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Waste Industry Experts

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February 2, 2009

Mr. Ervin Lane
Compliance Hydrogeologist
NCDENR/Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

RE: Second Semiannual Groundwater Monitoring Report of 2008
Coble's Sandrock Construction & Demolition Debris Landfill
Permit No. 01-05
Alamance County, North Carolina
JEI Project No. 419.00, Task No. 29

Dear Ervin:

On behalf of Coble's Sandrock, Joyce Engineering, Inc. is submitting the enclosed *Second Semiannual Groundwater Monitoring Report of 2008.* This report completes the second semiannual compliance monitoring event of 2008 for the Coble's Sandrock Construction & Demolition Debris Landfill, Permit No. 01-05, as required by the North Carolina Division of Waste Management, Solid Waste Section. Please feel free to contact me at (336) 323-0092 if you have any questions regarding this submittal.

Sincerely,
JOYCE ENGINEERING, INC.

Jeremey J. Kerly, P.G.
Project Consultant

Enclosure

C: Kent Coble – Coble's Sandrock
File

Prepared for:

Coble's Sandrock, Inc.
5833 Foster Store Road
Liberty, North Carolina 27298

JEI Project No. 419.00, Task No. 29

SECOND SEMIANNUAL GROUNDWATER MONITORING REPORT OF 2008

COBLE'S SANDROCK CONSTRUCTION & DEMOLITION DEBRIS LANDFILL
ALAMANCE COUNTY, NORTH CAROLINA
PERMIT NO. 01-05

February 2009

Prepared by:

JOYCE ENGINEERING, INC.

2211 West Meadowview Road, Suite 101
Greensboro, North Carolina 27407
Phone: (336) 323-0092
Fax: (336) 323-0093

DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Joyce Engineering, Inc.

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

Name: Jeremey J. Kerly Phone: (336) 323-0092

E-mail: jkerly@joyceengineering.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Coble's Sandrock, Inc. C&D Debris Landfill	5833 Foster Store Road Liberty, NC 27298	01-05	.0500	October 15, 2008

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☒ No. No groundwater or surface water standards or explosive methane gas limits were exceeded.
☐ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Jeremey J. Kerly — Facility Representative Name (Print)

Project Consultant — Title

(336) 323-0092 — (Area Code) Telephone Number

Signature

2-2-09 — Date

Affix NC Licensed Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 2097 GEOLOGIST JEREMEY JOHN KERLY

Revised 10/2006

Second Semiannual Groundwater Monitoring Report of 2008
Coble's Sandrock Construction & Demolition Debris Landfill
Alamance County, North Carolina

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1.0 INTRODUCTION

1.1 Site Information

The Coble's Sandrock Construction and Demolition (C&D) Debris Landfill is owned and operated by the Kent and Brenda Coble under Permit No. 01-05. The property consists of approximately 154 acres in Alamance County, one half mile east of Kimesville, North Carolina and approximately eight miles south of Burlington, North Carolina. The 154 acres includes the currently permitted 39.6 acres plus an adjacent expansion area of 114.4 acres. The current C & D facility has been in operation since 1998 on the currently permitted 39.6 acres previously approved for site suitability. It includes a total of 12.86 acres approved for waste disposal, including Phase 1 (7.0 acres), Phase 2A (1.1 acres), and Phase 2B (4.76 acres). The proposed 114.4 acre expansion property is contiguous with and south and east of the currently permitted facility, and includes two proposed new waste cells, Phase 3A (6.3 acres) and Phase 3B (5.6 acres).

The site is located in the Piedmont physiographic province on a group of knolls and valleys. The northeast-flowing Poppaw Creek is located along the northern facility property line. Two primary drainages (small, intermittent creeks) transect the site and flow into Poppaw Creek. One of the drainages flows west-southwest across the southern half of the site and has a 2- to 4-acre man-made pond at its upstream limit in the southeastern corner of the proposed site. The other drainage flows north-northwest, roughly parallel to the eastern site boundary, and is fed by outflow from a small pond located on the site property and by two smaller, spring-fed drainages which flow into it from off the site property to east. These streams and ponds are shown on Drawing No. 1. Adjoining land uses are primarily agricultural and residential. The regional topography is shown on an excerpt of the USGS 7.5 Minute Topographic Quadrangle for Kimesville, North Carolina included as Figure No. 1.

1.2 Site Geology

The site is located within the Carolina Slate Belt in the central Piedmont physiographic and geological province. The Carolina Slate Belt is made of metamorphosed sediments, volcanics, and intrusive igneous rocks and the site is underlain by a felsic intrusive complex. The complex is described as white to gray, fine- to coarse-grained, massive to foliated, metamorphosed bodies of assemblages of intimately associated felsic intrusive rock types. The rock types vary from granite, granodiorite, quartz diorite, to quartz monzonite. Narrow mafic dikes are common within the felsic intrusive units. This region is also characterized by regional- and small-scale Mesozoic diabase dikes. Most of the dikes are near-vertical and trend north-south to northwest-southeast and are characterized by plagioclase, augite and olivine minerals (Ragland, 1991).

The rock seen in float and/or large outcrop, as well as rock core from this site was predominantly medium-grained biotite-muscovite granite with foliation observed locally. Otherwise, site outcrops of granite are massive, with very little to no observed structure or foliation. No diabase dikes have been observed at the site, but numerous mafic (meta-volcanic) dikes do exist.

1.3 Regulatory Status

The Coble's Sandrock C&D Debris Landfill is currently in the detection monitoring program for C&D landfills under Section .0540 of the North Carolina Solid Waste Management Rules. The facility currently monitors for the eight RCRA metals and NC Appendix I list of volatile organic compounds. Once the Permit to Operate is issued for the Phase 3A and 3B expansion, the full list of NC Appendix I constituents will be sampled including mercury, chloride, manganese, sulfate, iron, alkalinity, and total dissolved solids.

2.0 FACILITY MONITORING PROGRAM

2.1 Groundwater Monitoring Program

Four active groundwater monitoring wells comprise the monitoring network at the Coble's Sandrock C&D Debris Landfill. The current compliance network consists of the following monitoring wells: MW-2, MW-4, MW-6 (facility background well), and MW-7. Monitoring wells MW-5, MW-8, MW-10S, and MW-10D are monitored for water levels only.

Monitoring Well	Date Installed	Classification	Monitoring Program	Total Depth from TOC (ft)	Lithology of Screened Interval
MW-1	3/25/97	Compliance	Abandoned	35.85	Saprolite/Part. Weathered Rock
MW-2	3/28/97	Compliance	Detection	22.98	Saprolite/Part. Weathered Rock
MW-3	3/31/97	Observation	Abandoned	59.82	Bedrock
MW-4	4/01/97	Compliance	Detection	24.22	Saprolite/Part. Weathered Rock
MW-5	1/18/02	Observation	Water Level	17.20	Saprolite/Part. Weathered Rock
MW-6	8/05/97	Background	Detection	41.00	Bedrock
MW-7	12/19/02	Compliance	Detection	16.00	Saprolite/Part. Weathered Rock
MW-8	3/21/05	Observation	Water Level	22.76	Saprolite/Part. Weathered Rock
MW-9	3/21/05	Observation	Abandoned	40.16	Partially Weathered Rock
MW-10S	3/22/05	Observation	Water Level	24.34	Bedrock
MW-10D	3/25/05	Observation	Water Level	66.86	Bedrock

Three monitoring wells (MW-1, MW-2, and MW-4) were installed during the Phase 1 site suitability study to characterize the uppermost aquifer. A letter dated September 18, 1998 from Trigon Engineering Consultants, Inc. to the Solid Waste Section stated that piezometer P-1 was converted to an upgradient monitoring well now known as MW-3. After April 2003, MW-3 was replaced with MW-6 (formerly P-3) as the upgradient background well. Well MW-5 was added to the compliance network before the April 2002 sampling event, but was replaced with MW-7 before the November 2003 sampling event at the request of the Solid Waste Section. Four monitoring wells (MW-8, MW-9, MW-10S, and MW-10D) were installed in and around the Phase 3A waste cell limits between March 21 and 25, 2005. Monitoring wells MW-1, MW-3, and MW-9 were abandoned on September 30 and 31, 2008 for the Phase 3A and 3B expansion.

2.2 Surface Water Monitoring Program

Two surface water monitoring points comprise the surface water monitoring program for the Coble's Sandrock C&D Debris Landfill.

Surface Point	Classification	Monitoring Program
SW-1	Compliance	Detection
SW-2	Compliance	Detection

The two surface water monitoring points are monitored for RCRA metals and NC Appendix I list of volatile organics. Surface water point SW-1 monitors water quality in Poppaw Creek, shortly after it enters the site. The sample location is at the property line near the northwest edge of the site. Surface water monitoring point SW-2 serves as a downstream monitoring point. Samples from this point are collected at a location approximately 350 feet northeast of the proposed Phase 3 disposal area near the northeastern corner of the site and where a small tributary that flows adjacent to the eastern property boundary discharges into Poppaw Creek. Surface water monitoring point locations are shown on Drawing No. 1.

3.0 SECOND SEMIANNUAL SAMPLING EVENT OF 2008

3.1 Field Work and Visual Inspection

In order to detect potential releases of leachate and/or landfill gas migration in a timely manner, a visual inspection program has been implemented at the Coble's Sandrock C&D Debris Landfill. This inspection program involves field personnel making the following observations:

- Observation of stress induced on the biological community (i.e., dead or dying vegetation),
- Indications of leachate impact (i.e., seeps, impacted surface water),
- Observations of erosion; and
- Negative changes around the waste facility.

On October 15, 2008 personnel from JEI visited Coble's Sandrock C&D Debris Landfill to purge and sample monitoring wells MW-2, MW-4, MW-6, and MW-7. Surface monitoring points SW-1 and SW-2 were also sampled during the October 2008 event. Beginning with the background well (MW-6), depth-to-water measurement were obtained to the nearest 0.01 foot using an electronic water level indicator for all monitoring wells in the compliance network prior to purging. Monitoring wells MW-5 and MW-8 were monitored for water levels only to augment groundwater elevation data and interpretation of groundwater surface contour mapping.

Monitoring wells were purged and sampled using disposable bailers. Measurements of temperature, pH, specific conductivity, and turbidity were recorded in the site specific log book prior to purging, after each purge volume, and during sampling. Prior to sampling, laboratory-supplied containers were prepared with the following information:

- Monitoring well number (completed by field personnel),
- Date and time of sample collection (completed by field personnel),
- Initials of sampling personnel (completed by field personnel),
- Project name and number (completed by the laboratory),
- Chemical preservative (completed by the laboratory); and
- Requested chemical analysis (completed by the laboratory).

Groundwater samples from each monitoring well were collected directly from the disposable bailers in the provided laboratory containers either immediately after purging or within 24 hours of the final purge volume. Immediately after collection, the samples were placed on ice in a laboratory provided cooler. Field forms are provided in Appendix I.

Surface water samples were collected directly from stream flow, by lowering the prepared sample containers into the stream flow with the opening facing into the current flow. Care was taken not the overflow the sample containers (which could lead to preservative loss) and avoid sample-induced turbidity. At the time of sampling, surface water was also measured for temperature, pH, specific conductivity, and turbidity and recorded in the site specific log book. After collection, the samples were placed on ice in a laboratory provided cooler. Field forms are provided in the Appendix.

3.2 Laboratory Analysis and JEI Quality Control

The October 2008 groundwater, surface water, and leachate samples were submitted to Pace Analytical Services, Inc. of Huntersville, North Carolina under chain-of-custody control for analysis. As presented earlier, the groundwater and surface water samples were analyzed for the eight RCRA metals and NC Appendix I list of volatile organic compounds. JEI requested a Level II data report for the final laboratory report. The samples were received by the laboratory on October 16, 2008 in good condition, properly preserved, and within analysis hold times.

In addition to samples collected for compliance monitoring at the Coble's Sandrock C&D Debris Landfill, a Field Blank was collected by JEI personnel as part of the October 2008 sampling event. Also, a Trip Blank prepared by the laboratory to accompany the volatile sampling containers to and from the laboratory. The Field Blank was analyzed for the eight RCRA metals and NC Appendix I list of volatile organic compounds while the Trip Blank was analyzed for NC Appendix I volatile organic compounds only.

Upon receipt of the laboratory data package, the data is reviewed by JEI personnel for the following:

- General typographical errors,
- Correct analyses performed and within method specified hold times,
- Biased data results based on Surrogate Recoveries, Matrix Spike, Matrix Spike Duplicate, and Laboratory Control Samples,
- Blank qualified data (B-flags),
- Detections above the NC 2L Groundwater Standards, Groundwater Water Protection (GWP) Standards, NC 2B Surface Water Standards, and/or EPA National Criteria; and
- Detections that are above historical levels.

No questions or problems were discovered based on the review to warrant laboratory notification.

4.0 HYDROGEOLOGICAL CONDITIONS

The surficial aquifer beneath the site occurs within saprolite, partially weathered rock (PWR), and bedrock. Generally, the saprolite and PWR units are relatively thin (5 to 40 feet) at and around the waste disposal areas. The saprolite and PWR are expected to behave as a relatively isotropic, porous medium, whereas groundwater flow in the bedrock is primarily through fractures; however, the bedrock is highly fractured and well connected to the overlying units so they are expected to behave as a single aquifer. The groundwater potentiometric surface, based on water level measurements taken on October 15, 2008, is shown on Drawing No. 1.

