Groundwater Contamination Summary Report

Prepared for

Cherokee County Subtitle D Lined Landfill
Marble, North Carolina

Permit Number: 20-02
MESCO Project Number: G10054.0

Submitted on October 21, 2010

Municipal Services Garner, NC
Engineering Company, P.A. Boone, NC

Municipal Engineering Services Company, P.A.
Garner, Boone and Morehead City, North Carolina

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OPERATION/CONSTRUCTION MANAGERS
Municipal Services
CIVIL/SANITARY ENGINEERS
Engineering Company, P.A.

October 21, 2010

Mr. Ervin Lane
Solid Waste Section - Compliance
Division of Waste Management
North Carolina Department of Environment and Natural Resources
401 Oberlin Road, Suite 150
Raleigh, NC 27605

Re: **Groundwater Contamination Summary Report**
Cherokee County Subtitle D Lined MSW Landfill
10160 US Hwy 19
Murphy, NC 28905
Permit No. 20-02

Mr. Lane:

Municipal Engineering Services Co., P.A. (MESCO), on behalf of Cherokee County, appreciates the opportunity to present this Groundwater Contamination Summary Report (Report) to the Solid Waste Section (SWS). This Report has been prepared in response to comments from your February 3, 2010 letter regarding MESCO's August 2009 *Groundwater Sampling Report and Statistical Analysis*, and in accordance with MESCO's Groundwater Contamination Assessment Plan (Plan), dated March 22, 2010 and approved by the SWS on March 26, 2010. The primary objective of the plan was to characterize the extent of the horizontal and vertical contamination in the vicinity of MW-6D and MW-7.

BACKGROUND

As proposed in our March 22, 2010 Plan, there were two areas to be evaluated. The first area of concern is located south of the lined Phase 1 unit near MW-6S and MW-6D; surveyed approximately 115 feet from the liner limit at the slope toe. Groundwater, in this immediate area, generally flows southerly towards the Valley River, the primary discharge feature. MW-6S was installed to a depth of approximately 20 feet below ground surface (bgs) and is screened in partially weathered rock (PWR) and rock. MW-6D was installed to a depth of approximately 50 feet bgs and is screened entirely in gneiss.

Elevated levels of volatile organic compounds (VOCs) detected above the North Carolina Groundwater Standard, as promulgated in 15A NCAC 2L (2L), in the area of MW-6S and MW-6D have been reported in past semi-annual sampling events. In January 2006, three wells were installed approximately at the 250-foot compliance boundary to monitor possible leachate migration. P-17 was installed to a depth of approximately 12.82 feet bgs, P-18 was installed to a depth of approximately 16.6 feet bgs and P-19 was installed to a depth of approximately 11.9 feet bgs. There have been no reported 2L violations of Appendix I or Appendix II listed constituents in these wells.

A second area of concern, near MW-7, is located south of the Phase 1 and 2 lined units. MW-7 was installed approximately 125 feet from the liner limit to a depth of approximately 25 feet bgs and was screened in sand and gravel. Groundwater, in this area, also generally flows in a southerly direction

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towards the primary drainage feature of the Valley River. Historically, detections in this area have not warranted further assessment.

A record of historic VOC detections is included as **Table 1.** A historic VOC exceedance list is shown on **Table 2**. Surveyed well locations are shown on **Plate 1**.

WORK PLAN IMPLEMENTATION

MESCO instituted the following actions to address the identified concerns:

1.) Deep Well P-18D, was installed adjacent to P-18 to delineate the vertical extent of the MW-6D plume. P-18D was advanced to approximately 54.43 feet bgs and was screened in rock.

2.) Well cluster pair, P-20S and P-20D, was installed approximately 250 feet from the estimated extent of waste south of MW-7 to delineate the shallow and deep extent of the MW-7 plume. P-20S was installed to a depth of approximately 20.43 feet bgs with the screen spanning the water table. P-20D was installed to approximately 42.92 feet bgs and was screened in rock.

