB NO. 89-468-E			
DEPTH IN FEET	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH FROM-TO	DESCRIPTION OF MATERIAL	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²
					PLASTIC LIMIT %
				SURFACE ELEVATION	STANDARD PENETRATION BLOWS/FT.
				SANDY SILT, tan, white, hard, (ML). NOTE: (Field description).	
1	1	ss	2.5 3.0		
5	2	ss	5.0 5.5		
	3	ss	7.5 8.0		
10	4	ss	10.0 10.5		
15	5	ss	15.0 15.5	SILT, tan, hard, (ML). NOTE: Contains weathered rock fragments. (Field description).	
				Auger Refusal at 18.0 ft.	
20				Metavolcanic Bedrock (Rock type based on Geologic Map of North Carolina).	
25					
30					

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU THE TRANSITION MAY BE GRADUAL.

WATER TABLE DATA — DEPTH BELOW SURFACE		BORING STARTED 1-23-90		BORING COMPLETED 1-23-90	
NA @ 0 HRS.		RIG Air Rotary		APP'D BY ABN	
@ _____ HRS.		FOREMAN		AUGER: NA	

OWNER Davidson County Solid Waste Dept.				BORING NUMBER MW-1A				
PROJECT NAME Davidson County Landfill				ARCHITECT-ENGINEER				
SITE LOCATION Holly Grove, NC				JOB. NO. 89-468-E		UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ² 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENTS % LIQUID LIMIT % X ⊕ Δ 10 20 30 40 50		
DEPTH IN FEET	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH FROM TO	DESCRIPTION OF MATERIAL				
SURFACE ELEVATION				● STANDARD PENETRATION 10 20 30 40 50 BLOWS/FT.				
35								
				Boring Terminated at 37.5 ft.				

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL

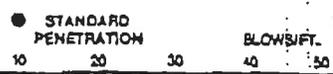
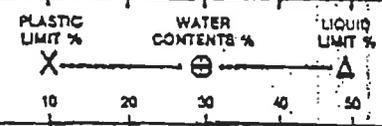
WATER TABLE DATA — DEPTH BELOW SURFACE	BORING STARTED	BORING COMPLETED
@ 0 HRS. @ _____ HRS.	RIG	APP'D BY
	FOREMAN	AUGER

OWNER: Davidson County Solid Waste Dept. BORING NUMBER: MW-3A

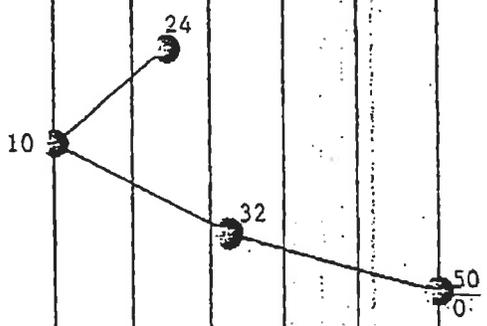
PROJECT NAME: Davidson County Landfill ARCHITECT-ENGINEER:

SITE LOCATION: Holly Grove, NC JOB NO.: 89-468-E

DEPTH IN FEET	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH FROM TO	DESCRIPTION OF MATERIAL	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²				
					1	2	3	4	5



DEPTH IN FEET	SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH FROM TO	DESCRIPTION OF MATERIAL	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²	STANDARD PENETRATION	BLOWS/FT.
0				SURFACE ELEVATION			
2.5	1	ss	2.5 - 4.0	SANDY SILT, brown, tan, white, firm, (ML). NOTE: (Field description).			
5.0	2	ss	5.0 - 6.5				
7.5	3	ss	7.5 - 9.0	CLAYEY SILT, gray, stiff, (ML). NOTE: (Field description).			
13.5				Auger Refusal at 13.5 ft.			
13.5				Metavolcanic Bedrock (Rock type based on Geologic Map of North Carolina).			
32.0				Boring Terminated at 32.0 ft.			



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL

WATER TABLE DATA — DEPTH BELOW SURFACE: NA @ 0 HRS. BORING STARTED: 1-23-90 BORING COMPLETED: 1-23-90
 RIG: Air Rotary FOREMAN: APP'D BY: ABN AUGER: NA

FIELD GEOLOGIC LOG

PROJECT DAVIDSON COUNTY LANDFILL		DATE 10/27/92	SHEET 1 OF 1
WELL No. MW-5		SAMPLING METHOD Split Spoon (24")	
LOGGED BY M. Sanford		OFFICE CDM/Ral	DRILLING METHOD 8" O.D. HSA and Air Rotary
DRILLING CONTRACTOR McCall Brothers Inc.			

SAMP. No.	DEPTH, feet	LITHOLOGY	BLOW COUNT	SAMPLE DESCRIPTION	DRILLING COMMENTS
	0-3 1/2"			<i>dark brown silty, fine-grained SAND</i>	
	3 1/2" - 9 1/2"			<i>light brown, fine-grained, sandy, clayey SILT</i>	
			4		
			11		
			12		
			12		
			6		
	9.5' - 10.2'		10	<i>light green, silty, clayey, fine-to-medium grained SAND with rock fragments, moist</i>	<i>Auger refusal @ 10'</i>
			17		<i>Perched water on top of bedrock</i>
			50/3"		
	10.2' - 25'			<i>Air Rotary drilling Metavolcanics</i>	<i>Water-bearing fracture zone encountered @ 18.67'</i>
					<i>Boring terminated @ 25'</i>

FIELD BOREHOLE LOG

BOREHOLE NUMBER:
MW-6

PROJECT NUMBER: **DAV000-1**
 PROJECT NAME: **Holly Grove Landfill**
 LOCATION: **Lexington, North Carolina**
 RILLING COMPANY: **Engineering Tectonics**
 RIG TYPE & NUMBER: **MOBILE B-80**
 DRILLING METHOD: **Hollow Stem Auger**
 WEATHER: **Sunny, 80 DEGREES**
 FIELD PARTY: **D. Barron**
 GEOLOGIST: **P. May**
 DATE BEGUN: **7/29/97** DATE COMPLETED: **7/30/97**

TOP OF CASING ELEVATION: **781.23**
 TOTAL DEPTH: **65.0 FT**
 GROUND SURFACE ELEVATION: **779.04**
 SHEET: **2** OF: **2**

STATIC WATER LEVEL (BLS)		
	WD=While Drilling	AB=After Boring
Depth(ft)	59.8 bg	63.30 bg
Time	-	7:00 pm
Date	7/31/97	8/1/97