Horizontal hydraulic gradients for the site were calculated using three groundwater flow line segments indicated on the groundwater surface contour map (Drawing No. 1). Average linear groundwater flow velocities were calculated using the modified Darcy equation:

$$\mathbf{V = Ki/n}$$

where **V** = average linear velocity (feet per day), **K** = hydraulic conductivity (ft/day), **i** = horizontal hydraulic gradient, and **n** = effective porosity. An effective porosity of **n** = 0.21 (21%) was assumed based on average effective porosities for saprolite and PWR determined by laboratory analysis of soil samples. The average gradients (**i**) were determined for each flow path shown on Drawing No. 1. The geometric mean of the hydraulic conductivities of all slug test conducted on the site (**K** = 1.97×10^{-1} ft/day) was used for groundwater flow calculations for the site.

The above equation makes the simplifying assumptions of a homogeneous, isotropic aquifer in a porous medium. Groundwater flow velocities were calculated using saprolite and PWR data because the site's uppermost aquifer is primarily in those hydrogeologic units. An average linear groundwater flow velocity was calculated across areas where bedrock is the surficial aquifer because rock cores have shown that bedrock is highly fractured to the point that groundwater flow is expected to behave relatively similar to the unconsolidated hydrogeologic units. Also, aquifer tests conducted on bedrock wells and piezometers showed similar range of values for hydraulic conductivity. Groundwater flow velocities within the fractured bedrock aquifer are likely to be variable.

Data and calculations for the horizontal gradients are presented in Table 2. The calculated horizontal gradients from three flow line segments across the site range from 0.030 to 0.046 ft/ft. Calculated linear groundwater velocities ranged from approximately 0.03 to 0.04 ft/day.

5.0 DATA ANALYSIS

Results from the October 2008 sampling event were received November 3, 2008 from Pace Analytical Services, Inc. and are found in the Appendix. There were no exceedences of NC 2L Groundwater Standards (NC 2L) or Groundwater Protection Standards (GWPS) in compliance monitoring wells. There were also no exceedences of the NC 2B Surface Water Standards (NC

2B) or EPA National Criteria (EPA NC). No resampling is required for the October 2008 sampling event.

5.1 Analytical Results for Groundwater and Comparisons to Standards

The following inorganic constituents were detected in groundwater during the October 2008 sampling event. All concentrations are reported in micrograms per liter (µg/L). Concentrations with a "J" are considered to be estimated. Concentrations with a "B" are considered attributed to lab or field contamination.

Constituent	NC 2L/GWPS	Background	Downgradient			Blanks
		MW-6	MW-2	MW-4	MW-7	
Barium	2,000	41.3 J	73.8 J	19.9 J	175	ND
Chromium	50	1.6 J	15.3	1.3 J	1.8 J	ND
Selenium	50	ND	4.4 B	ND	ND	5.6 J
Silver	17.5	0.27 J	0.21 J	ND	2.8 J	ND

ND = Not detected above laboratory detection limits.

In general, the inorganic results are consistent with historical data. Historical inorganic groundwater data can be found in Table 3. No inorganic constituents exceeded the NC 2L or GWPS.

The following organic constituents were detected during the October 2008 sampling event. All concentrations are reported in micrograms per liter (µg/L). Concentrations with a "J" are considered to be J-flagged and the detection is considered to be estimated.

Constituent	NC 2L /GWPS	Background	Downgradient			Blanks
		MW-6	MW-2	MW-4	MW-7	
Acetone	700	ND	ND	ND	ND	24.0 J
2-Butanone	4,200	ND	ND	ND	ND	2.3 J
Chlorobenzene	50	ND	ND	ND	ND	0.64 J
Styrene	100	ND	ND	ND	ND	0.36 J
Toluene	1,000	ND	ND	ND	ND	9.6

ND = Not detected above laboratory detection limits.

There were no detections for organic compounds in any compliance monitoring wells. In general, the organic results are consistent with historical data. Historical organic groundwater data can be found in Table 3.

5.2 Analytical Results for Surface Water and Comparisons to Standards

The following inorganic and organic constituents were detected in surface water during the October 2008 sampling event. All concentrations are reported in micrograms per liter (µg/L). Concentrations with a "J" are considered to be estimated. Concentrations with a "B" are considered to be attributed to lab or field contamination.

Constituent	NC 2B/EPA NC	SW-1	SW-2	Blanks
Arsenic	50	ND	4.4 J	ND
Barium	NE	32.5 J	41.2 J	ND
Selenium	5	ND	8.5 B	5.6 J
Silver	0.06	0.13 J	0.11 J	ND
Acetone	2,000	ND	ND	24.0
2-Butanone	160,000	ND	ND	2.3 J
Chlorobenzene	140	ND	ND	0.64 J
Styrene	NE	ND	ND	0.36 J
Toluene	11	ND	ND	9.6

1. ND = Not detected above laboratory detection limits.
2. NE = Not established.

There were no detections for organic compounds in any surface water monitoring points. In general, the results are consistent with historical data. Historical surface water data can be found in Table 4.

6.0 CONCLUSION

There were no inorganic or organic constituent exceedences of groundwater or surface water standards detected during the October 2008 sampling event at the Coble's Sandrock C&D Debris Landfill. Based on analytical results from the October 2008 sampling event, Coble's Sandrock C&D Debris Landfill will remain in Detection Monitoring. The next scheduled semiannual sampling event is scheduled for April 2009.

7.0 REFERENCES

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United States Geological Survey. Kimesville 7.5 minute Quadrangle.

Tables

Table 1 Summary of Groundwater Elevations
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TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS

Location	Background	Downgradient									
	MW-6	MW-1	MW-2	MW-3	MW-4	MW-5	MW-7	MW-8	MW-9	MW-10S	MW-10D
TOC Elevation	652.56	602.46	582.31	613.05	582.64	577.41	583.33	574.26	589.09	592.46	592.76
Well Depth	41.00	35.85	22.98	59.82	24.22	17.20	16.00	22.76	40.16	24.34	66.86
Apr-00	NA	569.59	569.81	579.91	569.07	NI	NI	NI	NI	NI	NI
Aug-00	627.42	568.21	566.97	578.23	568.08	NI	NI	NI	NI	NI	NI
Oct-00	NA	569.30	568.55	578.25	568.81	NI	NI	NI	NI	NI	NI
Nov-00	627.30	568.09	566.87	577.47	567.04	NI	NI	NI	NI	NI	NI
Apr-01	627.17	571.48	569.72	578.67	569.06	NI	NI	NI	NI	NI	NI
Dec-01	621.78	567.28	565.31	575.90	566.21	NI	NI	NI	NI	NI	NI
Apr-02	623.94	568.17	567.84	576.09	568.21	569.32	NI	NI	NI	NI	NI
Nov-02	626.32	570.60	570.36	578.47	569.74	570.45	NI	NI	NI	NI	NI
Apr-03	633.40	571.66	569.18	579.70	568.84	570.32	574.38	NI	NI	NI	NI
Nov-03	632.53	568.49	567.38	578.54	567.47	569.59	572.44	NI	NI	NI	NI
Apr-04	630.13	568.54	568.44	578.92	567.83	569.86	573.63	NI	NI	NI	NI
Oct-04	628.60	567.86	567.92	577.61	567.91	570.30	573.30	NI	NI	NI	NI
Apr-05	630.65	568.90	568.69	578.54	568.16	570.76	574.54	NS	NS	NS	NS
Oct-05	625.65	567.16	565.52	576.33	566.43	569.12	571.24	NS	NS	NS	NS
27-Apr-06	624.46	567.84	569.36	NS	569.34	NS	572.77	NS	NS	NS	NS
11-Oct-06	624.45	567.91	567.22	577.59	568.29	570.11	571.77	567.03	567.92	583.95	583.62
16-Apr-07	629.42	570.33	570.04	NS	569.38	571.49	574.94	569.10	569.76	584.80	585.37
11-Oct-07	624.91	566.74	563.35	NS	564.43	NS	570.18	NS	NS	580.07	580.28
15-Apr-08	625.12	569.67	569.41	NS	568.87	569.99	574.03	568.85	569.57	584.34	584.73
15-Oct-08	625.86	AB	568.11	AB	569.00	570.33	573.64	564.91	AB	NS	NS

Notes:
1. Water levels are measured from top of casing (TOC).
2. NS = Not sampled and/or water levels not measured.
3. AB = Monitoring well has been abandoned.
4. NI = Monitoring well has not been installed.
5. NA = Data not available.

TABLE 2

SUMMARY OF HORIZONTAL HYDRAULIC GRADIENTS AND LINEAR VELOCITIES

GRADIENT CALCULATION SEGMENT	FLOW LINE LENGTH (feet)	FLOW DIRECTION	GROUNDWATER ELEVATION (feet)	HORIZONTAL GRADIENT i (ft/ft)	HYDRAULIC CONDUCTIVITY K (ft/day)	EFFECTIVE POROSITY n	LINEAR VELOCITY V (ft/day)
i_1	1080	NW	620	0.046	1.97E-01	0.21	0.043
			570				
i_2	1689	NW	620	0.030	1.97E-01	0.21	0.028
			570				
			Average:	0.038		Average:	0.036

NOTES:

1. The hydraulic conductivity (**K**) is taken from the geometric mean of **K** estimated from slug tests performed during hydrogeologic investigations.
2. The effective porosity (**n**) is taken from the average **n** determined by laboratory analysis of soil samples.
3. The horizontal hydraulic gradient (**i**) is the change in groundwater elevation divided by the segment length.
4. The groundwater flow velocity (**V**) is calculated based on the modified Darcy equation: **V=Ki/n**.