3.) Additional well P-21 was drilled to approximately 17.20 feet bgs; and is located approximately 45 feet beyond P-20S and P-20D, 25 feet across the compliance boundary, and 80 feet from the Valley River. P-21 was installed to delineate possible contamination due to the complex alluvial lithology.

4.) An additional Surface Water Monitoring Location, SW-5, was added on the Valley River downstream of the impacted wells, to monitor stream impact. It will be included in four consecutive semi-annual sampling events, the first occurred August 31, 2010.

5.) P-17, P-18, P-18D, P-19, P-20S and P-20D will be included as temporary sampling locations for Appendix I VOCs for four semi-annual sampling events, to delineate the shallow and deep plumes, if any. The wells were sampled during the semi-annual sampling event on August 31, 2010.

Drilling

Landprobe Drilling Services, LLC (Landprobe) was employed by MESCO to install and develop P-18D, P-20S, P-20D and P-21. Landprobe successfully installed P-18D, P-20S and P-21 between June 14-25, 2010. P-20D was installed in a separate mobilization between August 25-30, 2010. P-18D was installed to 54.43 feet bgs as a Type III well. P-20S was installed to a depth of 20.43 feet bgs. P-20D was installed to 42.92 feet bgs as a Type III well. P-21 was installed to 17.20 feet bgs. Wells were constructed in accordance with NCAC 2C Rules. Deep wells were installed as Type III wells to prevent communication between shallow and deep wells, and ensure quality samples could be obtained in the river sediments. Well boring logs and construction information is assembled in **Appendix A**.

Newly installed wells were surveyed on September 22, 2010 by Southern Boundary Surveying Company of Marble, NC. Surveyed well locations are found on **Plate 1**.

Sampling and Analytical

Groundwater samples were collected from wells MW-6S, MW-6D, MW-7, MW-8, P-17, P-18, P-18D, P-19, P-20S, P-20D and P-21 as part of a semi-annual sampling event, conducted August 31, 2010.

Analytical results for this event are presented in **Table 3**. A single-day potentiometric map has been created based on water levels recorded during the sampling event. In general, the localized groundwater flows southerly, beneath the site, towards the Valley River. The single-day map is found as **Plate 2**.

Parameters detected at levels above their respective above 2L Standards include 1, 4-dichlorobenene, tetrachloroethene and vinyl chloride. A surface water sample analyzed from SW-5 had no VOC concentrations at levels above the laboratory method detection limits (MDL). MESCO personnel used the laboratory data to delineate the extent of Appendix I VOC contamination, in the shallow and bedrock aquifers. Laboratory results are included as **Appendix B**.

RESULTS

In the area surrounding MW-6S and MW-6D, VOC contamination does not appear to have spread beyond the compliance boundary. P-17, P-18, P-18D and P-19, located within the compliance boundary, did not contain elevated levels of VOCs. SW-5 also showed no VOC influence. The Valley River is a major confining feature for the landfill; in the event contamination were ever to pass the compliance boundary, localized groundwater and neighboring properties should be protected by flow directions as well as stream dilution.

Further delineation of MW-7 required installation of three new wells: P-20S, P-20D and P-21. Data collected during the August semi-annual sampling event detected tetrachloroethene in P-20S slightly above the 2L Standard. A confirmation event for P-20S, collected October 5, 2010, indicated conditions below 2L, suggesting the possible plume edge. No VOC parameters were detected above their 2L Standard in P-20D or P-21, indicating the horizontal and vertical extent of VOC contamination has been delineated within the compliance boundary. No VOC detects in MW-8 suggest the horizontal contamination extent is generally limited to around MW-7.

CLOSING

Municipal Engineering Services Co., P.A., on behalf of Cherokee County, appreciates the opportunity to submit this Summary Report to the Solid Waste Section. Please contact us at (919) 772-5393 or by e-mail at mgerman@mesco.com or mbrown@mesco.com if you have any questions or comments.