DEPTH	BLOW COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTENCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
29.0								DIORITE: No significant water bearing fractures. Boring Terminated at 65 feet.	29.0	x x x	
30.0							30.0		x x x		
31.0							31.0		x x x		
32.0							32.0		x x x		
33.0							33.0		x x x		
34.0							34.0		x x x		
35.0							35.0		x x x		
36.0							36.0		x x x		
37.0							37.0		x x x		
38.0							38.0		x x x		
39.0							39.0		x x x		
40.0							40.0		x x x		
41.0							41.0		x x x		
42.0							42.0		x x x		
43.0							43.0		x x x		
44.0							44.0		x x x		
45.0							45.0		x x x		
46.0							46.0		x x x		
47.0							47.0		x x x		
48.0							48.0		x x x		
49.0							49.0	x x x			
50.0							50.0	x x x			
51.0							51.0	x x x			
52.0							52.0	x x x			
53.0							53.0	x x x			
54.0							54.0	x x x			
55.0							55.0	x x x			
56.0							56.0	x x x			
57.0							57.0	x x x			
58.0							58.0	x x x			
59.0							59.0	x x x			
60.0							60.0	x x x			
61.0							61.0	x x x			
62.0							62.0	x x x			
63.0							63.0	x x x			
64.0							64.0	x x x			
65.0							65.0	x x x			

FIELD BOREHOLE LOG

BOREHOLE NUMBER

MW-7

PROJECT NUMBER: **DAVDCO-1**
 PROJECT NAME: **Holly Grove Landfill**
 LOCATION: **Lexington, North Carolina**
 DRILLING COMPANY: **Engineering Tectonics**
 RIG TYPE & NUMBER: **MOBILE B-80**
 DRILLING METHOD: **Hollow Stem Auger**
 WEATHER: **Sunny, 80 DEGREES**
 FIELD PARTY: **D. Barron**
 GEOLOGIST: **P. May**
 DATE BEGUN: **7/25/97**

TOP OF CASING ELEVATION: **762.14**
 TOTAL DEPTH: **34.0 FT**
 GROUND SURFACE ELEVATION: **759.65**
 SHEET **2** OF **2**

STATIC WATER LEVEL (BLS)		
WD=While Drilling AB=After Boring		
Depth(ft)	23.51	22.17
Time	10:00	11:00
Date	7/28/97	7/29/97

DATE COMPLETED: **7/28/97**

DEPTH	BLOW COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTANCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
19.0								DIORITE: competent rock. Water bearing fracture at 30 feet.	19.0	x x x x	
20.0		G	S5				20.0		x x x x		
21.0							21.0		x x x x		
22.0							22.0		x x x x		
23.0							23.0		x x x x		
24.0							24.0		x x x x		
25.0		G	S6				25.0		x x x x		
26.0							26.0		x x x x		
27.0							27.0		x x x x		
28.0							28.0		x x x x		
29.0							29.0		x x x x		
30.0		G	S7				30.0		x x x x		
31.0							31.0		x x x x		
32.0							32.0		x x x x		
33.0							33.0		x x x x		
34.0							34.0		x x x x		
35.0							35.0		x x x x		

Boring terminated at 34.0'

FIELD BOREHOLE LOG

BOREHOLE NUMBER

MW-S

PROJECT NUMBER **DAVDCO-1**
 PROJECT NAME: **Holly Grove Landfill**
 LOCATION: **Lexington, North Carolina**
 DRILLING COMPANY: **Engineering Tectonics**
 RIG TYPE & NUMBER: **MOBILE B-80**
 DRILLING METHOD: **Hollow Stem Auger**
 WEATHER: **Sunny, 80 DEGREEE6**
 FIELD PARTY: **D. Barron**
 GEOLOGIST: **P. May**
 DATE BEGUN: **7/28/97**

TOP OF CASING ELEVATION: **737.60**
 TOTAL DEPTH: **57.0 FT**
 GROUND SURFACE ELEVATION: **735.54**
 SHEET: **1** OF **2**

STATIC WATER LEVEL (BLS)		
WD=While Drilling AB=After Boring		
Depth(ft)	38.63	31.47
Time	11:00	7:00
Date	7/29/97	7/30/97

DEPTH	BLON	COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTANCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
1.0										1.0		
0.0										0.0		
1.0	4	6	Ss	S1			12"		CLAYEY SILT: brown silt to clayey silt. slight cast, no ribbon. ML.	1.0		
2.0										2.0		
3.0	10	12	Ss	S2			14"		CLAYEY SANDY SILT: Brown, dry, clayey silt to clayey sandy silt. Slight cast, no ribbon. trace gravel. manganese stained at 4.5'. SM-SC.	3.0		
4.0		15								4.0		
5.0										5.0		
6.0										6.0		
7.0										7.0		
8.0	17	23	Ss	S3			10"		CLAYEY SILTY SAND: sandy clayey silt to clayey silty sand, trace coarse sand. dry. slight cast. SM.	8.0		
9.0		21								9.0		
10.0										10.0		
11.0										11.0		
12.0										12.0		
13.0	50/3		Ss	S4			3"		SANDY SILT: Brown, dry, sandy silt. trace gravel. SM. Auger refusal at 17'.	13.0		
14.0										14.0		
15.0										15.0		
16.0										16.0		
17.0										17.0		
18.0									DIORITE: competent rock.	18.0		
19.0										19.0		
20.0			6	SS						20.0		
21.0										21.0		
22.0										22.0		
23.0										23.0		
24.0										24.0		
25.0			6	SE						25.0		

FIELD BOREHOLE LOG

BOREHOLE NUMBER

MW-8

PROJECT NUMBER: **DAYDCO-1**
 PROJECT NAME: **Holly Grove Landfill**
 LOCATION: **Lexington, North Carolina**
 DRILLING COMPANY: **Engineering Tectonics**
 RIG TYPE & NUMBER: **MOBILE B-80**
 DRILLING METHOD: **Hollow Stem Auger**
 WEATHER: **Sunny, 80 DEGREES**
 FIELD PARTY: **D. Barron**
 GEOLOGIST: **P. May**
 DATE BEGUN: **7/28/97**

TOP OF CASING ELEVATION: **737.60**
 TOTAL DEPTH: **57.0 FT**
 GROUND SURFACE ELEVATION: **735.54**
 SHEET: **2** OF **2**

STATIC WATER LEVEL (BLS)		
WD=While Drilling	AB=After Boring	
Depth (Ft)	38.63	31.47
Time	11:00	7:00
Date	7/29/97	7/30/97

DATE COMPLETED **7/29/97**

DEPTH	BLH	COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTENCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
26.0									DIORITE: competent rock. No water bearing fractures noted.	26.0	x x x x	x x x x
27.0										27.0	x x x x	x x x x
28.0										28.0	x x x x	x x x x
29.0										29.0	x x x x	x x x x
30.0			G	S7						30.0	x x x x	x x x x
31.0										31.0	x x x x	x x x x
32.0										32.0	x x x x	x x x x
33.0										33.0	x x x x	x x x x
34.0										34.0	x x x x	x x x x
35.0			G	S8						35.0	x x x x	x x x x
36.0										36.0	x x x x	x x x x
37.0										37.0	x x x x	x x x x
38.0										38.0	x x x x	x x x x
39.0										39.0	x x x x	x x x x
40.0			G	S9						40.0	x x x x	x x x x
41.0										41.0	x x x x	x x x x
42.0										42.0	x x x x	x x x x
43.0										43.0	x x x x	x x x x
44.0										44.0	x x x x	x x x x
45.0			G	S10						45.0	x x x x	x x x x
46.0										46.0	x x x x	x x x x
47.0										47.0	x x x x	x x x x
48.0										48.0	x x x x	x x x x
49.0										49.0	x x x x	x x x x
50.0			G	S11						50.0	x x x x	x x x x
51.0										51.0	x x x x	x x x x
52.0										52.0	x x x x	x x x x
53.0										53.0	x x x x	x x x x
54.0										54.0	x x x x	x x x x
55.0			G	S12						55.0	x x x x	x x x x
56.0										56.0	x x x x	x x x x
57.0										57.0	x x x x	x x x x

Boring terminated at 57.0'.