TABLE 3

SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS

Constituent	Date	Concentration (µg/L)																						
		DL	RL	Background		Downgradient																	Blanks	
				MW-6		MW-1		MW-2		MW-3		MW-4		MW-5		MW-7								
Arsenic	Apr-00	8	10	NA		ND		ND		10	J	ND		NI		NI							ND	
NC 2L = 50 µg/L (10/23/07)	Nov-00	NR	10	WL		ND		ND		ND		ND		NI		NI							ND	
	Apr-01	NR	10	WL		ND		ND		ND		ND		NI		NI							ND	
	Dec-01	NR	10	WL		ND		ND		ND		ND		NI		NI							ND	
	Apr-02	NR	10	WL		ND		ND		ND		ND		ND		NI							ND	
	Nov-02	NR	10	WL		ND		ND		ND		ND		ND		NI							ND	
	Apr-03	NR	10	WL		ND		ND		ND		ND		ND		WL							ND	
	Nov-03	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Apr-04	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-04	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Apr-05	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-05	NR	10	ND		NS		ND		WL		ND		WL		ND							ND	
	28-Apr-06	NR	10	ND		ND		ND		NS		ND		NS		ND							ND	
	11-Oct-06	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	19-Apr-07	2.0	10	ND		ND		ND		NS		2.0	B	WL		ND							2.1	J
	11-Oct-07	3.0	10	ND		NS		ND		NS		ND		NS		ND							ND	
	15-Apr-08	2.7	10.0	ND		ND		ND		NS		ND		WL		ND							ND	
	15-Oct-08	2.7	10.0	ND		AB		ND		AB		ND		WL		ND							ND	
Barium	Apr-00	2	8	NA		240		180		340		ND		NI		NI							ND	
NC 2L = 2,000 µg/L (10/23/07)	Nov-00	NR	500	WL		ND		ND		ND		ND		NI		NI							ND	
	Apr-01	NR	500	WL		ND		ND		ND		ND		NI		NI							ND	
	Dec-01	NR	500	WL		ND		ND		ND		ND		NI		NI							ND	
	Apr-02	NR	500	WL		ND		ND		ND		ND		ND		NI							ND	
	Nov-02	NR	500	WL		ND		ND		ND		ND		ND		NI							ND	
	Apr-03	NR	500	WL		ND		ND		ND		ND		ND		WL							ND	
	Nov-03	NR	500	ND		ND		ND		WL		ND		WL		ND							ND	
	Apr-04	NR	500	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-04	NR	500	ND		ND		ND		WL		ND		WL		ND							ND	
	Apr-05	NR	500	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-05	NR	500	ND		NS		ND		WL		ND		WL		ND							ND	
	28-Apr-06	NR	500	ND		ND		ND		NS		ND		NS		ND							ND	
	11-Oct-06	NR	500	ND		ND		ND		WL		ND		WL		ND							ND	
	19-Apr-07	0.20	100	58.8	J	19.4	J	66.0	J	NS		24.9	J	WL		140							0.30	J
	11-Oct-07	2.0	100	38.2	B	NS		478		NS		45.8	B	NS		241							35.8	J
	15-Apr-08	0.20	100	37.8	J	19.9	J	44.0	J	NS		31.3	J	WL		156							ND	
	15-Oct-08	0.20	100	41.3	J	AB		73.8	J	AB		19.9	J	WL		175							ND	
Cadmium	Apr-00	1	4	NA		2	J	2	J	4		ND		NI		NI							ND	
NC 2L = 1.75 µg/L (10/23/07)	Nov-00	NR	1	WL		2		ND		ND		ND		NI		NI							ND	
	Apr-01	NR	1	WL		ND		ND		ND		ND		NI		NI							ND	
	Dec-01	NR	1	WL		3.5		1.0		ND		ND		NI		NI							ND	
	Apr-02	NR	1	WL		ND		ND		ND		ND		ND		NI							ND	
	Nov-02	NR	1	WL		1.3		ND		ND		1.2		1.0		NI							ND	
	Apr-03	NR	1	WL		2.0		1.4		1.9		1.7		2.6		WL							ND	
	Nov-03	NR	1	ND		3.2		1.1		WL		1.4		WL		ND							ND	
	Apr-04	NR	1	1.8		ND		1.7		WL		ND		WL		ND							ND	
	Oct-04	NR	1	1		ND		ND		WL		ND		WL		ND							ND	
	Apr-05	NR	1	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-05	NR	1	ND		NS		ND		WL		ND		WL		ND							ND	
	28-Apr-06	NR	1	ND		ND		ND		NS		ND		NS		ND							ND	
	11-Oct-06	NR	1.00	ND		ND		ND		WL		ND		WL		ND							ND	
	19-Apr-07	0.50	1	ND		ND		ND		NS		ND		WL		ND							ND	
	11-Oct-07	0.1	1	ND		NS		0.4	J	NS		ND		NS		ND							ND	
	15-Apr-08	0.50	1.0	ND		ND		ND		NS		ND		WL		ND							ND	
	15-Oct-08	0.50	1.0	ND		NS		ND		AB		ND		WL		ND							ND	
Chromium	Apr-00	3	12	NA		36		30		76		10	J	NI		NI							ND	
NC 2L = 50 µg/L (10/23/07)	Nov-00	NR	10	WL		15		ND		ND		ND		NI		NI							ND	
	Apr-01	NR	10	WL		ND		ND		ND		ND		NI		NI							ND	
	Dec-01	NR	10	WL		31		10		ND		ND		NI		NI							ND	
	Apr-02	NR	10	WL		ND		ND		ND		ND		ND		NI							45	
	Nov-02	NR	10	WL		ND		ND		ND		ND		ND		NI							ND	
	Apr-03	NR	10	WL		ND		ND		ND		ND		ND		WL							ND	
	Nov-03	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Apr-04	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-04	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Apr-05	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-05	NR	10	ND		NS		14		WL		ND		WL		ND							ND	
	28-Apr-06	NR	10	ND		ND		ND		NS		ND		NS		ND							ND	
	11-Oct-06	NR	10.0	ND		ND		ND		WL		ND		WL		ND							ND	
	19-Apr-07	2.0	10	ND		ND		10.9		NS		3.8	J	WL		ND							ND	
	11-Oct-07	1.0	10	1.7	J	NS		121		NS		5.8	J	NS		12.7							ND	
Resample	28-Dec-07	1.0	10	NS		NS		15.7		NS		NS		NS		NS							ND	
	15-Apr-08	0.40	10.0	1.5	B	2.1	B	11.1		NS		7.7	J	WL		0.47	B						0.61	J
	15-Oct-08	0.40	10.0	1.6	J	AB		15.3		AB		1.3	J	WL		1.8	J						ND	
Lead	Apr-00	3	12	NA		5	J	5	J	19		ND		NI		NI							ND	
NC 2L = 15 µg/L (10/23/07)	Nov-00	NR	10	WL		ND		ND		ND		ND		NI		NI							ND	
	Apr-01	NR	10	WL		ND		ND		ND		ND		NI		NI							ND	
	Dec-01	NR	10	WL		11		ND		ND		ND		NI		NI							ND	
	Apr-02	NR	10	WL		ND		ND		ND		ND		ND		NI							ND	
	Nov-02	NR	10	WL		ND		ND		ND		ND		ND		WL							ND	
	Apr-03	NR	10	WL		ND		ND		ND		ND		ND		ND							ND	
	Nov-03	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Apr-04	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-04	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Apr-05	NR	10	ND		ND		ND		WL		ND		WL		ND							ND	
	Oct-05	NR	10	ND		NS		ND		WL		ND		WL		ND							ND	
	28-Apr-06	NR	10	ND		ND		ND		NS		ND		NS		ND							ND	
	11-Oct-06	NR	10.0	ND		ND		ND		WL		ND		WL		ND							ND	
	19-Apr-07	2.0	10	ND		ND		ND		NS		ND		WL		ND							ND	
	11-Oct-07	6.0	10	ND		NS		ND		NS		ND		NS		ND							ND	
	15-Apr-08	4.0	10.0	ND		ND		ND		NS		ND		WL		ND							ND	
	15-Oct-08	4.0	10.0	ND		AB		ND		AB		ND		WL		ND							ND	

TABLE 3

SUMMARY OF HISTORICAL GROUNDWATER CONSTITUENTS

Constituent	Date	Concentration (µg/L)										
		DL	RL	Background	Downgradient						Blanks
				MW-6	MW-1	MW-2	MW-3	MW-4	MW-5	MW-7	
Selenium	Apr-00	4	16	NA	ND	ND	13 J	ND	NI	NI	ND
NC 2L = 50 µg/L (10/23/07)	Nov-00	NR	20	WL	ND	ND	ND	ND	NI	NI	ND
	Apr-01	NR	20	WL	ND	ND	ND	ND	NI	NI	ND
	Dec-01	NR	20	WL	ND	ND	ND	ND	NI	NI	ND
	Apr-02	NR	20	WL	ND	ND	ND	ND	ND	NI	ND
	Nov-02	NR	20	WL	ND	ND	ND	ND	ND	NI	ND
	Apr-03	NR	20	WL	ND	ND	ND	ND	ND	WL	ND
	Nov-03	NR	20	ND	ND	ND	WL	ND	WL	ND	ND
	Apr-04	NR	20	ND	ND	ND	WL	ND	WL	ND	ND
	Oct-04	NR	20	ND	ND	ND	WL	ND	WL	ND	ND
	Apr-05	NR	20	ND	ND	ND	WL	ND	WL	ND	ND
	Oct-05	NR	20	ND	NS	ND	WL	ND	WL	ND	ND
	28-Apr-06	NR	20	ND	ND	ND	NS	ND	NS	ND	ND
	11-Oct-06	NR	20.0	ND	ND	ND	WL	ND	WL	ND	ND
	19-Apr-07	2.0	10	2.3 B	ND	ND	NS	ND	WL	ND	3.5 J
	11-Oct-07	2.0	10	ND	NS	ND	NS	ND	NS	ND	ND
	15-Apr-08	3.8	10.0	ND	ND	ND	NS	ND	WL	5.1 J	ND
	15-Oct-08	3.8	10.0	ND	AB	4.4 B	AB	ND	WL	ND	5.6 J
Silver	15-Apr-08	0.10	10.0	ND	ND	ND	NS	0.32 J	WL	ND	ND
NC 2L = 17.5 µg/L (10/23/07)	15-Oct-08	0.10	10.0	0.27 J	AB	0.21 J	AB	ND	WL	2.8 J	ND
Acetone	15-Apr-08	2.2	100	ND	ND	ND	NS	ND	WL	ND	8.2 J
NC 2L = 700 µg/L (10/23/07)	15-Oct-08	20.0	100	ND	AB	ND	AB	ND	WL	ND	24.0 J
2-Butanone (MEK)	15-Oct-08	0.96	100	ND	AB	ND	AB	ND	WL	ND	2.3 J
NC 2L = 4,200 µg/L (10/23/07)											
Chlorobenzene	15-Oct-08	0.23	3.0	ND	AB	ND	AB	ND	WL	ND	0.64 J
NC 2L = 50 µg/L (10/23/07)											
Cis-1,2-Dichloroethylene	11-Oct-07	0.2	5	ND	AB	ND	NS	ND	NS	0.4 J	ND
NC 2L = 70 µg/L (10/23/07)	15-Apr-08	0.19	5.0	ND	ND	ND	NS	ND	WL	ND	ND
	15-Oct-08	0.19	5.0	ND	AB	ND	AB	ND	WL	ND	ND
Styrene	15-Oct-08	0.26	1.0	ND	AB	ND	AB	ND	WL	ND	0.36 J
NC 2L = 100 µg/L (10/23/07)											
Tetrachloroethylene	15-Apr-08	0.46	1.0	ND	ND	ND	NS	ND	WL	ND	19
NC 2L = 0.7 µg/L (10/23/07)	15-Oct-08	0.46	1.0	ND	AB	ND	AB	ND	WL	ND	ND
Toluene	15-Oct-08	0.26	1.0	ND	AB	ND	AB	ND	WL	ND	9.6
NC 2L = 1,000 µg/L (10/23/07)											

Notes:
1. All concentrations are in micrograms per liter (ug/L).
2. MW = Groundwater monitoring well.
3. RL = Laboratory reporting limit (NC SWSL (or lower) beginning in April 2007 to present).
4. DL = Laboratory detection limit.
6. ND = Not detected above laboratory reporting limit November 2000 to October 2006, not detected above laboratory detection limit April 2000 and April 2007 to present.
7. J = Estimated value between the DL and the RL April 2000 and the DL and NC SWSL (or lower) from April 2007 to present.
8. B = Blank qualified data.
9. NC 2L Standard = North Carolina's groundwater quality standard established under 15A NCAC 2L, .0202. (specific concentration established by date).
10. GWPS = Groundwater Protection Standards (specific concentration established by date).
11. Shaded values are above the NC 2L or GWP Standards.
12. AB = Monitoring well has been abandoned.
13. NS = Monitoring well has not been sampled.
14. NR = Not reported. Detections limits not required prior to April 2007 sampling event.
15. WL = Water levels only.
16. NA = Not available.
16. NC SWSL = North Carolina Solid Waste Section limits.

TABLE 4

SUMMARY OF HISTORICAL SURFACE WATER CONSTITUENTS

Constituent	Date	Concentration (µg/L)							
		DL	RL	SW-1		SW-2		Blanks	
Arsenic	Apr-00	8	10	ND		ND		ND	
NC2B/EPA NC = 50 µg/L (03/28/08)	Nov-00	NR	10	ND		ND		ND	
	Apr-01	NR	10	ND		ND		ND	
	Dec-01	NR	10	ND		ND		ND	
	Apr-02	NR	10	ND		ND		ND	
	Nov-02	NR	10	ND		ND		ND	
	Apr-03	NR	10	ND		ND		ND	
	Nov-03	NR	10	ND		ND		ND	
	Apr-04	NR	10	ND		ND		ND	
	Oct-04	NR	10	ND		ND		ND	
	Apr-05	NR	10	ND		ND		ND	
	Oct-05	NR	10	ND		Dry		ND	
	28-Apr-06	NR	10	ND		ND		ND	
	11-Oct-06	NR	10	ND		ND		ND	
	19-Apr-07	2.0	10	ND		2.6	B	2.1	J
	11-Oct-07	3.0	10	Dry		Dry		ND	
	15-Apr-08	2.7	10.0	ND		ND		ND	
	15-Oct-08	2.7	10.0	ND		4.4	J	ND	
Barium	Apr-00	2	8	ND		ND		ND	
NC2B/EPA NC = NE µg/L (03/28/08)	Nov-00	NR	500	ND		ND		ND	
	Apr-01	NR	500	ND		ND		ND	
	Dec-01	NR	500	ND		ND		ND	
	Apr-02	NR	500	ND		ND		ND	
	Nov-02	NR	500	ND		ND		ND	
	Apr-03	NR	500	ND		ND		ND	
	Nov-03	NR	500	ND		ND		ND	
	Apr-04	NR	500	ND		ND		ND	
	Oct-04	NR	500	ND		ND		ND	
	Apr-05	NR	500	ND		ND		ND	
	Oct-05	NR	500	ND		Dry		ND	
	28-Apr-06	NR	500	ND		ND		ND	
	11-Oct-06	NR	500	ND		ND		ND	
	19-Apr-07	0.20	100	28.1	J	40.7	J	0.30	J
	11-Oct-07	2.0	100	Dry		Dry		35.8	J
	15-Apr-08	0.20	100	19.9	J	20.0	J	ND	
	15-Oct-08	0.20	100	32.5	J	41.2	J	ND	
Cadmium	Apr-00	1	4	ND		ND		ND	
NC2B/EPA NC = 2 µg/L (03/28/08)	Nov-00	NR	1	ND		ND		ND	
	Apr-01	NR	1	ND		ND		ND	
	Dec-01	NR	1	1.4		ND		ND	
	Apr-02	NR	1	ND		ND		ND	
	Nov-02	NR	1	ND		ND		ND	
	Apr-03	NR	1	1.2		1.2		ND	
	Nov-03	NR	1	ND		ND		ND	
	Apr-04	NR	1	ND		ND		ND	
	Oct-04	NR	1	ND		ND		ND	
	Apr-05	NR	1	ND		ND		ND	
	Oct-05	NR	1	ND		Dry		ND	
	28-Apr-06	NR	1	ND		ND		ND	
	11-Oct-06	NR	1.00	ND		ND		ND	
	19-Apr-07	0.50	1	ND		ND		ND	
	11-Oct-07	0.1	1	Dry		Dry		ND	
	15-Apr-08	0.50	1.0	ND		ND		ND	
	15-Oct-08	0.50	1.0	ND		ND		ND	