Sincerely,
MUNICIPAL ENGINEERING SERVICES CO., P.A.

NORTH CAROLINA LICENSED SEAL 1711 10/22/10 GEOLOGIST MARK BROWN

Madeline German
Geoscientist

Mark Brown, LG, PG
Senior Professional Geologist

Enclosures

cc: Mr. Robert Allen, Cherokee County Solid Waste Director
Wayne Sullivan, MESCO

Tables

Table 1: Historic Detections
Cherokee County Lined Landfill

Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6D	2	ug/l	1,1-Dichloroethane	75-34-3	08/23/2007	6	5
MW-6D	1.6	ug/l	1,1-Dichloroethane	75-34-3	02/18/2008	6	5
MW-6D	0.99	ug/l	1,1-Dichloroethane	75-34-3	08/19/2008	6	5
MW-6D	0.8	ug/l	1,1-Dichloroethane	75-34-3	02/24/2009	6	5
MW-6D	0.98	ug/l	1,1-Dichloroethane	75-34-3	08/18/2009	6	5
MW-6D	1.1	ug/l	1,1-Dichloroethane	75-34-3	02/24/2010	6	5
MW-6D	0.54	ug/l	1,1-Dichloroethane	75-34-3	08/31/2010	6	5
MW-6S	**8.7**	**ug/l**	**1,1-Dichloroethane**	**75-34-3**	**08/20/2002**	**6**	**5**
MW-6S	5.3	ug/l	1,1-Dichloroethane	75-34-3	02/19/2003	6	5
MW-6S	1.3	ug/l	1,1-Dichloroethane	75-34-3	08/23/2007	6	5
MW-6S	1.3	ug/l	1,1-Dichloroethane	75-34-3	02/18/2008	6	5
MW-6S	0.94	ug/l	1,1-Dichloroethane	75-34-3	08/19/2008	6	5
MW-6S	0.67	ug/l	1,1-Dichloroethane	75-34-3	02/24/2009	6	5
MW-6S	0.5	ug/l	1,1-Dichloroethane	75-34-3	08/18/2009	6	5
MW-6S	0.36	ug/l	1,1-Dichloroethane	75-34-3	02/24/2010	6	5
MW-7	0.97	ug/l	1,1-Dichloroethane	75-34-3	02/18/2008	6	5
MW-7	0.43	ug/l	1,1-Dichloroethane	75-34-3	08/18/2008	6	5
MW-7	0.66	ug/l	1,1-Dichloroethane	75-34-3	02/24/2009	6	5
MW-7	0.71	ug/l	1,1-Dichloroethane	75-34-3	08/18/2009	6	5
MW-7	0.65	ug/l	1,1-Dichloroethane	75-34-3	02/24/2010	6	5
MW-7	0.62	ug/l	1,1-Dichloroethane	75-34-3	08/31/2010	6	5
P-18	0.58	ug/l	1,1-Dichloroethane	75-34-3	08/19/2008	6	5
P-18	0.42	ug/l	1,1-Dichloroethane	75-34-3	08/31/2010	6	5
MW-6D	0.31	ug/l	1,2-Dichloroethane	107-06-2	02/24/2009	0.38	1
MW-6D	0.3	ug/l	1,2-Dichloroethane	107-06-2	02/24/2010	0.38	1
MW-6S	**0.39**	**ug/l**	**1,2-Dichloroethane**	**107-06-2**	**02/24/2009**	**0.38**	**1**
MW-6S	0.28	ug/l	1,2-Dichloroethane	107-06-2	02/24/2010	0.38	1
MW-6S	13	ug/l	1,2-Dichlorobenzene	95-50-1	02/24/2004	20	5
MW-6S	16.3	ug/l	1,3-Dichlorobenzene	541-73-1	08/23/2007	200	5
MW-6D	3.8	ug/l	1,4-Dichlorobenzene	106-46-7	08/23/2007	6	1
MW-6D	5.7	ug/l	1,4-Dichlorobenzene	106-46-7	02/18/2008	6	1
MW-6D	**6.2**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/19/2008**	**6**	1
MW-6D	**6.8**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2009**	6	1
MW-6D	**7.9**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/18/2009**	**6**	1
MW-6D	3.8	ug/l	1,4-Dichlorobenzene	106-46-7	02/24/2010	6	1
MW-6D	**7.3**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2010**	**6**	**1**
MW-6D	**8.1**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/31/2010**	**6**	**1**
MW-6S	**9.9**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2004**	**6**	1
MW-6S	**16**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/10/2004**	**6**	1
MW-6S	**12**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/23/2005**	**6**	1
MW-6S	**14**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/23/2005**	**6**	1
MW-6S	**9**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**09/15/2005**	**6**	1
MW-6S	**15**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/23/2006**	**6**	1
MW-6S	**16**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/28/2006**	**6**	1
MW-6S	**16**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/15/2007**	**6**	1
MW-6S	**11**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/18/2008**	**6**	1
MW-6S	**12**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/19/2008**	**6**	1
MW-6S	**14.8**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2009**	6	1
MW-6S	**8.5**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2009**	6	1
MW-6S	**19**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/18/2009**	**6**	1
MW-6S	**15**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2010**	**6**	**1**
MW-6S	**18.7**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2010**	**6**	**1**
MW-6S	**12**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/31/2010**	**6**	**1**
MW-7	0.73	ug/l	1,4-Dichlorobenzene	106-46-7	02/18/2008	6	1