FIELD BOREHOLE LOG

BOREHOLE NUMBER

MW-10

PROJECT NUMBER: DAVCO-1
 PROJECT NAME: Holly Grove Landfill
 LOCATION: Lexington, North Carolina
 DRILLING COMPANY: Engineering Tectonics
 RIG TYPE & NUMBER: MOBILE B-80
 DRILLING METHOD: Hollow Stem Auger
 WEATHER: Sunny, 80 DEGREES
 FIELD PARTY: D. Barron
 GEOLOGIST: P. May
 DATE BEGUN: 7/30/97

TOP OF CASING ELEVATION: 678.24
 TOTAL DEPTH: 13.0 FT
 GROUND SURFACE ELEVATION: 675.68
 SHEET: 1 OF 1

STATIC WATER LEVEL (BLS)		
WD=While Drilling AB=After Boring		
Depth(ft)	9.0 bg	2.48 bg
Time	11:00 am	-
Date	7/30/97	7/31/97

DEPTH	BLOW COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTENCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
1.0								CLAYEY SILT: Dark brown, dry, clayey silt with some gravel. Some brown silty sandy clay.	1.0		
2.0											
3.0	5	Ss	S1			18"					
4.0	6										
5.0	8										
6.0											
7.0											
8.0	50/6	Ss	S2			8"					
9.0							DIORITE: partially weathered rock. Auger refusal at 13'.	9.0			
10.0											
11.0											
12.0											
13.0											

FIELD BOREHOLE LOG

BOREHOLE NUMBER:

MW-11

PROJECT NUMBER: **DAVDCO-1**
 PROJECT NAME: **Holly Grove Landfill**
 LOCATION: **Lexington, North Carolina**
 DRILLING COMPANY: **Engineering Tectonics**
 RIG TYPE & NUMBER: **MOBILE B-80**
 DRILLING METHOD: **Hollow Stem Auger**
 WEATHER: **Sunny, 80 DEGREES**
 FIELD PARTY: **D. Barron**
 GEOLOGIST: **P. May**
 DATE BEGUN: **7/29/97**

TOP OF CASING ELEVATION: **680.07**
 TOTAL DEPTH: **38.0 FT**
 GROUND SURFACE ELEVATION: **677.72**
 SHEET: **1** OF: **2**

STATIC WATER LEVEL (BLS)		
WD=While Drilling AB=After Boring		
Depth(Ft)	23.25 <i>bg</i>	23.28 <i>bg</i>
Time	-	-
Date:	7/31/97	8/4/97

DATE COMPLETED: **7/29/97**

DEPTH	BLOW COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTENCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
1.0									1.0		
0.0	3	Ss	S1			12"		SANDY CLAYEY SILT: brown to tan sandy clayey silt, dry.	0.0	[Diagonal Hatching]	[Diamond Pattern]
1.0	4								1.0	[Diagonal Hatching]	[Diamond Pattern]
2.0	6								2.0	[Diagonal Hatching]	[Diamond Pattern]
3.0		Ss	S2			10"		SILT: Brown silt with trace clay and sand, dry.	3.0	[Diagonal Hatching]	[Diamond Pattern]
4.0	18								4.0	[Diagonal Hatching]	[Diamond Pattern]
5.0	26								5.0	[Diagonal Hatching]	[Diamond Pattern]
6.0	34								6.0	[Diagonal Hatching]	[Diamond Pattern]
7.0									7.0	[Diagonal Hatching]	[Diamond Pattern]
8.0		Ss	S3			10"		SILT: Brown silt with trace clay and sand, dry, damp at 10'.	8.0	[Diagonal Hatching]	[Diamond Pattern]
9.0	18								9.0	[Diagonal Hatching]	[Diamond Pattern]
10.0	50/5								10.0	[Diagonal Hatching]	[Diamond Pattern]
11.0									11.0	[Diagonal Hatching]	[Diamond Pattern]
12.0									12.0	[Diagonal Hatching]	[Diamond Pattern]
13.0									13.0	[Diagonal Hatching]	[Diamond Pattern]
14.0	50/6	Ss	S4			6"		SANDY SILT: Dry, gravelly sandy silt. with manganese and iron staining. Partially weathered rock.	14.0	[Diagonal Hatching]	[Diamond Pattern]
15.0									15.0	[Diagonal Hatching]	[Diamond Pattern]
16.0									16.0	[Diagonal Hatching]	[Diamond Pattern]
17.0									17.0	[Diagonal Hatching]	[Diamond Pattern]
18.0									18.0	[Diagonal Hatching]	[Diamond Pattern]
19.0	50/3	Ss				0"		DIORITE: competent rock.	19.0	[X Pattern]	[Diamond Pattern]
20.0			S5						20.0	[X Pattern]	[Diamond Pattern]
21.0									21.0	[X Pattern]	[Diamond Pattern]

FIELD BOREHOLE LOG

BOREHOLE NUMBER:

MW-11

PROJECT NUMBER: **DAVDCO-1**
 PROJECT NAME: **Holly Grove Landfill**
 LOCATION: **Lexington, North Carolina**
 DRILLING COMPANY: **Engineering Tectonics**
 RIG TYPE & NUMBER: **MOBILE B-80**
 DRILLING METHOD: **Hollow Stem Auger**
 WEATHER: **Sunny, 80 DEGREES**
 FIELD PARTY: **D. Barron**
 GEOLOGIST: **P. May**
 DATE BEGUN: **7/29/97**

TOP OF CASING ELEVATION: **680.07**
 TOTAL DEPTH: **38.0 FT**
 GROUND SURFACE ELEVATION: **677.72**
 SHEET: **2** OF: **2**

STATIC WATER LEVEL (BLS)		
WD=While Drilling AB=After Boring		
Depth(ft)	23.25 bg	23.28 bg
Time	-	-
Date	7/31/97	8/4/97