TABLE 4

SUMMARY OF HISTORICAL SURFACE WATER CONSTITUENTS

Constituent	Date	Concentration (µg/L)				
		DL	RL	SW-1	SW-2	Blanks
Chromium	Apr-00	3	12	ND	ND	ND
NC2B/EPA NC = 50 µg/L (03/28/08)	Nov-00	NR	10	ND	ND	ND
	Apr-01	NR	10	ND	ND	ND
	Dec-01	NR	10	ND	ND	ND
	Apr-02	NR	10	ND	310	45
	Nov-02	NR	10	ND	ND	ND
	Apr-03	NR	10	ND	ND	ND
	Nov-03	NR	10	ND	ND	ND
	Apr-04	NR	10	ND	ND	ND
	Oct-04	NR	10	ND	ND	ND
	Apr-05	NR	10	ND	ND	ND
	Oct-05	NR	10	ND	Dry	ND
	28-Apr-06	NR	10	ND	ND	ND
	11-Oct-06	NR	10.0	ND	ND	ND
	19-Apr-07	2.0	10	ND	ND	ND
	11-Oct-07	1.0	10	Dry	Dry	ND
	15-Apr-08	0.40	10.0	ND	0.93 B	0.61 J
	15-Oct-08	0.40	10.0	ND	ND	ND
Lead	Apr-00	3	12	ND	ND	ND
NC2B/EPA NC = 25 µg/L (03/28/08)	Nov-00	NR	10	ND	ND	ND
	Apr-01	NR	10	ND	ND	ND
	Dec-01	NR	10	ND	ND	ND
	Apr-02	NR	10	ND	ND	ND
	Nov-02	NR	10	ND	ND	ND
	Apr-03	NR	10	ND	ND	ND
	Nov-03	NR	10	ND	ND	ND
	Apr-04	NR	10	ND	ND	ND
	Oct-04	NR	10	ND	ND	ND
	Apr-05	NR	10	ND	ND	ND
	Oct-05	NR	10	ND	Dry	ND
	28-Apr-06	NR	10	ND	ND	ND
	11-Oct-06	NR	10.0	ND	ND	ND
	19-Apr-07	2.0	10	ND	ND	ND
	11-Oct-07	6.0	10	Dry	Dry	ND
	15-Apr-08	4.0	10.0	ND	ND	ND
	15-Oct-08	4.0	10.0	ND	ND	ND
Selenium	Apr-00	4	16	ND	ND	ND
NC2B/EPA NC = 5 µg/L (03/28/08)	Nov-00	NR	20	ND	ND	ND
	Apr-01	NR	20	ND	ND	ND
	Dec-01	NR	20	ND	ND	ND
	Apr-02	NR	20	ND	ND	ND
	Nov-02	NR	20	ND	ND	ND
	Apr-03	NR	20	ND	ND	ND
	Nov-03	NR	20	ND	ND	ND
	Apr-04	NR	20	ND	ND	ND
	Oct-04	NR	20	ND	ND	ND
	Apr-05	NR	20	ND	ND	ND
	Oct-05	NR	20	ND	Dry	ND
	28-Apr-06	NR	20	ND	ND	ND
	11-Oct-06	NR	20.0	ND	ND	ND
	19-Apr-07	2.0	10	ND	ND	3.5 J
	11-Oct-07	2.0	10	Dry	Dry	ND
	15-Apr-08	3.8	10.0	ND	ND	ND
	15-Oct-08	3.8	10.0	ND	8.5 B	5.6 J

TABLE 4

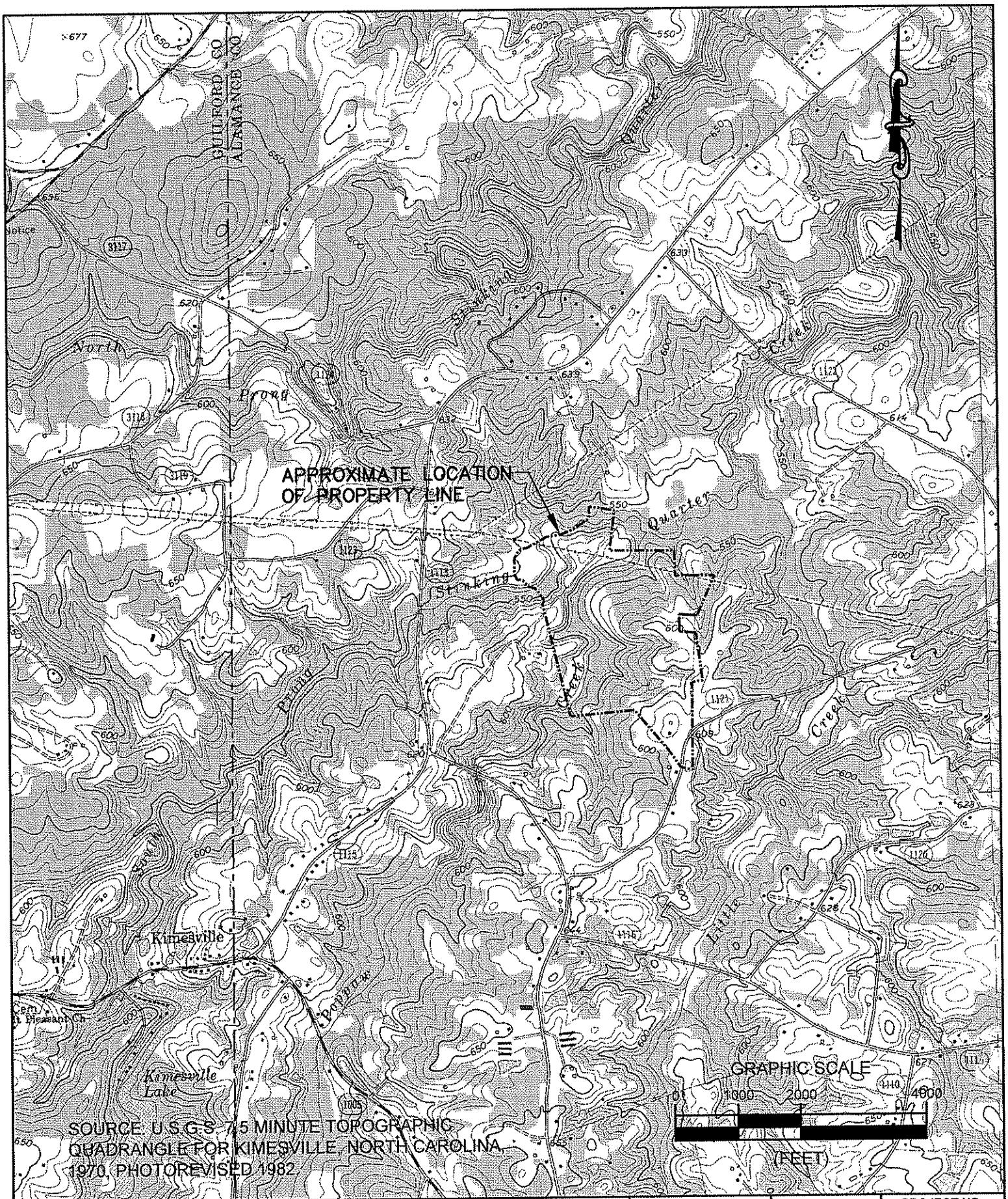
SUMMARY OF HISTORICAL SURFACE WATER CONSTITUENTS

Constituent	Date	Concentration (µg/L)				
		DL	RL	SW-1	SW-2	Blanks
Silver NC2B/EPA NC = 0.06 µg/L (03/28/08)	15-Apr-08 15-Oct-08	0.10 0.10	10.0 10.0	ND 0.13 J	ND 0.11 J	ND ND
Acetone NC2B/EPA NC = 2,000 µg/L (03/28/08)	15-Apr-08 15-Oct-08	2.2 20.0	100 100	ND ND	ND ND	8.2 J 24.0 J
2-Butanone (MEK) NC2B/EPA NC = 160,000 µg/L (03/28/08)	15-Oct-08	0.96	100	ND	ND	2.3 J
Chlorobenzene NC2B/EPA NC = 140 µg/L (03/28/08)	15-Oct-08	0.23	3.0	ND	ND	0.64 J
Cis-1,2-Dichloroethylene NC2B/EPA NC = NE µg/L (03/28/08)	15-Apr-08 15-Oct-08	0.19 0.19	5.0 5.0	ND ND	ND ND	ND ND
Styrene NC2B/EPA NC = NE µg/L (03/28/08)	15-Oct-08	0.26	1.0	ND	ND	0.36 J
Tetrachloroethylene NC2B/EPA NC = NE µg/L (03/28/08)	15-Apr-08 15-Oct-08	0.46 0.46	1.0 1.0	ND ND	ND ND	1.9 ND
Toluene NC2B/EPA NC = 11 µg/L (03/28/08)	15-Oct-08	0.26	1.0	ND	ND	9.6

Notes:
1. All concentrations are in micrograms per liter (mg/L).
2. SW = Surface water monitoring point.
3. RL = Laboratory reporting limit (NC SWSL {or lower} beginning in April 2007 to present).
4. DL = Laboratory detection limit.
5. ND = Not detected above laboratory reporting limit November 2000 to October 2006, not detected above laboratory detection limit April 2000 and April 2007 to present.
6. J = Estimated value between the DL and the RL April 2000 and the DL and NC SWSL (or lower) from April 2007 to present.
7. B = Blank qualified data.
8. NC 2B Standard = North Carolina's surface water standards (specific concentration established by date).
9. Shaded values are above the NC 2B Surface Water Standards or EPA National Criteria (EPA NC).
10. - = No data available/not reported.
11. NC SWSL = North Carolina Solid Waste Section limits.
12. The classification of the surface waters for Coble's Sandrock is Freshwater Aqudic Life.
13. NR = Not reported. Detections limits not required prior to April 2007 sampling event.
14. Dry = Surface water monitoring point was dry. No sample collected.
15. NE = Concentration not established.

Figure

Figure No. 1 Site Location Map

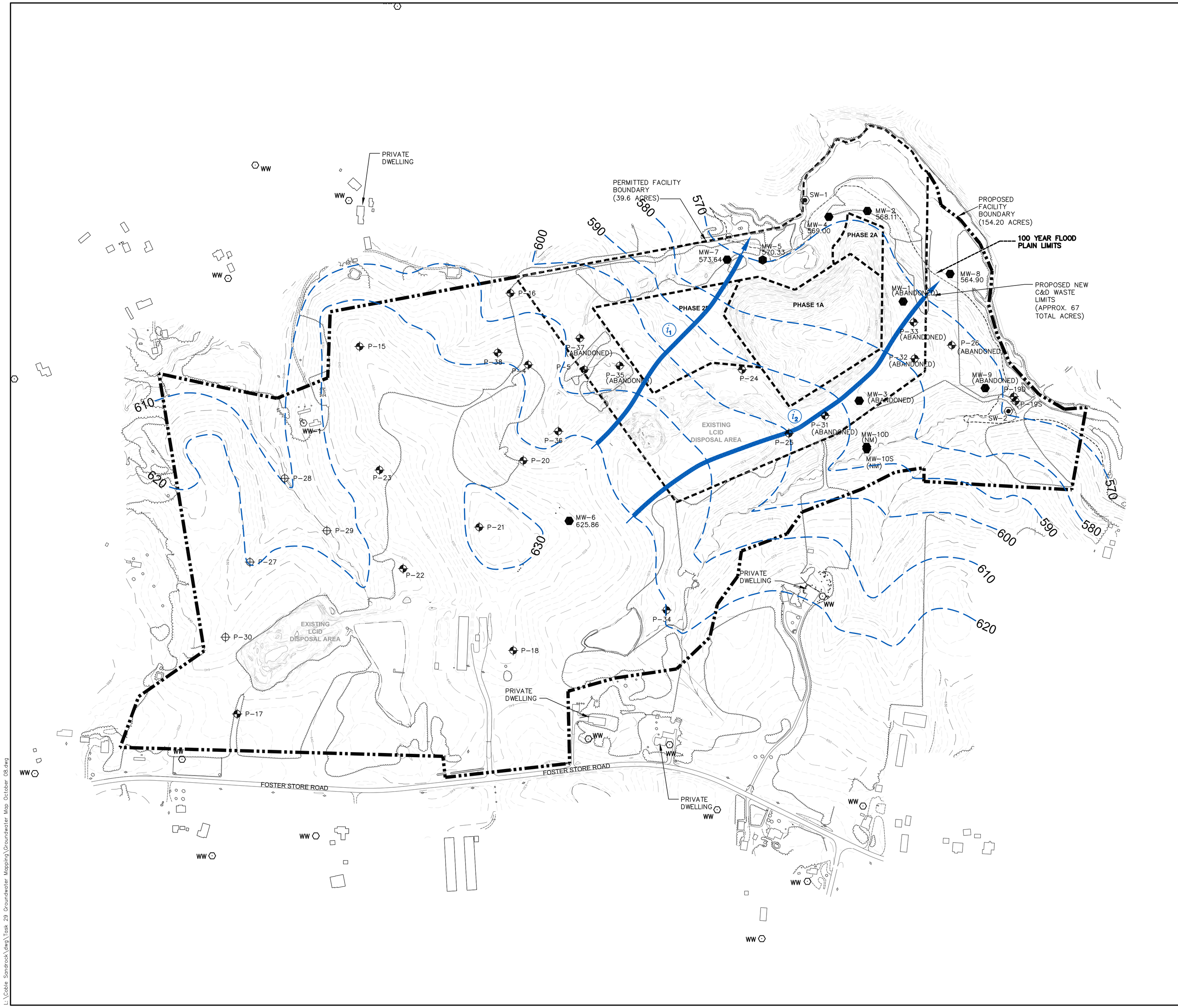


COBLE'S SANDROCK C&D DEBRIS LANDFILL KIMESVILLE, NC	JOYCE ENGINEERING, INC. 2211 W. MEADOWVIEW ROAD GREENSBORO, NC 27407 PHONE: (336) 323-0092	DESIGNED RB DRAWN CADD/RB CHECKED JJK APPROVED JJK DATE 7/17/08	SCALE AS SHOWN	PROJECT NO. 419.00.29
SITE LOCATION MAP		© 2008 Joyce Engineering, Inc. All rights reserved.		FIGURE NO. 1