Table 1: Historic Detections
Cherokee County Lined Landfill

Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-7	0.83	ug/l	1,4-Dichlorobenzene	106-46-7	02/24/2009	6	1
MW-7	0.64	ug/l	1,4-Dichlorobenzene	106-46-7	08/31/2010	6	1
P-18	0.45	ug/l	1,4-Dichlorobenzene	106-46-7	08/18/2009	6	1
P-18	0.57	ug/l	1,4-Dichlorobenzene	106-46-7	08/31/2010	6	1
MW-6D	4.9	ug/l	Acetone	67-64-1	08/19/2008	700	100
MW-7	5.4	ug/l	Acetone	67-64-1	08/18/2009	700	100
MW-7	150	ug/l	Acetone	67-64-1	08/31/2010	700	100
MW-6D	0.98	ug/l	Antimony, total	7440-36-0	08/19/2008		6
MW-6D	0.381	ug/l	Antimony, total	7440-36-0	08/31/2010		6
MW-6S	1.41	ug/l	Antimony, total	7440-36-0	08/19/2008		6
MW-6D	8	ug/l	Arsenic, total	7440-38-2	02/24/2009	10	10
MW-6D	3.3	ug/l	Arsenic, total	7440-38-2	08/18/2009	10	10
MW-6D	3.5	ug/l	Arsenic, total	7440-38-2	02/24/2010	10	10
MW-6D	7.67	ug/l	Arsenic Total	7440-38-2	08/31/2010	10	10
MW-6S	5.38	ug/l	Arsenic Total	7440-38-2	08/31/2010	10	10
MW-7	**10**	**ug/l**	**Arsenic, total**	**7440-38-2**	**02/19/2003**	**10**	10
MW-7	**10**	**ug/l**	**Arsenic, total**	**7440-38-2**	**08/26/2003**	**10**	10
MW-7	2.6	ug/l	Arsenic, total	7440-38-2	02/18/2008	10	10
MW-7	2.89	ug/l	Arsenic Total	7440-38-2	08/31/2010	10	10
P-18	4.72	ug/l	Arsenic Total	7440-38-2	08/31/2010	10	10
MW-6D	8.7	ug/l	Barium, total	7440-39-3	05/19/1999	700	100
MW-6D	6.5	ug/l	Barium, total	7440-39-3	04/18/2000	700	100
MW-6D	8.2	ug/l	Barium, total	7440-39-3	10/26/2000	700	100
MW-6D	7.3	ug/l	Barium, total	7440-39-3	08/20/2002	700	100
MW-6D	3	ug/l	Barium, total	7440-39-3	08/26/2003	700	100
MW-6D	9	ug/l	Barium, total	7440-39-3	02/24/2004	700	100
MW-6D	36	ug/l	Barium, total	7440-39-3	08/10/2004	700	100
MW-6D	5.7	ug/l	Barium, total	7440-39-3	02/23/2005	700	100
MW-6D	10	ug/l	Barium, total	7440-39-3	02/23/2006	700	100
MW-6D	5.8	ug/l	Barium, total	7440-39-3	08/23/2007	700	100
MW-6D	4.6	ug/l	Barium, total	7440-39-3	02/18/2008	700	100
MW-6D	8.2	ug/l	Barium, total	7440-39-3	08/19/2008	700	100
MW-6D	9.2	ug/l	Barium, total	7440-39-3	02/24/2009	700	100
MW-6D	16.9	ug/l	Barium, total	7440-39-3	08/18/2009	700	100
MW-6D	13	ug/l	Barium, total	7440-39-3	02/24/2010	700	100
MW-6D	21.4	ug/l	Barium Total	7440-39-3	08/31/2010	700	100
MW-6S	100	ug/l	Barium, total	7440-39-3	12/15/1997	700	100
MW-6S	100	ug/l	Barium, total	7440-39-3	03/16/1998	700	100
MW-6S	48	ug/l	Barium, total	7440-39-3	05/19/1999	700	100
MW-6S	43	ug/l	Barium, total	7440-39-3	10/18/1999	700	100
MW-6S	52	ug/l	Barium, total	7440-39-3	04/18/2000	700	100
MW-6S	48	ug/l	Barium, total	7440-39-3	10/23/2000	700	100
MW-6S	84	ug/l	Barium, total	7440-39-3	04/26/2001	700	100
MW-6S	150	ug/l	Barium, total	7440-39-3	10/15/2001	700	100
MW-6S	170	ug/l	Barium, total	7440-39-3	02/18/2002	700	100
MW-6S	130	ug/l	Barium, total	7440-39-3	08/20/2002	700	100
MW-6S	200	ug/l	Barium, total	7440-39-3	02/19/2003	700	100
MW-6S	190	ug/l	Barium, total	7440-39-3	08/26/2003	700	100
MW-6S	240	ug/l	Barium, total	7440-39-3	02/24/2004	700	100
MW-6S	140	ug/l	Barium, total	7440-39-3	08/10/2004	700	100
MW-6S	280	ug/l	Barium, total	7440-39-3	02/23/2005	700	100
MW-6S	180	ug/l	Barium, total	7440-39-3	02/23/2006	700	100
MW-6S	125	ug/l	Barium, total	7440-39-3	08/23/2007	700	100
MW-6S	98.5	ug/l	Barium, total	7440-39-3	02/18/2008	700	100