DATE COMPLETED: **7/29/97**

DEPTH	BLOG COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTANCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
22.0								DIORITE: competent rock. water bearing fracture at 34 ft. Boring terminated at 38'.	22.0	x x x x	
23.0							23.0		x x x x		
24.0							24.0		x x x x		
25.0		G	S6				25.0		x x x x		
26.0							26.0		x x x x		
27.0							27.0		x x x x		
28.0							28.0		x x x x		
29.0							29.0		x x x x		
30.0		G	S7				30.0		x x x x		
31.0							31.0		x x x x		
32.0							32.0		x x x x		
33.0							33.0		x x x x		
34.0							34.0		x x x x		
35.0		G	S8				35.0		x x x x		
36.0							36.0		x x x x		
37.0							37.0		x x x x		
38.0							38.0		x x x x		
39.0							39.0		x x x x		
40.0							40.0		x x x x		

FIELD BOREHOLE LOG

BOREHOLE NUMBER:
MW-12

PROJECT NUMBER: DAVIDCO-1
 PROJECT NAME: Holly Grove Landfill
 LOCATION: Lexington, North Carolina
 DRILLING COMPANY: Engineering Tectonics
 RIG TYPE & NUMBER: MOBILE B-80
 DRILLING METHOD: Hollow Stem Auger
 WEATHER: Sunny, 80 DEGREES
 FIELD PARTY: D. Barron
 GEOLOGIST: P. May
 DATE BEGUN: 7/29/97

TOP OF CASING ELEVATION: 671.48
 TOTAL DEPTH: 65.0 FT
 GROUND SURFACE ELEVATION: 669.08
 SHEET 2 OF 2

STATIC WATER LEVEL (BLS)		
WD=While Drilling AB=After Boring		
Depth(ft)	63.7 ba	62.05 ba
Time		7:00 pm
Date	7/31/97	8/1/97

DATE COMPLETED: 7/30/97

DEPTH	BLU	COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTENCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
29.0									DIORITE: No water bearing fractures. Boring Terminated at 65 Feet.	29.0	x x x x	
30.0								30.0		x x x x		
31.0									31.0	x x x x		
32.0									32.0	x x x x		
33.0									33.0	x x x x		
34.0									34.0	x x x x		
35.0									35.0	x x x x		
36.0									36.0	x x x x		
37.0									37.0	x x x x		
38.0									38.0	x x x x		
39.0									39.0	x x x x		
40.0									40.0	x x x x		
41.0									41.0	x x x x		
42.0									42.0	x x x x		
43.0									43.0	x x x x		
44.0									44.0	x x x x		
45.0									45.0	x x x x		
46.0									46.0	x x x x		
47.0									47.0	x x x x		
48.0									48.0	x x x x		
49.0									49.0	x x x x		
50.0									50.0	x x x x		
51.0									51.0	x x x x		
52.0									52.0	x x x x		
53.0									53.0	x x x x		
54.0									54.0	x x x x		
55.0									55.0	x x x x		
56.0									56.0	x x x x		
57.0									57.0	x x x x		
58.0									58.0	x x x x		
59.0									59.0	x x x x		
60.0									60.0	x x x x		
61.0									61.0	x x x x		
62.0									62.0	x x x x		
63.0									63.0	x x x x		
64.0									64.0	x x x x		
65.0									65.0	x x x x		

FIELD BOREHOLE LOG

BOREHOLE NUMBER:

MW-13

PROJECT NUMBER **DAVDCO-1**
 PROJECT NAME: **Holly Grove Landfill**
 LOCATION: **Lexington, North Carolina**
 DRILLING COMPANY: **Engineering Tectonics**
 RIG TYPE & NUMBER: **MOBILE B-80**
 DRILLING METHOD: **Hollow Stem Auger**
 WEATHER: **Sunny, 80 DEGREES**
 FIELD PARTY: **D. Barron**
 GEOLOGIST: **P. May**
 DATE BEGUN **7/29/97**

TOP OF CASING ELEVATION **671.31**
 TOTAL DEPTH: **22.5 FT**
 GROUND SURFACE ELEVATION: **668.89**
 SHEET **1** OF: **1**

STATIC WATER LEVEL (BLS)		
ND=While Drilling AB=After Boring		
Depth(ft)	14.50 bg	14.03 bg
Time	-	-
Date	7/29/97	7/31/97

DEPTH	BLON COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTANCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
1.0								<p>SILTY SANDY CLAY: Orange brown silty sandy clay, dry some partially weathered rock. Switched to air hammer at 7.5'.</p>	1.0		
0.0							0.0				
1.0							1.0				
2.0							2.0				
3.0	9	Ss	S1			14"	3.0				
4.0	20						4.0				
5.0	50/4						5.0				
6.0							6.0				
7.0							7.0				
8.0	37	Ss	S2			6"	<p>SANDY SILT: Tan orange dry sandy silt with partially weathered rock at 15'.</p>	8.0			
9.0	50/3							9.0			
10.0								10.0			
11.0								11.0			
12.0								12.0			
13.0								13.0			
14.0								14.0			
15.0								15.0			
16.0								16.0			
17.0								17.0			
18.0								18.0			
19.0								19.0			
20.0								20.0			
21.0								21.0			
22.0								22.0			
23.0							23.0				
								<p>GRANITE: Fairly competent rock. Some partially weathered rock. Boring Terminated at 22.5'.</p>			

FIELD BOREHOLE LOG

BOREHOLE NUMBER

MW-14

PROJECT NUMBER: DAVDCO-1
 PROJECT NAME: Holly Grove Landfill
 LOCATION: Lexington, North Carolina
 DRILLING COMPANY: Engineering Tectonics
 RIG TYPE & NUMBER: MOBILE B-80
 DRILLING METHOD: Roller Bit/Air Hammer
 WEATHER: Sunny, 80 DEGREES
 FIELD PARTY: D. Barron
 GEOLOGIST: J Finkbeiner
 DATE BEGUN: 7/22/97

TOP OF CASING ELEVATION: 665.04
 TOTAL DEPTH: 42.0 FT
 GROUND SURFACE ELEVATION: 663.43
 SHEET: 1 OF 2

STATIC WATER LEVEL (BLS)		
WD=While Drilling AB=After Boring		
Depth(Ft)	12.77 bg	12.84 bg
Time	-	-
Date:	7/28/97	7/31/97

DATE COMPLETED: 7/24/97

DEPTH	BLD/COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTANCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
1.0								CLAYEY SILT: Red brown silty clay to clayey silt.	1.0		
0.0									0.0		
1.0			S1						1.0		
2.0									2.0		
3.0		G							3.0		
4.0									4.0		
5.0			S2						5.0		
6.0									6.0		
7.0									7.0		
8.0		G						8.0			
9.0			S3					DIORITE: Partially weathered rock.	9.0		
10.0			S4						10.0		
11.0									11.0		
12.0									12.0		
13.0		G							13.0		
14.0									14.0		
15.0									15.0		
16.0									16.0		
17.0									17.0		
18.0								18.0			
19.0		G						19.0			
								DIORITE: Light gray cuttings. Upper 7 feet of rock is fractured; set outer casing at 19.0'.			