I:\Coble Sandrock\dwg\Task 29 Groundwater Mapping\, SITE LOCATION MAP.dwg

Drawing

Drawing No. 1 Groundwater Surface Contour Map, October 15, 2008



LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- GROUNDWATER CONTOURS
- EXISTING CELL BOUNDARIES
- GROUNDWATER FLOW DIRECTION WITH GRADIENT CALCULATION SEGMENT
- SEGMENT USED FOR GRADIENT CALCULATIONS — i_1
- PIEZOMETER LOCATION — P-32
- GROUNDWATER MONITORING WELL LOCATION AND IDENTIFICATION — MW-6 625.86
- HAND AUGER PIEZOMETER LOCATION — P-28
- RESIDENTIAL WELL LOCATION — WW-1
- SURFACE WATER POINT LOCATION — SW-1

NOTES

1. TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET.
2. GROUNDWATER SURFACE CONTOUR INTERVAL = 10 FEET.

GRAPHIC SCALE

0 100 200 400

(FEET)

DATE	REVISIONS AND RECORD OF ISSUE	NO	BY	CK	APP

DESIGNED CM
DRAWN RB
CHECKED JK
APPROVED JK
DATE 12/01/08

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2211 WEST MEADOWVIEW ROAD
GREENSBORO, NC 27407
PHONE: (336) 323-0092

COBLE'S SANDROCK, INC.
KIMESVILLE, NORTH CAROLINA

GROUNDWATER SURFACE CONTOUR MAP
OCTOBER 15, 2008

PROJECT NO.
419.00.29

SCALE
AS SHOWN

DRAWING NO.
1

L:\Coble Sandrock\dwg\Task 29 Groundwater Mapping\Groundwater Map October 08.dwg

Appendix

Laboratory Analytical Report and Field Forms

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October 31, 2008

Mr. Jeremey Kerly
Joyce Engineering-NC
2211 West Meadowview Rd
Greensboro, NC 27407

RE: Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Dear Mr. Kerly:
Enclosed are the analytical results for sample(s) received by the laboratory on October 16, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin

kevin.godwin@pacelabs.com
Project Manager

Enclosures

RECEIVED NOV 03 2008

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CERTIFICATIONS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Charlotte Certification IDs
Connecticut Certification Number: PH-0104
Pennsylvania Certification Number: 68-00784
West Virginia Certification Number: 357
Virginia Certification Number: 00213
Tennessee Certification Number: 04010
South Carolina Drinking Water Cert. Number: 990060003
South Carolina Certification Number: 990060001
North Carolina Field Services Certification Number: 5342
North Carolina Wastewater Certification Number: 12
North Carolina Drinking Water Certification Number: 37706
Louisiana/LELAP Certification Number: 04034
Kentucky UST Certification Number: 84
New Jersey Certification Number: NC012
Florida/NELAP Certification Number: E87627

Asheville Certification IDs
Connecticut Certification Number: PH-0106
Massachusetts Certification Number: M-NC030
West Virginia Certification Number: 356
Virginia Certification Number: 00072
Tennessee Certification Number: 2980
South Carolina Bioassay Certification Number: 99030002
South Carolina Certification Number: 99030001
Pennsylvania Certification Number: 68-03578
North Carolina Bioassay Certification Number: 9
North Carolina Wastewater Certification Number: 40
North Carolina Drinking Water Certification Number: 37712
New Jersey Certification Number: NC011
Louisiana/LELAP Certification Number: 03095
Florida/NELAP Certification Number: E87648

Eden Certification IDs
Virginia Drinking Water Certification Number: 00424
North Carolina Wastewater Certification Number: 633
North Carolina Drinking Water Certification Number: 37738

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SAMPLE SUMMARY

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9230184001	0105-MW2	Water	10/15/08 15:00	10/16/08 13:43
9230184002	0105-MW4	Water	10/15/08 15:20	10/16/08 13:43
9230184003	0105-MW6	Water	10/15/08 14:30	10/16/08 13:43
9230184004	0105-MW7	Water	10/15/08 15:40	10/16/08 13:43
9230184005	0105-SW-1	Water	10/15/08 15:25	10/16/08 13:43
9230184006	0105-SW-2	Water	10/15/08 12:30	10/16/08 13:43
9230184007	0105-FIELD BLANK	Water	10/15/08 15:50	10/16/08 13:43
9230184008	0105-TRIP BLANK	Water	10/15/08 00:00	10/16/08 13:43

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SAMPLE ANALYTE COUNT

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Lab ID	Sample ID	Method	Analysts	Analytes Reported
9230184001	0105-MW2	EPA 6010 GW North Carolina	JMW	7
		EPA 7470	EWS	1
		EPA 8260	AW	54
9230184002	0105-MW4	EPA 6010 GW North Carolina	JMW	7
		EPA 7470	EWS	1
		EPA 8260	AW	54
9230184003	0105-MW6	EPA 6010 GW North Carolina	JMW	7
		EPA 7470	EWS	1
		EPA 8260	AW	54
9230184004	0105-MW7	EPA 6010 GW North Carolina	JMW	7
		EPA 7470	EWS	1
		EPA 8260	AW	54
9230184005	0105-SW-1	EPA 6010 GW North Carolina	JMW	7
		EPA 7470	EWS	1
		EPA 8260	AW	54
9230184006	0105-SW-2	EPA 6010 GW North Carolina	JMW	7
		EPA 7470	EWS	1
		EPA 8260	AW	54
9230184007	0105-FIELD BLANK	EPA 6010 GW North Carolina	JMW	7
		EPA 7470	EWS	1
		EPA 8260	AW	54
9230184008	0105-TRIP BLANK	EPA 8260	AW	54

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-MW2 **Lab ID: 9230184001** Collected: 10/15/08 15:00 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010								
Arsenic	ND	ug/L	10.0	2.7	1	10/21/08 14:00	10/23/08 00:15	7440-38-2	
Barium	**73.8J**	ug/L	100	0.20	1	10/21/08 14:00	10/23/08 00:15	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	10/21/08 14:00	10/23/08 00:15	7440-43-9	
Chromium	**15.3**	ug/L	10.0	0.40	1	10/21/08 14:00	10/23/08 00:15	7440-47-3	
Lead	ND	ug/L	10.0	4.0	1	10/21/08 14:00	10/23/08 00:15	7439-92-1	
Selenium	**4.4J**	ug/L	10.0	3.8	1	10/21/08 14:00	10/23/08 00:15	7782-49-2	
Silver	**0.21J**	ug/L	10.0	0.10	1	10/21/08 14:00	10/23/08 00:15	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.090	1	10/22/08 14:45	10/23/08 14:26	7439-97-6	M0,R1
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	20.0	1		10/19/08 21:06	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		10/19/08 21:06	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/19/08 21:06	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		10/19/08 21:06	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/19/08 21:06	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		10/19/08 21:06	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		10/19/08 21:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		10/19/08 21:06	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		10/19/08 21:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/19/08 21:06	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		10/19/08 21:06	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		10/19/08 21:06	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		10/19/08 21:06	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/19/08 21:06	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		10/19/08 21:06	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		10/19/08 21:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/19/08 21:06	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		10/19/08 21:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		10/19/08 21:06	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/19/08 21:06	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		10/19/08 21:06	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		10/19/08 21:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/19/08 21:06	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	0.49	1		10/19/08 21:06	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		10/19/08 21:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		10/19/08 21:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		10/19/08 21:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/19/08 21:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/19/08 21:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/19/08 21:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/19/08 21:06	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		10/19/08 21:06	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		10/19/08 21:06	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/19/08 21:06	75-09-2	