Table 1: Historic Detections
Cherokee County Lined Landfill

Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6S	172	ug/l	Barium, total	7440-39-3	08/19/2008	700	100
MW-6S	239	ug/l	Barium, total	7440-39-3	02/24/2009	700	100
MW-6S	164	ug/l	Barium, total	7440-39-3	08/18/2009	700	100
MW-6S	231	ug/l	Barium, total	7440-39-3	02/24/2010	700	100
MW-6S	112	ug/l	Barium Total	7440-39-3	08/31/2010	700	100
MW-7	500	ug/l	Barium, total	7440-39-3	01/26/1998	700	100
MW-7	200	ug/l	Barium, total	7440-39-3	03/16/1998	700	100
MW-7	200	ug/l	Barium, total	7440-39-3	04/20/1998	700	100
MW-7	30	ug/l	Barium, total	7440-39-3	05/19/1999	700	100
MW-7	10	ug/l	Barium, total	7440-39-3	10/19/1999	700	100
MW-7	30	ug/l	Barium, total	7440-39-3	04/18/2000	700	100
MW-7	10	ug/l	Barium, total	7440-39-3	10/24/2000	700	100
MW-7	160	ug/l	Barium, total	7440-39-3	04/26/2001	700	100
MW-7	20	ug/l	Barium, total	7440-39-3	10/15/2001	700	100
MW-7	170	ug/l	Barium, total	7440-39-3	02/18/2002	700	100
MW-7	20	ug/l	Barium, total	7440-39-3	08/20/2002	700	100
MW-7	160	ug/l	Barium, total	7440-39-3	02/19/2003	700	100
MW-7	140	ug/l	Barium, total	7440-39-3	08/26/2003	700	100
MW-7	40	ug/l	Barium, total	7440-39-3	02/24/2004	700	100
MW-7	30	ug/l	Barium, total	7440-39-3	08/10/2004	700	100
MW-7	40	ug/l	Barium, total	7440-39-3	02/23/2005	700	100
MW-7	80	ug/l	Barium, total	7440-39-3	02/23/2006	700	100
MW-7	30.8	ug/l	Barium, total	7440-39-3	08/23/2007	700	100
MW-7	21.3	ug/l	Barium, total	7440-39-3	02/18/2008	700	100
MW-7	120	ug/l	Barium, total	7440-39-3	08/18/2008	700	100
MW-7	29.4	ug/l	Barium, total	7440-39-3	02/24/2009	700	100
MW-7	40.8	ug/l	Barium, total	7440-39-3	08/18/2009	700	100
MW-7	28.9	ug/l	Barium, total	7440-39-3	02/24/2010	700	100
MW-7	32.4	ug/l	Barium Total	7440-39-3	08/31/2010	700	100
P-18	31.9	ug/l	Barium Total	7440-39-3	08/31/2010	700	100
MW-6D	**4.1**	**ug/l**	**Benzene**	**71-43-2**	**08/23/2007**	**1**	**1**
MW-6D	**2.7**	**ug/l**	**Benzene**	**71-43-2**	**02/18/2008**	**1**	**1**