FIELD BOREHOLE LOG

BOREHOLE NUMBER

MW-14

PROJECT NUMBER **DAVDCO-1**
 PROJECT NAME: **Holly Grove Landfill**
 LOCATION: **Lexington, North Carolina**
 DRILLING COMPANY: **Engineering Tectonics**
 RIG TYPE & NUMBER: **MOBILE B-80**
 DRILLING METHOD: **Roller Bit/Air Hammer**
 WEATHER: **Sunny, 80 DEGREES**
 FIELD PARTY: **D. Barron**
 GEOLOGIST: **J. Finkbeiner**
 DATE BEGUN: **7/22/97**

TOP OF CASING ELEVATION: **566.04**
 TOTAL DEPTH: **42.0 FT**
 GROUND SURFACE ELEVATION: **563.43**
 SHEET **2** OF **2**

STATIC WATER LEVEL (BLS)		
WD=White Drilling AB=After Boring		
Depth(ft)	12.77 bg	12.84 bg
Time	-	-
Date	7/28/97	7/31/97

DATE COMPLETED: **7/24/97**

DEPTH	BLCA COUNTS	SAMPLING METHOD	SAMPLE NUMBER	MOISTURE	CONSISTANCY	SAMPLE RECOVERY	DRILL METHOD	LITHOLOGY DESCRIPTION	DEPTH	LITHOLOGY	WELL INSTALLATION
20.0								DIORITE: Light gray cuttings. water seam at 38.5 feet.	20.0	X	O
21.0									21.0	X	O
22.0									22.0	X	O
23.0		G							23.0	X	O
24.0									24.0	X	O
25.0			55						25.0	X	O
26.0									26.0	X	O
27.0									27.0	X	O
28.0		G							28.0	X	O
29.0			56						29.0	X	O
30.0									30.0	X	O
31.0									31.0	X	O
32.0									32.0	X	O
33.0		G							33.0	X	O
34.0									34.0	X	O
35.0									35.0	X	O
36.0									36.0	X	O
37.0									37.0	X	O
38.0		G							38.0	X	O
39.0			57						39.0	X	O
40.0									40.0	X	O
41.0									41.0	X	O
42.0									42.0	X	O
43.0		G							43.0	X	O

Boring terminated at 42.0'

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Appendix B

Laboratory Analytical Report

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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#: 6037

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

DATE COLLECTED: 03/29/12
DATE REPORTED : 04/17/12

REVIEWED BY: 

PARAMETERS	MDL	SWSL	MW-1A	MW-2	MW-3A	MW-5	MW-6	Analysis		Method
								Date	Analyst	
Antimony, ug/l	0.14	6.0	--- U	--- U	--- U	--- U	0.15 J	04/05/12CMF	EPA200.8	
Arsenic, ug/l	0.10	10.0	0.66 J	--- U	--- U	--- U	0.78 J	04/05/12CMF	EPA200.8	
Barium, ug/l	0.02	100.0	272	153	18.3 J	26.8 J	104	04/05/12CMF	EPA200.8	
Beryllium, ug/l	0.02	1.0	--- U	--- U	--- U	--- U	0.06 J	04/05/12CMF	EPA200.8	
Cadmium, ug/l	0.02	1.0	0.46 J	0.10 J	0.08 J	0.05 J	0.46 J	04/05/12CMF	EPA200.8	
Cobalt, ug/l	0.03	10.0	11	9.3 J	0.19 J	0.76 J	2.8 J	04/05/12CMF	EPA200.8	
Copper, ug/l	0.02	10.0	1.5 J	2.0 J	0.61 J	2.5 J	10.0	04/05/12CMF	EPA200.8	
Total Chromium, ug/l	0.04	10.0	--- U	0.22 J	--- U	0.85 J	15	04/05/12CMF	EPA200.8	
Lead, ug/l	0.02	10.0	0.13 J	0.10 J	0.08 J	0.21 J	4.0 J	04/05/12CMF	EPA200.8	
Nickel, ug/l	0.04	50.0	4.5 J	3.5 J	1.0 J	1.8 J	4.2 J	04/05/12CMF	EPA200.8	
Selenium, ug/l	0.20	10.0	0.44 J	0.82 J	0.54 J	--- U	0.44 J	04/05/12CMF	EPA200.8	
Silver, ug/l	0.02	10.0	--- U	04/05/12CMF	EPA200.8					
Thallium, ug/l	0.02	5.5	--- U	--- U	0.20 J	0.18 J	0.11 J	04/05/12CMF	EPA200.8	
Vanadium, ug/l	0.14	25.0	12.2 J	1.2 J	2.6 J	4.0 J	13.9 J	04/05/12CMF	EPA200.8	
Zinc, ug/l	0.24	10.0	2.6 J	3.0 J	1.1 J	5.7 J	26	04/05/12CMF	EPA200.8	

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

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

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

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

ID#: 6037

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

DATE COLLECTED: 03/29/12
DATE REPORTED : 04/17/12

REVIEWED BY: 