Date: 10/31/2008 09:50 AM

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-MW2 **Lab ID: 9230184001** Collected: 10/15/08 15:00 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		10/19/08 21:06	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/19/08 21:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		10/19/08 21:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		10/19/08 21:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/19/08 21:06	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/19/08 21:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/19/08 21:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/19/08 21:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/19/08 21:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/19/08 21:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/19/08 21:06	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		10/19/08 21:06	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/19/08 21:06	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/19/08 21:06	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/19/08 21:06	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		10/19/08 21:06	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109		1		10/19/08 21:06	460-00-4	
Dibromofluoromethane (S)	95	%	85-115		1		10/19/08 21:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	87	%	79-120		1		10/19/08 21:06	17060-07-0	
Toluene-d8 (S)	99	%	70-120		1		10/19/08 21:06	2037-26-5	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-MW4 **Lab ID: 9230184002** Collected: 10/15/08 15:20 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010								
Arsenic	ND	ug/L	10.0	2.7	1	10/21/08 14:00	10/23/08 00:28	7440-38-2	
Barium	**19.9J**	ug/L	100	0.20	1	10/21/08 14:00	10/23/08 00:28	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	10/21/08 14:00	10/23/08 00:28	7440-43-9	
Chromium	**1.3J**	ug/L	10.0	0.40	1	10/21/08 14:00	10/23/08 00:28	7440-47-3	
Lead	ND	ug/L	10.0	4.0	1	10/21/08 14:00	10/23/08 00:28	7439-92-1	
Selenium	ND	ug/L	10.0	3.8	1	10/21/08 14:00	10/23/08 00:28	7782-49-2	
Silver	ND	ug/L	10.0	0.10	1	10/21/08 14:00	10/23/08 00:28	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.090	1	10/22/08 14:45	10/23/08 14:34	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	20.0	1		10/19/08 21:29	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		10/19/08 21:29	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/19/08 21:29	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		10/19/08 21:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/19/08 21:29	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		10/19/08 21:29	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		10/19/08 21:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		10/19/08 21:29	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		10/19/08 21:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/19/08 21:29	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		10/19/08 21:29	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		10/19/08 21:29	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		10/19/08 21:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/19/08 21:29	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		10/19/08 21:29	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		10/19/08 21:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/19/08 21:29	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		10/19/08 21:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		10/19/08 21:29	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/19/08 21:29	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		10/19/08 21:29	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		10/19/08 21:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/19/08 21:29	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	0.49	1		10/19/08 21:29	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		10/19/08 21:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		10/19/08 21:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		10/19/08 21:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/19/08 21:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/19/08 21:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/19/08 21:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/19/08 21:29	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		10/19/08 21:29	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		10/19/08 21:29	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/19/08 21:29	75-09-2	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-MW4 **Lab ID: 9230184002** Collected: 10/15/08 15:20 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		10/19/08 21:29	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/19/08 21:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		10/19/08 21:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		10/19/08 21:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/19/08 21:29	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/19/08 21:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/19/08 21:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/19/08 21:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/19/08 21:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/19/08 21:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/19/08 21:29	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		10/19/08 21:29	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/19/08 21:29	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/19/08 21:29	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/19/08 21:29	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		10/19/08 21:29	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109		1		10/19/08 21:29	460-00-4	
Dibromofluoromethane (S)	96	%	85-115		1		10/19/08 21:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	87	%	79-120		1		10/19/08 21:29	17060-07-0	
Toluene-d8 (S)	99	%	70-120		1		10/19/08 21:29	2037-26-5	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-MW6 **Lab ID: 9230184003** Collected: 10/15/08 14:30 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010								
Arsenic	ND	ug/L	10.0	2.7	1	10/21/08 14:00	10/23/08 00:32	7440-38-2	
Barium	**41.3J**	ug/L	100	0.20	1	10/21/08 14:00	10/23/08 00:32	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	10/21/08 14:00	10/23/08 00:32	7440-43-9	
Chromium	**1.6J**	ug/L	10.0	0.40	1	10/21/08 14:00	10/23/08 00:32	7440-47-3	
Lead	ND	ug/L	10.0	4.0	1	10/21/08 14:00	10/23/08 00:32	7439-92-1	
Selenium	ND	ug/L	10.0	3.8	1	10/21/08 14:00	10/23/08 00:32	7782-49-2	
Silver	**0.27J**	ug/L	10.0	0.10	1	10/21/08 14:00	10/23/08 00:32	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.090	1	10/22/08 14:45	10/23/08 14:44	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	20.0	1		10/19/08 21:53	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		10/19/08 21:53	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/19/08 21:53	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		10/19/08 21:53	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/19/08 21:53	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		10/19/08 21:53	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		10/19/08 21:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		10/19/08 21:53	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		10/19/08 21:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/19/08 21:53	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		10/19/08 21:53	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		10/19/08 21:53	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		10/19/08 21:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/19/08 21:53	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		10/19/08 21:53	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		10/19/08 21:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/19/08 21:53	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		10/19/08 21:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		10/19/08 21:53	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/19/08 21:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		10/19/08 21:53	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		10/19/08 21:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/19/08 21:53	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	0.49	1		10/19/08 21:53	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		10/19/08 21:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		10/19/08 21:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		10/19/08 21:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/19/08 21:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/19/08 21:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/19/08 21:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/19/08 21:53	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		10/19/08 21:53	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		10/19/08 21:53	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/19/08 21:53	75-09-2	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-MW6 **Lab ID: 9230184003** Collected: 10/15/08 14:30 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		10/19/08 21:53	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/19/08 21:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		10/19/08 21:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		10/19/08 21:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/19/08 21:53	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/19/08 21:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/19/08 21:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/19/08 21:53	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/19/08 21:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/19/08 21:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/19/08 21:53	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		10/19/08 21:53	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/19/08 21:53	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/19/08 21:53	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/19/08 21:53	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		10/19/08 21:53	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109		1		10/19/08 21:53	460-00-4	
Dibromofluoromethane (S)	96	%	85-115		1		10/19/08 21:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	79-120		1		10/19/08 21:53	17060-07-0	
Toluene-d8 (S)	97	%	70-120		1		10/19/08 21:53	2037-26-5	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-MW7 **Lab ID: 9230184004** Collected: 10/15/08 15:40 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010								
Arsenic	ND	ug/L	10.0	2.7	1	10/21/08 14:00	10/23/08 00:36	7440-38-2	
Barium	**175**	ug/L	100	0.20	1	10/21/08 14:00	10/23/08 00:36	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	10/21/08 14:00	10/23/08 00:36	7440-43-9	
Chromium	**1.8J**	ug/L	10.0	0.40	1	10/21/08 14:00	10/23/08 00:36	7440-47-3	
Lead	ND	ug/L	10.0	4.0	1	10/21/08 14:00	10/23/08 00:36	7439-92-1	
Selenium	ND	ug/L	10.0	3.8	1	10/21/08 14:00	10/23/08 00:36	7782-49-2	
Silver	**2.8J**	ug/L	10.0	0.10	1	10/21/08 14:00	10/23/08 00:36	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.090	1	10/22/08 14:45	10/23/08 14:46	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	20.0	1		10/19/08 22:17	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		10/19/08 22:17	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/19/08 22:17	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		10/19/08 22:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/19/08 22:17	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		10/19/08 22:17	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		10/19/08 22:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		10/19/08 22:17	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		10/19/08 22:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/19/08 22:17	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		10/19/08 22:17	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		10/19/08 22:17	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		10/19/08 22:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/19/08 22:17	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		10/19/08 22:17	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		10/19/08 22:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/19/08 22:17	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		10/19/08 22:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		10/19/08 22:17	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/19/08 22:17	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		10/19/08 22:17	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		10/19/08 22:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/19/08 22:17	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	0.49	1		10/19/08 22:17	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		10/19/08 22:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		10/19/08 22:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		10/19/08 22:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/19/08 22:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/19/08 22:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/19/08 22:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/19/08 22:17	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		10/19/08 22:17	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		10/19/08 22:17	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/19/08 22:17	75-09-2	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-MW7 **Lab ID: 9230184004** Collected: 10/15/08 15:40 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		10/19/08 22:17	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/19/08 22:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		10/19/08 22:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		10/19/08 22:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/19/08 22:17	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/19/08 22:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/19/08 22:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/19/08 22:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/19/08 22:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/19/08 22:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/19/08 22:17	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		10/19/08 22:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/19/08 22:17	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/19/08 22:17	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/19/08 22:17	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		10/19/08 22:17	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109		1		10/19/08 22:17	460-00-4	
Dibromofluoromethane (S)	100	%	85-115		1		10/19/08 22:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	91	%	79-120		1		10/19/08 22:17	17060-07-0	
Toluene-d8 (S)	97	%	70-120		1		10/19/08 22:17	2037-26-5	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-SW-1 **Lab ID: 9230184005** Collected: 10/15/08 15:25 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010								
Arsenic	ND	ug/L	10.0	2.7	1	10/21/08 14:00	10/23/08 00:42	7440-38-2	
Barium	**32.5J**	ug/L	100	0.20	1	10/21/08 14:00	10/23/08 00:42	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	10/21/08 14:00	10/23/08 00:42	7440-43-9	
Chromium	ND	ug/L	10.0	0.40	1	10/21/08 14:00	10/23/08 00:42	7440-47-3	
Lead	ND	ug/L	10.0	4.0	1	10/21/08 14:00	10/23/08 00:42	7439-92-1	
Selenium	ND	ug/L	10.0	3.8	1	10/21/08 14:00	10/23/08 00:42	7782-49-2	
Silver	**0.13J**	ug/L	10.0	0.10	1	10/21/08 14:00	10/23/08 00:42	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.090	1	10/22/08 14:45	10/23/08 14:49	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	20.0	1		10/19/08 22:40	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		10/19/08 22:40	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/19/08 22:40	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		10/19/08 22:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/19/08 22:40	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		10/19/08 22:40	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		10/19/08 22:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		10/19/08 22:40	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		10/19/08 22:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/19/08 22:40	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		10/19/08 22:40	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		10/19/08 22:40	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		10/19/08 22:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/19/08 22:40	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		10/19/08 22:40	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		10/19/08 22:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/19/08 22:40	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		10/19/08 22:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		10/19/08 22:40	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/19/08 22:40	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		10/19/08 22:40	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		10/19/08 22:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/19/08 22:40	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	0.49	1		10/19/08 22:40	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		10/19/08 22:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		10/19/08 22:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		10/19/08 22:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/19/08 22:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/19/08 22:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/19/08 22:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/19/08 22:40	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		10/19/08 22:40	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		10/19/08 22:40	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/19/08 22:40	75-09-2	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-SW-1 **Lab ID: 9230184005** Collected: 10/15/08 15:25 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		10/19/08 22:40	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/19/08 22:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		10/19/08 22:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		10/19/08 22:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/19/08 22:40	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/19/08 22:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/19/08 22:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/19/08 22:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/19/08 22:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/19/08 22:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/19/08 22:40	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		10/19/08 22:40	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/19/08 22:40	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/19/08 22:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/19/08 22:40	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		10/19/08 22:40	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109		1		10/19/08 22:40	460-00-4	
Dibromofluoromethane (S)	97	%	85-115		1		10/19/08 22:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	88	%	79-120		1		10/19/08 22:40	17060-07-0	
Toluene-d8 (S)	98	%	70-120		1		10/19/08 22:40	2037-26-5	

Date: 10/31/2008 09:50 AM

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-SW-2 **Lab ID: 9230184006** Collected: 10/15/08 12:30 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010								
Arsenic	**4.4J**	ug/L	10.0	2.7	1	10/22/08 12:05	10/23/08 21:30	7440-38-2	
Barium	**41.2J**	ug/L	100	0.20	1	10/22/08 12:05	10/23/08 21:30	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	10/22/08 12:05	10/23/08 21:30	7440-43-9	
Chromium	ND	ug/L	10.0	0.40	1	10/22/08 12:05	10/23/08 21:30	7440-47-3	
Lead	ND	ug/L	10.0	4.0	1	10/22/08 12:05	10/23/08 21:30	7439-92-1	
Selenium	**8.5J**	ug/L	10.0	3.8	1	10/22/08 12:05	10/23/08 21:30	7782-49-2	
Silver	**0.11J**	ug/L	10.0	0.10	1	10/22/08 12:05	10/23/08 21:30	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.090	1	10/22/08 14:45	10/23/08 14:51	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	20.0	1		10/19/08 23:04	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		10/19/08 23:04	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/19/08 23:04	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		10/19/08 23:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/19/08 23:04	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		10/19/08 23:04	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		10/19/08 23:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		10/19/08 23:04	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		10/19/08 23:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/19/08 23:04	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		10/19/08 23:04	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		10/19/08 23:04	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		10/19/08 23:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/19/08 23:04	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		10/19/08 23:04	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		10/19/08 23:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/19/08 23:04	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		10/19/08 23:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		10/19/08 23:04	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/19/08 23:04	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		10/19/08 23:04	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		10/19/08 23:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/19/08 23:04	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	0.49	1		10/19/08 23:04	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		10/19/08 23:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		10/19/08 23:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		10/19/08 23:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/19/08 23:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/19/08 23:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/19/08 23:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/19/08 23:04	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		10/19/08 23:04	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		10/19/08 23:04	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/19/08 23:04	75-09-2	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-SW-2 **Lab ID: 9230184006** Collected: 10/15/08 12:30 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		10/19/08 23:04	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/19/08 23:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		10/19/08 23:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		10/19/08 23:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/19/08 23:04	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/19/08 23:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/19/08 23:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/19/08 23:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/19/08 23:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/19/08 23:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/19/08 23:04	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		10/19/08 23:04	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/19/08 23:04	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/19/08 23:04	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/19/08 23:04	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		10/19/08 23:04	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109		1		10/19/08 23:04	460-00-4	
Dibromofluoromethane (S)	99	%	85-115		1		10/19/08 23:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	90	%	79-120		1		10/19/08 23:04	17060-07-0	
Toluene-d8 (S)	98	%	70-120		1		10/19/08 23:04	2037-26-5	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-FIELD BLANK **Lab ID: 9230184007** Collected: 10/15/08 15:50 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010								
Arsenic	ND	ug/L	10.0	2.7	1	10/22/08 12:05	10/23/08 21:38	7440-38-2	
Barium	ND	ug/L	100	0.20	1	10/22/08 12:05	10/23/08 21:38	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	10/22/08 12:05	10/23/08 21:38	7440-43-9	
Chromium	ND	ug/L	10.0	0.40	1	10/22/08 12:05	10/23/08 21:38	7440-47-3	
Lead	ND	ug/L	10.0	4.0	1	10/22/08 12:05	10/23/08 21:38	7439-92-1	
Selenium	**5.6J**	ug/L	10.0	3.8	1	10/22/08 12:05	10/23/08 21:38	7782-49-2	
Silver	ND	ug/L	10.0	0.10	1	10/22/08 12:05	10/23/08 21:38	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.090	1	10/22/08 14:45	10/23/08 14:54	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	**20.9J**	ug/L	100	20.0	1		10/19/08 17:32	67-64-1	C9
Acrylonitrile	ND	ug/L	200	1.9	1		10/19/08 17:32	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/19/08 17:32	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		10/19/08 17:32	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/19/08 17:32	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		10/19/08 17:32	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		10/19/08 17:32	74-83-9	
2-Butanone (MEK)	**2.1J**	ug/L	100	0.96	1		10/19/08 17:32	78-93-3	C9
Carbon disulfide	ND	ug/L	100	1.2	1		10/19/08 17:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/19/08 17:32	56-23-5	
Chlorobenzene	**0.63J**	ug/L	3.0	0.23	1		10/19/08 17:32	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		10/19/08 17:32	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		10/19/08 17:32	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/19/08 17:32	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		10/19/08 17:32	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		10/19/08 17:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/19/08 17:32	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		10/19/08 17:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		10/19/08 17:32	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/19/08 17:32	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		10/19/08 17:32	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		10/19/08 17:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/19/08 17:32	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	0.49	1		10/19/08 17:32	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		10/19/08 17:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		10/19/08 17:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		10/19/08 17:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/19/08 17:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/19/08 17:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/19/08 17:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/19/08 17:32	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		10/19/08 17:32	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		10/19/08 17:32	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/19/08 17:32	75-09-2	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-FIELD BLANK **Lab ID: 9230184007** Collected: 10/15/08 15:50 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		10/19/08 17:32	108-10-1	
Styrene	**0.36J**	ug/L	1.0	0.26	1		10/19/08 17:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		10/19/08 17:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		10/19/08 17:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/19/08 17:32	127-18-4	
Toluene	**9.0**	ug/L	1.0	0.26	1		10/19/08 17:32	108-88-3	C9
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/19/08 17:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/19/08 17:32	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/19/08 17:32	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/19/08 17:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/19/08 17:32	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		10/19/08 17:32	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/19/08 17:32	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/19/08 17:32	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/19/08 17:32	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		10/19/08 17:32	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109		1		10/19/08 17:32	460-00-4	
Dibromofluoromethane (S)	95	%	85-115		1		10/19/08 17:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	88	%	79-120		1		10/19/08 17:32	17060-07-0	
Toluene-d8 (S)	99	%	70-120		1		10/19/08 17:32	2037-26-5	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-TRIP BLANK **Lab ID: 9230184008** Collected: 10/15/08 00:00 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	**24.0J**	ug/L	100	20.0	1		10/19/08 17:56	67-64-1	C9
Acrylonitrile	ND	ug/L	200	1.9	1		10/19/08 17:56	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/19/08 17:56	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		10/19/08 17:56	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/19/08 17:56	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		10/19/08 17:56	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		10/19/08 17:56	74-83-9	
2-Butanone (MEK)	**2.3J**	ug/L	100	0.96	1		10/19/08 17:56	78-93-3	C9
Carbon disulfide	ND	ug/L	100	1.2	1		10/19/08 17:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/19/08 17:56	56-23-5	
Chlorobenzene	**0.64J**	ug/L	3.0	0.23	1		10/19/08 17:56	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		10/19/08 17:56	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		10/19/08 17:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/19/08 17:56	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		10/19/08 17:56	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		10/19/08 17:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/19/08 17:56	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		10/19/08 17:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		10/19/08 17:56	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/19/08 17:56	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		10/19/08 17:56	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		10/19/08 17:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/19/08 17:56	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	0.49	1		10/19/08 17:56	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		10/19/08 17:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		10/19/08 17:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		10/19/08 17:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/19/08 17:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/19/08 17:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/19/08 17:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/19/08 17:56	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		10/19/08 17:56	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		10/19/08 17:56	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/19/08 17:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		10/19/08 17:56	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/19/08 17:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		10/19/08 17:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		10/19/08 17:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/19/08 17:56	127-18-4	
Toluene	**9.6**	ug/L	1.0	0.26	1		10/19/08 17:56	108-88-3	C9
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/19/08 17:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/19/08 17:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/19/08 17:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/19/08 17:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/19/08 17:56	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		10/19/08 17:56	108-05-4	