MW-6D	**1.1**	**ug/l**	**Benzene**	**71-43-2**	**08/19/2008**	**1**	**1**
MW-6D	**1.7**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2009**	**1**	**1**
MW-6D	**2.5**	**ug/l**	**Benzene**	**71-43-2**	**08/18/2009**	**1**	**1**
MW-6D	**2.8**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2010**	**1**	**1**
MW-6S	**8.8**	**ug/l**	**Benzene**	**71-43-2**	**02/19/2003**	**1**	**1**
MW-6S	**8.4**	**ug/l**	**Benzene**	**71-43-2**	**08/26/2003**	**1**	**1**
MW-6S	**11**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2004**	**1**	**1**
MW-6S	**12**	**ug/l**	**Benzene**	**71-43-2**	**08/10/2004**	**1**	**1**
MW-6S	**6.3**	**ug/l**	**Benzene**	**71-43-2**	**02/23/2005**	**1**	**1**
MW-6S	**6.9**	**ug/l**	**Benzene**	**71-43-2**	**08/23/2005**	**1**	**1**
MW-6S	**6**	**ug/l**	**Benzene**	**71-43-2**	**09/15/2005**	**1**	**1**
MW-6S	**5.5**	**ug/l**	**Benzene**	**71-43-2**	**02/23/2006**	**1**	**1**
MW-6S	**5.8**	**ug/l**	**Benzene**	**71-43-2**	**08/28/2006**	**1**	**1**
MW-6S	**5.3**	**ug/l**	**Benzene**	**71-43-2**	**02/15/2007**	**1**	**1**
MW-6S	**4.5**	**ug/l**	**Benzene**	**71-43-2**	**08/23/2007**	**1**	**1**
MW-6S	**3.6**	**ug/l**	**Benzene**	**71-43-2**	**02/18/2008**	**1**	**1**
MW-6S	**2.2**	**ug/l**	**Benzene**	**71-43-2**	**08/19/2008**	**1**	**1**
MW-6S	**3**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2009**	**1**	**1**
MW-6S	**2.3**	**ug/l**	**Benzene**	**71-43-2**	**08/18/2009**	**1**	**1**
MW-6S	**2.5**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2010**	**1**	**1**
MW-7	**5.7**	**ug/l**	**Benzene**	**71-43-2**	**02/15/2007**	**1**	**1**
MW-7	**3.6**	**ug/l**	**Benzene**	**71-43-2**	**08/23/2007**	**1**	**1**
MW-7	**7.6**	**ug/l**	**Benzene**	**71-43-2**	**02/18/2008**	**1**	**1**
MW-7	**1.3**	**ug/l**	**Benzene**	**71-43-2**	**08/18/2008**	**1**	**1**
MW-7	**4.3**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2009**	**1**	**1**