PARAMETERS	MDL	SWSL	MW-8	MW-9	MW-10	MW-11	MW-12	Analysis	
								Date	Analyst
Antimony, ug/l	0.14	6.0	---	U				04/05/12CMF	EPA200.8
Antimony, ug/l	0.14	6.0			0.16 J	---	U	04/09/12LFFJ	EPA200.8
Arsenic, ug/l	0.10	10.0	0.43 J	1.0 J				04/05/12CMF	EPA200.8
Arsenic, ug/l	0.10	10.0			2.6 J	0.93 J	2.5 J	04/09/12LFFJ	EPA200.8
Barium, ug/l	0.02	100.0	31.9 J	170				04/05/12CMF	EPA200.8
Barium, ug/l	0.02	100.0			175	75.6 J	66.9 J	04/09/12LFFJ	EPA200.8
Beryllium, ug/l	0.02	1.0	---	U	0.06 J			04/05/12CMF	EPA200.8
Beryllium, ug/l	0.02	1.0				---	U	04/09/12LFFJ	EPA200.8
Cadmium, ug/l	0.02	1.0	0.08 J	0.13 J				04/05/12CMF	EPA200.8
Cadmium, ug/l	0.02	1.0			0.11 J	0.16 J	0.21 J	04/09/12LFFJ	EPA200.8
Cobalt, ug/l	0.03	10.0	0.47 J	13				04/05/12CMF	EPA200.8
Cobalt, ug/l	0.03	10.0			14	2.0 J	0.55 J	04/09/12LFFJ	EPA200.8
Copper, ug/l	0.02	10.0	0.95 J	7.2 J				04/05/12CMF	EPA200.8
Copper, ug/l	0.02	10.0			4.1 J	2.9 J	1.9 J	04/09/12LFFJ	EPA200.8
Total Chromium, ug/l	0.04	10.0	0.76 J	4.8 J				04/05/12CMF	EPA200.8
Total Chromium, ug/l	0.04	10.0			0.51 J	---	U	04/09/12LFFJ	EPA200.8
Lead, ug/l	0.02	10.0	0.12 J	0.60 J				04/05/12CMF	EPA200.8
Lead, ug/l	0.02	10.0			0.26 J	0.09 J	0.53 J	04/09/12LFFJ	EPA200.8
Nickel, ug/l	0.04	50.0	2.1 J	8.1 J				04/05/12CMF	EPA200.8
Nickel, ug/l	0.04	50.0			22.0 J	9.4 J	7.1 J	04/09/12LFFJ	EPA200.8
Selenium, ug/l	0.20	10.0	0.80 J	0.37 J				04/05/12CMF	EPA200.8
Selenium, ug/l	0.20	10.0			7.5 J	3.1 J	8.6 J	04/09/12LFFJ	EPA200.8
Silver, ug/l	0.02	10.0	---	U				04/05/12CMF	EPA200.8
Silver, ug/l	0.02	10.0			---	U	---	04/09/12LFFJ	EPA200.8
Thallium, ug/l	0.02	5.5	0.03 J	0.03 J				04/05/12CMF	EPA200.8
Thallium, ug/l	0.02	5.5			0.27 J	0.09 J	0.20 J	04/09/12LFFJ	EPA200.8
Vanadium, ug/l	0.14	25.0	8.8 J	6.4 J				04/05/12CMF	EPA200.8
Vanadium, ug/l	0.14	25.0			3.0 J	1.3 J	2.0 J	04/09/12LFFJ	EPA200.8
Zinc, ug/l	0.24	10.0	2.3 J	12				04/05/12CMF	EPA200.8
Zinc, ug/l	0.24	10.0			3.3 J	4.0 J	2.8 J	04/09/12LFFJ	EPA200.8

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

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

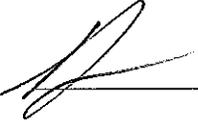
P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

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

ID#: 6037

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

DATE COLLECTED: 03/29/12
DATE REPORTED : 04/17/12

REVIEWED BY: 

PARAMETERS	MDL	SWSL	MW-13		MW-14		Analysis		Method
							Date	Analyst	Code
Antimony, ug/l	0.14	6.0	0.37 J		-- U		04/09/12LFS	EPA200.8	
Arsenic, ug/l	0.10	10.0	4.7 J		0.48 J		04/09/12LFS	EPA200.8	
Barium, ug/l	0.02	100.0	182		35.9 J		04/09/12LFS	EPA200.8	
Beryllium, ug/l	0.02	1.0	-- U		-- U		04/09/12LFS	EPA200.8	
Cadmium, ug/l	0.02	1.0	0.11 J		-- U		04/09/12LFS	EPA200.8	
Cobalt, ug/l	0.03	10.0	17		1.1 J		04/09/12LFS	EPA200.8	
Copper, ug/l	0.02	10.0	3.1 J		8.5 J		04/09/12LFS	EPA200.8	
Total Chromium, ug/l	0.04	10.0	0.98 J		2.1 J		04/09/12LFS	EPA200.8	
Lead, ug/l	0.02	10.0	0.45 J		0.21 J		04/09/12LFS	EPA200.8	
Nickel, ug/l	0.04	50.0	25.0 J		1.4 J		04/09/12LFS	EPA200.8	
Selenium, ug/l	0.20	10.0	12		0.36 J		04/09/12LFS	EPA200.8	
Silver, ug/l	0.02	10.0	-- U		0.05 J		04/09/12LFS	EPA200.8	
Thallium, ug/l	0.02	5.5	0.04 J		-- U		04/09/12LFS	EPA200.8	
Vanadium, ug/l	0.14	25.0	5.9 J		8.3 J		04/09/12LFS	EPA200.8	
Zinc, ug/l	0.24	10.0	4.0 J		3.5 J		04/09/12LFS	EPA200.8	

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

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

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

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

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

CLIENT ID: 6037
ANALYST: MAO
DATE COLLECTED: 03/29/12
DATE REPORTED: 04/17/12

Page: 1

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed		04/02/12	04/02/12	04/02/12	04/02/12	04/02/12	
	MDL	SWSL	MW-1A	MW-2	MW-3A	MW-5	MW-6	
1. Chloromethane	0.77	1.0	---	U	---	U	---	U
2. Vinyl Chloride	0.63	1.0	2.70		1.00		---	U
3. Bromomethane	0.67	10.0	---	U	---	U	---	U
4. Chloroethane	0.48	10.0	3.30	J	2.20	J	---	U
5. Trichlorofluoromethane	0.24	1.0	---	U	---	U	---	U
6. 1,1-Dichloroethene	0.17	5.0	0.20	J	---	U	---	U
7. Acetone	9.06	100.0	11.30	J	---	U	---	U
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	0.60	J	---	U	---	U
12. 1,1-Dichloroethane	0.20	5.0	25.60		0.30	J	4.00	J
13. Vinyl Acetate	0.20	50.0	---	U	---	U	---	U
14. Cis-1,2-Dichloroethene	0.25	5.0	41.70		---	U	0.40	J
15. 2-Butanone	2.21	100.0	---	U	---	U	---	U
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	4.90		0.30	J	0.30	J
21. 1,2-Dichloroethane	0.27	1.0	1.90		---	U	---	U
22. Trichloroethene	0.23	1.0	1.20		---	U	---	U
23. 1,2-Dichloropropane	0.21	1.0	3.80		---	U	---	U
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	---	U
27. Toluene	0.23	1.0	---	U	---	U	---	U
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	0.40	J	---	U	---	U
31. 2-Hexanone	1.57	50.0	---	U	---	U	---	U
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	0.50	J	3.00		---	U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	---	U	---	U	---	U
36. Ethylbenzene	0.21	1.0	---	U	---	U	---	U
37. Xylenes	0.68	5.0	---	U	---	U	---	U
38. Dibromomethane	0.28	10.0	---	U	---	U	---	U
39. Styrene	0.19	1.0	---	U	---	U	---	U
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	4.00		1.80		0.40	J
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 Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