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ANALYTICAL RESULTS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

Sample: 0105-TRIP BLANK **Lab ID: 9230184008** Collected: 10/15/08 00:00 Received: 10/16/08 13:43 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/19/08 17:56	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/19/08 17:56	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/19/08 17:56	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		10/19/08 17:56	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109		1		10/19/08 17:56	460-00-4	
Dibromofluoromethane (S)	97	%	85-115		1		10/19/08 17:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	79-120		1		10/19/08 17:56	17060-07-0	
Toluene-d8 (S)	98	%	70-120		1		10/19/08 17:56	2037-26-5	

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QUALITY CONTROL DATA

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

QC Batch: MSV/4975
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9230184001, 9230184002, 9230184003, 9230184004, 9230184005, 9230184006, 9230184007, 9230184008

METHOD BLANK: 184823
Matrix: Water
Associated Lab Samples: 9230184001, 9230184002, 9230184003, 9230184004, 9230184005, 9230184006, 9230184007, 9230184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	10/19/08 17:08	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/19/08 17:08	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	10/19/08 17:08	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/19/08 17:08	
1,1-Dichloroethane	ug/L	ND	5.0	10/19/08 17:08	
1,1-Dichloroethene	ug/L	ND	5.0	10/19/08 17:08	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/19/08 17:08	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	10/19/08 17:08	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/19/08 17:08	
1,2-Dichlorobenzene	ug/L	ND	5.0	10/19/08 17:08	
1,2-Dichloroethane	ug/L	ND	1.0	10/19/08 17:08	
1,2-Dichloroethene (Total)	ug/L	ND	5.0	10/19/08 17:08	
1,2-Dichloropropane	ug/L	ND	1.0	10/19/08 17:08	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/19/08 17:08	
2-Butanone (MEK)	ug/L	ND	100	10/19/08 17:08	
2-Hexanone	ug/L	ND	50.0	10/19/08 17:08	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	10/19/08 17:08	
Acetone	ug/L	ND	100	10/19/08 17:08	
Acrylonitrile	ug/L	ND	200	10/19/08 17:08	
Benzene	ug/L	ND	1.0	10/19/08 17:08	
Bromochloromethane	ug/L	ND	3.0	10/19/08 17:08	
Bromodichloromethane	ug/L	ND	1.0	10/19/08 17:08	
Bromoform	ug/L	ND	3.0	10/19/08 17:08	
Bromomethane	ug/L	ND	10.0	10/19/08 17:08	
Carbon disulfide	ug/L	ND	100	10/19/08 17:08	
Carbon tetrachloride	ug/L	ND	1.0	10/19/08 17:08	
Chlorobenzene	ug/L	ND	3.0	10/19/08 17:08	
Chloroethane	ug/L	ND	10.0	10/19/08 17:08	
Chloroform	ug/L	0.36J	5.0	10/19/08 17:08	
Chloromethane	ug/L	ND	1.0	10/19/08 17:08	
cis-1,2-Dichloroethene	ug/L	ND	5.0	10/19/08 17:08	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/19/08 17:08	
Dibromochloromethane	ug/L	ND	3.0	10/19/08 17:08	
Dibromomethane	ug/L	ND	10.0	10/19/08 17:08	
Ethylbenzene	ug/L	ND	1.0	10/19/08 17:08	
Iodomethane	ug/L	ND	10.0	10/19/08 17:08	
m&p-Xylene	ug/L	ND	2.0	10/19/08 17:08	
Methylene Chloride	ug/L	ND	2.0	10/19/08 17:08	
o-Xylene	ug/L	ND	1.0	10/19/08 17:08	
Styrene	ug/L	ND	1.0	10/19/08 17:08	
Tetrachloroethene	ug/L	ND	1.0	10/19/08 17:08	
Toluene	ug/L	ND	1.0	10/19/08 17:08	
trans-1,2-Dichloroethene	ug/L	ND	5.0	10/19/08 17:08	

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QUALITY CONTROL DATA

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

METHOD BLANK: 184823 Matrix: Water
Associated Lab Samples: 9230184001, 9230184002, 9230184003, 9230184004, 9230184005, 9230184006, 9230184007, 9230184008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/19/08 17:08	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	10/19/08 17:08	
Trichloroethene	ug/L	ND	1.0	10/19/08 17:08	
Trichlorofluoromethane	ug/L	ND	1.0	10/19/08 17:08	
Vinyl acetate	ug/L	ND	50.0	10/19/08 17:08	
Vinyl chloride	ug/L	ND	1.0	10/19/08 17:08	
Xylene (Total)	ug/L	ND	2.0	10/19/08 17:08	
1,2-Dichloroethane-d4 (S)	%	89	79-120	10/19/08 17:08	
4-Bromofluorobenzene (S)	%	102	87-109	10/19/08 17:08	
Dibromofluoromethane (S)	%	96	85-115	10/19/08 17:08	
Toluene-d8 (S)	%	98	70-120	10/19/08 17:08	

LABORATORY CONTROL SAMPLE: 184824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.6	101	83-125	
1,1,1-Trichloroethane	ug/L	50	45.0	90	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	48.5	97	73-127	
1,1,2-Trichloroethane	ug/L	50	50.6	101	77-123	
1,1-Dichloroethane	ug/L	50	46.8	94	76-129	
1,1-Dichloroethene	ug/L	50	45.4	91	78-146	
1,2,3-Trichloropropane	ug/L	50	49.4	99	72-125	
1,2-Dibromo-3-chloropropane	ug/L	50	46.8	94	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	49.8	100	81-125	
1,2-Dichlorobenzene	ug/L	50	49.8	100	82-126	
1,2-Dichloroethane	ug/L	50	46.6	93	72-126	
1,2-Dichloroethene (Total)	ug/L	100	93.1	93	50-150	
1,2-Dichloropropane	ug/L	50	47.6	95	80-127	
1,4-Dichlorobenzene	ug/L	50	48.6	97	79-125	
2-Butanone (MEK)	ug/L	100	86.5J	86	50-134	
2-Hexanone	ug/L	100	94.1	94	58-138	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.2J	96	70-131	
Acetone	ug/L	100	86.9J	87	50-146	
Acrylonitrile	ug/L	250	252	101	66-124	
Benzene	ug/L	50	47.1	94	78-128	
Bromochloromethane	ug/L	50	50.6	101	73-124	
Bromodichloromethane	ug/L	50	50.4	101	81-125	
Bromoform	ug/L	50	45.5	91	71-125	
Bromomethane	ug/L	50	50.7	101	50-150	
Carbon disulfide	ug/L	50	45.4J	91	54-150	
Carbon tetrachloride	ug/L	50	53.8	108	81-137	
Chlorobenzene	ug/L	50	47.9	96	82-126	
Chloroethane	ug/L	50	38.8	78	69-140	
Chloroform	ug/L	50	48.0	96	77-129	
Chloromethane	ug/L	50	43.9	88	54-139	

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QUALITY CONTROL DATA

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

LABORATORY CONTROL SAMPLE: 184824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	48.1	96	76-133	
cis-1,3-Dichloropropene	ug/L	50	50.0	100	76-127	
Dibromochloromethane	ug/L	50	46.2	92	77-125	
Dibromomethane	ug/L	50	53.2	106	77-125	
Ethylbenzene	ug/L	50	48.1	96	80-127	
Iodomethane	ug/L	100	106	106	65-172	
m&p-Xylene	ug/L	100	93.0	93	82-127	
Methylene Chloride	ug/L	50	45.8	92	67-133	
o-Xylene	ug/L	50	47.3	95	83-124	
Styrene	ug/L	50	52.0	104	80-130	
Tetrachloroethene	ug/L	50	50.3	101	78-128	
Toluene	ug/L	50	49.5	99	76-126	
trans-1,2-Dichloroethene	ug/L	50	44.9	90	78-134	
trans-1,3-Dichloropropene	ug/L	50	46.5	93	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	47.4J	95	51-140	
Trichloroethene	ug/L	50	49.2	98	79-127	
Trichlorofluoromethane	ug/L	50	44.5	89	76-148	
Vinyl acetate	ug/L	100	95.7	96	50-150	
Vinyl chloride	ug/L	50	46.4	93	67-143	
Xylene (Total)	ug/L	150	140	94	83-125	
1,2-Dichloroethane-d4 (S)	%			93	79-120	
4-Bromofluorobenzene (S)	%			104	87-109	
Dibromofluoromethane (S)	%			93	85-115	
Toluene-d8 (S)	%			99	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 184825 184826

Parameter	Units	9230184001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	56.8	51.7	114	103	60-150	9	30	
Benzene	ug/L	ND	50	50	58.8	56.3	118	113	74-136	4	30	
Chlorobenzene	ug/L	ND	50	50	57.9	56.0	116	112	79-135	3	30	
Toluene	ug/L	ND	50	50	60.9	57.6	122	115	73-131	6	30	
Trichloroethene	ug/L	ND	50	50	61.0	58.1	122	116	73-131	5	30	
1,2-Dichloroethane-d4 (S)	%						87	89	79-120			
4-Bromofluorobenzene (S)	%						103	104	87-109			
Dibromofluoromethane (S)	%						95	96	85-115			
Toluene-d8 (S)	%						98	97	70-120			

Date: 10/31/2008 09:50 AM

REPORT OF LABORATORY ANALYSIS

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(704)875-9092

QUALITY CONTROL DATA

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

QC Batch: MPRP/3212
QC Batch Method: EPA 3010
Analysis Method: EPA 6010 GW North Carolina
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 9230184001, 9230184002, 9230184003, 9230184004, 9230184005

METHOD BLANK: 185284
Matrix: Water
Associated Lab Samples: 9230184001, 9230184002, 9230184003, 9230184004, 9230184005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	10/22/08 22:47	
Barium	ug/L	ND	100	10/22/08 22:47	
Cadmium	ug/L	ND	1.0	10/22/08 22:47	
Chromium	ug/L	ND	10.0	10/22/08 22:47	
Lead	ug/L	ND	10.0	10/22/08 22:47	
Selenium	ug/L	ND	10.0	10/22/08 22:47	
Silver	ug/L	ND	10.0	10/22/08 22:47	

LABORATORY CONTROL SAMPLE: 185285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	499	100	80-120	
Barium	ug/L	500	480	96	80-120	
Cadmium	ug/L	500	499	100	80-120	
Chromium	ug/L	500	502	100	80-120	
Lead	ug/L	500	500	100	80-120	
Selenium	ug/L	500	483	97	80-120	
Silver	ug/L	250	249	100	80-120	

MATRIX SPIKE SAMPLE: 185286

Parameter	Units	9230184001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	ND	500	495	99	75-125	
Barium	ug/L	73.8J	500	536	92	75-125	
Cadmium	ug/L	ND	500	484	97	75-125	
Chromium	ug/L	15.3	500	513	100	75-125	
Lead	ug/L	ND	500	472	94	75-125	
Selenium	ug/L	4.4J	500	478	95	75-125	
Silver	ug/L	0.21J	250	246	98	75-125	

SAMPLE DUPLICATE: 185287

Parameter	Units	9230184001 Result	Dup Result	RPD	Max RPD	Qualifiers
Arsenic	ug/L	ND	5.0J		25	
Barium	ug/L	73.8J	77.5J	5	25	
Cadmium	ug/L	ND	ND		25	
Chromium	ug/L	15.3	16.3	6	25	
Lead	ug/L	ND	ND		25	

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REPORT OF LABORATORY ANALYSIS

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(704)875-9092

QUALITY CONTROL DATA

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

SAMPLE DUPLICATE: 185287

Parameter	Units	9230184001 Result	Dup Result	RPD	Max RPD	Qualifiers
Selenium	ug/L	4.4J	5.0J		25	
Silver	ug/L	0.21J	0.20J		25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

QC Batch: MERP/1772
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 9230184001, 9230184002, 9230184003, 9230184004, 9230184005, 9230184006, 9230184007

METHOD BLANK: 185856
Matrix: Water
Associated Lab Samples: 9230184001, 9230184002, 9230184003, 9230184004, 9230184005, 9230184006, 9230184007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	10/23/08 13:44	

LABORATORY CONTROL SAMPLE: 185857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.2	86	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 185913 185914

Parameter	Units	9230184001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	3.6	1.8	146	71	75-125	69	25	M0,R1

SAMPLE DUPLICATE: 185915

Parameter	Units	9230184002 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	ug/L	ND	ND		25	

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QUALITY CONTROL DATA

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

QC Batch: MPRP/3223
QC Batch Method: EPA 3010
Analysis Method: EPA 6010 GW North Carolina
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 9230184006, 9230184007