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

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

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

CLIENT ID: 6037
ANALYST: MAO
DATE COLLECTED: 03/29/12
DATE REPORTED: 04/17/12

Page: 2

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed:		04/02/12	04/02/12	04/02/12	04/03/12	04/03/12	
	MDL	SWSL	MW-8	MW-9	MW-10	MW-11	MW-12	
1. Chloromethane	0.77	1.0	---	U	---	U	---	U
2. Vinyl Chloride	0.63	1.0	---	U	---	U	0.90 J	2.30
3. Bromomethane	0.67	10.0	---	U	---	U	---	U
4. Chloroethane	0.48	10.0	0.70 J	0.60 J	---	U	---	8.40 J
5. Trichlorofluoromethane	0.24	1.0	---	U	---	U	---	U
6. 1,1-Dichloroethene	0.17	5.0	0.20 J	---	U	---	U	0.90 J
7. Acetone	9.06	100.0	---	U	---	U	---	U
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	---	U
12. 1,1-Dichloroethane	0.20	5.0	14.80	---	U	---	2.50 J	11.70
13. Vinyl Acetate	0.20	50.0	---	U	---	U	---	U
14. Cis-1,2-Dichloroethene	0.25	5.0	0.40 J	0.70 J	---	U	0.50 J	---
15. 2-Butanone	2.21	100.0	---	U	---	U	---	U
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	0.60 J	1.50	---	U	0.30 J	---
21. 1,2-Dichloroethane	0.27	1.0	---	U	---	U	---	0.50 J
22. Trichloroethene	0.23	1.0	1.80	---	U	---	---	U
23. 1,2-Dichloropropane	0.21	1.0	---	U	---	U	0.30 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	---	U
27. Toluene	0.23	1.0	---	U	---	U	---	U
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	0.50 J	---	U	---	---	U
31. 2-Hexanone	1.57	50.0	---	U	---	U	---	U
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	3.70	0.30 J	3.90	3.00
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	---	U	---	U	---	U
36. Ethylbenzene	0.21	1.0	---	U	---	U	---	U
37. Xylenes	0.68	5.0	---	U	---	U	---	U
38. Dibromomethane	0.28	10.0	---	U	---	U	---	U
39. Styrene	0.19	1.0	---	U	---	U	---	U
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	3.00	---	1.80	5.30
44. 1,2-Dichlorobenzene	0.32	5.0	---	U	---	U	0.60 J	0.40 J
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 Quantitation Limits.

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

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

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

CLIENT ID: 6037
ANALYST: MAO
DATE COLLECTED: 03/29/12
DATE REPORTED: 04/17/12

Page: 3

REVIEWED BY: 

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed:		04/03/12	04/03/12
	MDL	SWSL	MW-13	MW-14
1. Chloromethane	0.77	1.0	---	U
2. Vinyl Chloride	0.63	1.0	---	U
3. Bromomethane	0.67	10.0	---	U
4. Chloroethane	0.48	10.0	42.50	0.50 J
5. Trichlorofluoromethane	0.24	1.0	---	2.90
6. 1,1-Dichloroethene	0.17	5.0	---	U
7. Acetone	9.06	100.0	---	U
8. Iodomethane	0.26	10.0	---	U
9. Carbon Disulfide	0.23	100.0	---	U
10. Methylene Chloride	0.64	1.0	---	U
11. trans-1,2-Dichloroethene	0.23	5.0	---	U
12. 1,1-Dichloroethane	0.20	5.0	2.40 J	2.00 J
13. Vinyl Acetate	0.20	50.0	---	U
14. Cis-1,2-Dichloroethene	0.25	5.0	---	U
15. 2-Butanone	2.21	100.0	---	U
16. Bromochloromethane	0.27	3.0	---	U
17. Chloroform	0.25	5.0	---	U
18. 1,1,1-Trichloroethane	0.19	1.0	---	U
19. Carbon Tetrachloride	0.22	1.0	---	U
20. Benzene	0.24	1.0	2.80	---
21. 1,2-Dichloroethane	0.27	1.0	---	U
22. Trichloroethene	0.23	1.0	---	U
23. 1,2-Dichloropropane	0.21	1.0	---	U
24. Bromodichloromethane	0.21	1.0	---	U
25. Cis-1,3-Dichloropropene	0.24	1.0	---	U
26. 4-Methyl-2-Pentanone	1.19	100.0	---	U
27. Toluene	0.23	1.0	0.30 J	---
28. trans-1,3-Dichloropropene	0.28	1.0	---	U
29. 1,1,2-Trichloroethane	0.25	1.0	---	U
30. Tetrachloroethene	0.17	1.0	---	U
31. 2-Hexanone	1.57	50.0	---	U
32. Dibromochloromethane	0.24	3.0	---	U
33. 1,2-Dibromoethane	0.26	1.0	---	U
34. Chlorobenzene	0.30	3.0	15.80	---
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	---	U
36. Ethylbenzene	0.21	1.0	---	U
37. Xylenes	0.68	5.0	---	U
38. Dibromomethane	0.28	10.0	---	U
39. Styrene	0.19	1.0	---	U
40. Bromoform	0.20	3.0	---	U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	---	U
42. 1,2,3-Trichloropropane	0.43	1.0	---	U
43. 1,4-Dichlorobenzene	0.39	1.0	8.40	---
44. 1,2-Dichlorobenzene	0.32	5.0	1.20 J	---
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	---	U
46. Acrylonitrile	2.72	200.0	---	U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	---	U

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

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

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

CLIENT: 6037 Week: 12

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

(919) 828-0577

CHAIN OF CUSTODY RECORD

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/L AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Metals			EPA 8260B	8260 Dup. 1	8260 Dup. 2	PH CHECK (LAB)	CHLORINE NEUTRALIZED AT COLLECTION
	DATE	TIME				A	P	R					
MW-1A	3-29-12	9:46a			4								
MW-2	3-29-12	11:06a			3								
MW-3A	3-29-12	10:54a			3								
MW-5	3-29-12	10:44a			3								
MW-6	3-29-12	9:57a			3								
MW-8	3-29-12	8:54a			3								
MW-9	3-29-12	8:44a			3								
MW-10	3-29-12	8:27a			3								
MW-11	3-29-12	9:17a			3								
MW-12	3-29-12	9:35a			3								
MW-13	3-29-12	9:30a			3								
REINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
<i>Sam M...</i>	3-29-12 4:47a	<i>[Signature]</i>	3-30-12 8:30	<i>[Signature]</i>									
COMMENTS:													
CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY. SAMPLES COLLECTED BY: <i>Diana Alex K</i> (Please Print) <input checked="" type="checkbox"/> SOLID WASTE SECTION <input type="checkbox"/> WASTEWATER (NPDES) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> DW/GW CLASSIFICATION: A - NONE D - NaOH B - HNO ₃ E - HCL C - H ₂ SO ₄ F - ZINC ACETATE G - NATHIOSULFATE PH CHECK (LAB) CONTAINER TYPE, P/G CHEMICAL PRESERVATION PARAMETERS													
SAMPLER MUST PLACE A "C" FOR COMPOSITE SAMPLE OR A "G" FOR GRAB SAMPLE IN THE BLOCKS ABOVE FOR EACH PARAMETER REQUESTED.													

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

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#: 6037 A

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

DATE COLLECTED: 03/29/12
DATE REPORTED : 04/17/12

REVIEWED BY: 

PARAMETERS	MDL	SWSL	MW-15	MW-16	MW-17	SW-1	SW-2	Analysis Date	Method Analyst Code
Antimony, ug/l	0.14	6.0	--- U	04/09/12LFFJ	EPA200.8				
Arsenic, ug/l	0.10	10.0	0.38 J	0.71 J	0.33 J	0.46 J	0.39 J	04/09/12LFFJ	EPA200.8
Barium, ug/l	0.02	100.0	69.5 J	30.9 J	181	19.8 J	17.8 J	04/09/12LFFJ	EPA200.8
Beryllium, ug/l	0.02	1.0	0.16 J	--- U	--- U	--- U	--- U	04/09/12LFFJ	EPA200.8
Cadmium, ug/l	0.02	1.0	0.06 J	0.04 J	0.23 J	--- U	--- U	04/09/12LFFJ	EPA200.8
Cobalt, ug/l	0.03	10.0	9.1 J	0.38 J	4.9 J	0.32 J	0.23 J	04/09/12LFFJ	EPA200.8
Copper, ug/l	0.02	10.0	14	0.59 J	1.3 J	1.6 J	1.7 J	04/09/12LFFJ	EPA200.8
Total Chromium, ug/l	0.04	10.0	20	0.14 J	--- U	0.16 J	0.14 J	04/09/12LFFJ	EPA200.8
Lead, ug/l	0.02	10.0	1.2 J	10	0.14 J	0.25 J	0.21 J	04/09/12LFFJ	EPA200.8
Nickel, ug/l	0.04	50.0	13.3 J	1.4 J	1.3 J	2.1 J	2.1 J	04/09/12LFFJ	EPA200.8
Selenium, ug/l	0.20	10.0	--- U	1.00 J	0.37 J	--- U	--- U	04/09/12LFFJ	EPA200.8
Silver, ug/l	0.02	10.0	--- U	04/09/12LFFJ	EPA200.8				
Thallium, ug/l	0.02	5.5	0.05 J	--- U	--- U	--- U	--- U	04/09/12LFFJ	EPA200.8
Vanadium, ug/l	0.14	25.0	20.5 J	2.4 J	11.2 J	1.2 J	1.2 J	04/09/12LFFJ	EPA200.8
Zinc, ug/l	0.24	10.0	26	1.9 J	5.8 J	5.5 J	5.6 J	04/09/12LFFJ	EPA200.8

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

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

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

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

ID#: 6037 A

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

DATE COLLECTED: 03/29/12
DATE REPORTED : 04/17/12

REVIEWED BY: 

PARAMETERS	MDL	SWSL	SW-3	Trip Blank	Analysis		Method
					Date	Analyst	Code
Antimony, ug/l	0.14	6.0	---	U	04/09/12LFG	EPA200.8	
Arsenic, ug/l	0.10	10.0	0.26	J	04/09/12LFG	EPA200.8	
Barium, ug/l	0.02	100.0	61.6	J	04/09/12LFG	EPA200.8	
Beryllium, ug/l	0.02	1.0	---	U	04/09/12LFG	EPA200.8	
Cadmium, ug/l	0.02	1.0	---	U	04/09/12LFG	EPA200.8	
Cobalt, ug/l	0.03	10.0	0.99	J	04/09/12LFG	EPA200.8	
Copper, ug/l	0.02	10.0	1.2	J	04/09/12LFG	EPA200.8	
Total Chromium, ug/l	0.04	10.0	0.22	J	04/09/12LFG	EPA200.8	
Lead, ug/l	0.02	10.0	0.13	J	04/09/12LFG	EPA200.8	
Nickel, ug/l	0.04	50.0	2.8	J	04/09/12LFG	EPA200.8	
Selenium, ug/l	0.20	10.0	0.30	J	04/09/12LFG	EPA200.8	
Silver, ug/l	0.02	10.0	---	U	04/09/12LFG	EPA200.8	
Thallium, ug/l	0.02	5.5	---	U	04/09/12LFG	EPA200.8	
Vanadium, ug/l	0.14	25.0	1.2	J	04/09/12LFG	EPA200.8	
Zinc, ug/l	0.24	10.0	12		04/09/12LFG	EPA200.8	

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

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
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CLIENT: DAVIDSON COUNTY (HOLLY GROVE)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
133 SPRING AVENUE
FUQUAY VARINA, NC 27526

CLIENT ID: 6037 A

ANALYST: MAO
DATE COLLECTED: 03/29/12
DATE ANALYZED: 04/03/12
DATE REPORTED: 04/17/12

Page: 1

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-15	MW-16	MW-17	SW-1	SW-2
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	0.70 J	--- U	--- U
5. Trichlorofluoromethane	0.24	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	9.06	100.0	--- U	--- U	--- U	--- U	--- U
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.64	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	0.30 J	--- U	11.70	--- 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	2.30 J	--- 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	0.70 J	--- U	--- U
23. 1,2-Dichloropropane	0.21	1.0	--- U	--- U	0.80 J	--- U	--- U
24. Bromodichloromethane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropane	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	0.50 J	--- U	--- U
31. 2-Hexanone	1.57	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.24	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.30	3.0	--- U	--- U	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.68	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.28	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.19	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.20	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	--- U	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	2.72	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- U	--- U	--- U	--- U	--- U

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

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

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

CLIENT ID: 6037 A
ANALYST: MAO
DATE COLLECTED: 03/29/12
DATE ANALYZED: 04/03/12
DATE REPORTED: 04/17/12

Page: 2

REVIEWED BY: 

VOLATILE ORGANICS
EPA METHOD 8260B

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

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

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

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

CLIENT: 6037 A Week: 12

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

(919) 828-0577

CHAIN OF CUSTODY RECORD

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2	COMMENTS:	PARAMETERS	CLASSIFICATION:
	DATE	TIME										
MW-15	3-29-12	16:30			3							<input type="checkbox"/> WASTEWATER (NPDES) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> DWQ/GW <input checked="" type="checkbox"/> SOLID WASTE SECTION
MW-16	3-29-12	10:07			3							CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY SAMPLES COLLECTED BY: <i>DMM</i> (Please Print) <i>Alac K</i> SAMPLES RECEIVED IN LAB AT <u>0.4</u> °C
MW-17	3-29-12	10:20			4							
SW-1	3-29-12	9:10			3							
SW-2	3-29-12	10:49			3							
SW-3	3-29-12	11:15			3							
Trip Blank					2							
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME							
<i>[Signature]</i>	3-29-12 4:40p	<i>[Signature]</i>	3/29/12 5:15									
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME							

DISINFECTION

CHLORINE

UV

NONE

CHLORINE NEUTRALIZED AT COLLECTION

pH CHECK (LAB)

CONTAINER TYPE, P/G

CHEMICAL PRESERVATION

A - NONE D - NaOH

B - HNO₃ E - HCL

C - H₂SO₄ F - ZINC ACETATE

G - Na THIOSULFATE

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