METHOD BLANK: 185940
Matrix: Water
Associated Lab Samples: 9230184006, 9230184007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	10/23/08 21:23	
Barium	ug/L	ND	100	10/23/08 21:23	
Cadmium	ug/L	ND	1.0	10/23/08 21:23	
Chromium	ug/L	ND	10.0	10/23/08 21:23	
Lead	ug/L	ND	10.0	10/23/08 21:23	
Selenium	ug/L	ND	10.0	10/23/08 21:23	
Silver	ug/L	ND	10.0	10/23/08 21:23	

LABORATORY CONTROL SAMPLE: 185941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	506	101	80-120	
Barium	ug/L	500	498	100	80-120	
Cadmium	ug/L	500	510	102	80-120	
Chromium	ug/L	500	509	102	80-120	
Lead	ug/L	500	512	102	80-120	
Selenium	ug/L	500	488	98	80-120	
Silver	ug/L	250	252	101	80-120	

MATRIX SPIKE SAMPLE: 185942

Parameter	Units	9230184006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	4.4J	500	501	99	75-125	
Barium	ug/L	41.2J	500	522	96	75-125	
Cadmium	ug/L	ND	500	496	99	75-125	
Chromium	ug/L	ND	500	495	99	75-125	
Lead	ug/L	ND	500	495	99	75-125	
Selenium	ug/L	8.5J	500	485	95	75-125	
Silver	ug/L	0.11J	250	246	98	75-125	

SAMPLE DUPLICATE: 185943

Parameter	Units	9230184007 Result	Dup Result	RPD	Max RPD	Qualifiers
Arsenic	ug/L	ND	ND		25	
Barium	ug/L	ND	ND		25	
Cadmium	ug/L	ND	ND		25	
Chromium	ug/L	ND	ND		25	
Lead	ug/L	ND	ND		25	

Date: 10/31/2008 09:50 AM

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QUALITY CONTROL DATA

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

SAMPLE DUPLICATE: 185943

Parameter	Units	9230184007 Result	Dup Result	RPD	Max RPD	Qualifiers
Selenium	ug/L	5.6J	ND		25	
Silver	ug/L	ND	ND		25	

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QUALIFIERS

Project: COBLE'S SANDROCK
Pace Project No.: 9230184

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
S - Surrogate
1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

C9	Common Laboratory Contaminant.
M0	Matrix spike recovery was outside laboratory control limits.
R1	RPD value was outside control limits.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1174646

Section A Required Client Information:

Company: Joyce Engineering, Inc.
Address: 2211 W. Meadowview Rd Ste 101, Greensboro, NC 27407
Email To: kerly@joyceengineering.com
Phone: 336-323-0092 Fax: 336-323-0073
Requested Due Date/TAT: 10 Day

Section B Required Project Information:

Report To: Jeremey Kerly
Copy To:
Purchase Order No.:
Project Name: Cobb's Sandrock
Project Number: 419.00.29

Section C Invoice Information:

Attention: Lecia Jones
Company Name: Joyce Engineering, Inc.
Address: 1604 Ownley Ln. Richmond VA 23222
Pace Quote Reference:
Pace Project Manager: Kevin Godwin
Pace Profile #: 2186-11

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	RCRA Metals	VOC App. I 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~0105 - MW1~~	WT	G			~~10-15-08~~			~~4~~			X	X					X	X			No Sample
2	0105 - MW2 MS/MSD	WT	G			10-15-08	15:00	19.1	12			X	X					X	X			001
3	0105 - MW4	WT	G			10-15-08	15:20	19.7	4			X	X					X	X			
4	0105 - MW6	WT	G			10-15-08	14:30	19.3	4			X	X					X	X			
5	0105 - MW7	WT	G			10-15-08	15:40	19.9	4			X	X					X	X			
6	0105 - SW1	WT	G			10-15-08	15:25	19.6	4			X	X					X	X			
7	0105 - SW2	WT	G			10-15-08	12:30	18.8	4			X	X					X	X			
8	0105 - Field blank	WT	G			10-15-08	16:50	-	4			X	X					X	X			
9	0105 - Trip blank	WT	G			—	—	-	2				X						X			
10																						
11																						
12																						

9230184

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Daniel Hirdner	10-16-08	10:43	pace CLT	10-16-08	10:43
	pace clt	10-16-08	13:43		10/16/08	1343

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
4.7	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Carrie Mitchell Daniel Hirdner

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/15/08

ORIGINAL

DATE: 10/15/08

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: COBLE'S SANDROCK & LF **Project No./Task No.:** 419.00.29

Well ID: 0105-MW2 **Sampler(s):** D. Girdner / C. Mitchell

Well Location: near top of hill; west side of LF

Well Diameter: 2 inches

Initial Depth to Water (DTW): 14.20 feet

Depth to Bottom (DTB): 22.98 feet

Water Column Thickness (WCT): 8.78 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.44 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 4.32 gallons

Actual Amount Purged/Bailed : 4.50 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 14.25 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	11:00	17.6	5.06	74.3	95	DG
1.44	11:03	17.2	4.74	77.0	871	DG
2.88	11:06	17.0	4.82	68.8	506	DG
4.32	11:09	16.8	4.87	69.8	745	DG
Before Sampling	15:00	19.1	5.00	77.8	292	DG

Comments (weather conditions, odor, color, silt, etc.):

Sunny, fair, mid 70's

Signature: [signature] **Date:** 10/15/08

QA/QC Sign Off: [signature] **Date:** 2-3-09

DATE: 10/15/08

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: COBLE'S SANDROCK & LF **Project No./Task No.:** 419.00.29

Well ID: 0105-MW4 **Sampler(s):** D. Girdner / C. Mitchell

Well Location: between MW-5 and MW-2

Well Diameter: 2 inches

Initial Depth to Water (DTW): 13.64 feet

Depth to Bottom (DTB): 24.22 feet

Water Column Thickness (WCT): 10.58 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.72 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 5.16 gallons

Actual Amount Purged/Bailed : 5.16 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 13.50 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	11:23	19.2	5.08	60.0	41.6	CM
1.72	11:26	18.2	4.57	62.7	138	CM
3.44	11:29	17.9	4.77	67.2	120	CM
5.16	11:33	17.8	4.90	72.9	127	CM
Before Sampling	15:20	19.7	5.28	87.9	48.7	CM

Comments (weather conditions, odor, color, silt, etc.):

Sunny, 70's

Signature: [signature] **Date:** 10/15/08

QA/QC Sign Off: [signature] **Date:** 2-3-09

DATE: 10/15/08

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: COBLE'S SANDROCK & LF **Project No./Task No.:** 419.00.29

Well ID: 0105-MW6 **Sampler(s):** D. Girdner / C. Mitchell

Well Location: flush mount in field that is fenced before the fill area (former P-3)

Well Diameter: 2 inches

Initial Depth to Water (DTW): 26.70 feet

Depth to Bottom (DTB): 41.00 feet

Water Column Thickness (WCT): 14.30 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 2.33 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 6.99 gallons

Actual Amount Purged/Bailed : 7.00 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 26.66 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	10:28	16.4	6.44	193	18.0	CM
2.33	10:33	16.2	5.06	200	72	CM
4.66	10:37	15.9	4.87	202	207	CM
6.99	10:41	15.9	4.99	199	38	CM
Before Sampling	14:30	19.3	6.78	188	28.6	CM

Comments (weather conditions, odor, color, silt, etc.):

Sunny, 70's

Signature: [signature] **Date:** 10/15/08

QA/QC Sign Off: [signature] **Date:** 2-3-09

DATE: 10/15/08

JOYCE ENGINEERING, INC.

GROUND WATER SAMPLING LOG

Project Name: COBLE'S SANDROCK & LF **Project No./Task No.:** 419.00.29

Well ID: 0105-MW7 **Sampler(s):** D. Girdner / C. Mitchell

Well Location: Westside of the landfill near MW5

Well Diameter: 2 inches

Initial Depth to Water (DTW): 9.69 feet

Depth to Bottom (DTB): 16.00 feet

Water Column Thickness (WCT): 6.31 feet [DTB-DTW]

Calculation for One Well Volume (WV):

For 2" Well: WCT X 0.163 = 1.03 gallons

For 4" Well: WCT X 0.653 = _____ gallons

For THREE Well Volumes: WV X 3 = 3.09 gallons

Actual Amount Purged/Bailed : 3.10 gallons

Purged with: disposable bailer

Sampled with: disposable bailer

Depth to Water before Sampling: 9.69 feet

Gallons	Time	Temp(°C)	pH	Cond. (µS)	Turb.(ntu)	Initials
0	11:47	19.5	5.57	1150	112	DG
1.03	11:50	19.4	5.80	1096	497	DG
2.06	11:52	19.3	5.80	1117	619	DG
3.09	11:55	19.5	5.76	936	773	DG
Before Sampling	15:40	19.9	5.69	1200	24.3	DG

Comments (weather conditions, odor, color, silt, etc.):

Sunny, fair, 77

Signature: [signature] **Date:** 10/15/08

QA/QC Sign Off: [signature] **Date:** 2-3-09

DATE: 10/15/08

JOYCE ENGINEERING, INC.

SURFACE WATER MONITORING LOG

Project Name: COBLE'S SANDROCK LF **Project/Task No.:** 419.00.29

Surface Point ID: 0105-SW1 **Sampler(s):** D. Girdner / C. Mitchell

Location: Stream near MW4

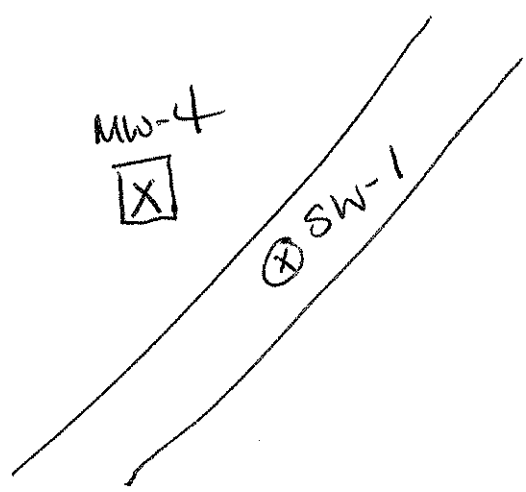
Field Parameters:

Time of Sampling:	15:25	
pH:	5.58	
Temperature :	19.6	(°C)
Conductivity :	131.3	(µS)
Turbidity :	5.73	(ntu)

Comments/Sample Description(weather conditions, odor, color, silt, etc.):

Sunny, 80's

Sketch of Sample Location (include flow direction, drainage pathways, etc.):



Signature: Carri Mitchell **Date:** 10/15/08

QA/QC Sign Off: [illegible] **Date:** 2-3-09

DATE: 10/15/08

JOYCE ENGINEERING, INC.

SURFACE WATER MONITORING LOG

Project Name: COBLE'S SANDROCK LF **Project/Task No.:** 419.00.29

Surface Point ID: 0105-SW2 **Sampler(s):** D. Girdner / C. Mitchell

Location: off bridge in woods

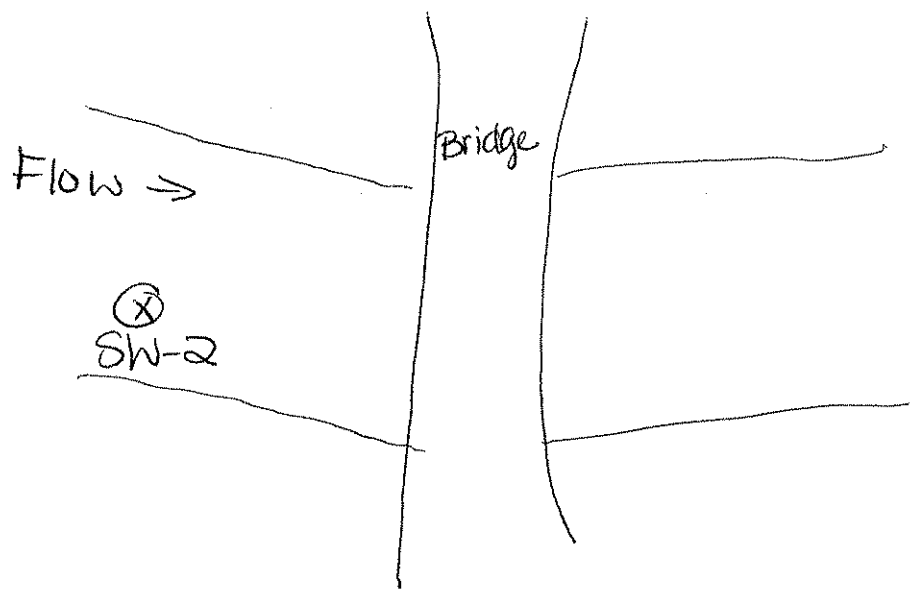
Field Parameters:

Time of Sampling:	12:30	
pH:	6.68	
Temperature :	18.3	(°C)
Conductivity :	197.1	(µS)
Turbidity :	5.71	(ntu)

Comments/Sample Description(weather conditions, odor, color, silt, etc.):

Sunny, 80's

Sketch of Sample Location (include flow direction, drainage pathways, etc.):



Signature: Carrie Mitchell **Date:** 10/15/08

QA/QC Sign Off: [illegible] **Date:** 2-3-09