Table 1: Historic Detections
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Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-7	**4.3**	**ug/l**	**Benzene**	**71-43-2**	**08/18/2009**	**1**	**1**
MW-7	**4.5**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2010**	**1**	**1**
MW-7	1.0	ug/l	Benzene	71-43-2	08/31/2010	1	1
MW-6S	1.2	ug/l	Benzyl alcohol	100-51-6	02/18/2008		20
MW-6D	2.6	ug/l	Beryllium, total	7440-41-7	10/26/2000		1
MW-6D	0.21	ug/l	Beryllium, total	7440-41-7	02/24/2009		1
MW-6D	0.16	ug/l	Beryllium, total	7440-41-7	08/18/2009		1
MW-6S	2	ug/l	Beryllium, total	7440-41-7	12/15/1997		1
MW-6S	1	ug/l	Beryllium, total	7440-41-7	03/16/1998		1
MW-6S	2.6	ug/l	Beryllium, total	7440-41-7	02/18/2002		1
MW-6S	1.2	ug/l	Beryllium, total	7440-41-7	08/26/2003		1
MW-6S	1.4	ug/l	Beryllium, total	7440-41-7	02/24/2004		1
MW-6S	0.58	ug/l	Beryllium, total	7440-41-7	02/24/2009		1
MW-6S	0.31	ug/l	Beryllium, total	7440-41-7	02/24/2010		1
MW-6S	0.148	ug/l	Beryllium Total	7440-41-7	08/31/2010		1
MW-7	1	ug/l	Beryllium, total	7440-41-7	01/26/1998		1
MW-7	2	ug/l	Beryllium, total	7440-41-7	04/18/2000		1
MW-7	2.5	ug/l	Beryllium, total	7440-41-7	10/24/2000		1
MW-7	3.2	ug/l	Beryllium, total	7440-41-7	04/26/2001		1
MW-7	4.1	ug/l	Beryllium, total	7440-41-7	02/18/2002		1
MW-7	0.3	ug/l	Beryllium, total	7440-41-7	02/24/2009		1
MW-7	0.17	ug/l	Beryllium, total	7440-41-7	08/18/2009		1
P-18	0.484	ug/l	Beryllium Total	7440-41-7	08/31/2010		1
MW-7	2.9	ug/L	Bis(2-ethylhexyl)phthalate	117-81-7	08/31/2010	3	15
MW-6D	1.1	ug/l	Cadmium, total	7440-43-9	08/28/2006	2	1
MW-6D	**8.2**	**ug/l**	**Cadmium, total**	**7440-43-9**	**08/23/2007**	**2**	**1**
MW-6D	0.62	ug/l	Cadmium, total	7440-43-9	08/18/2009	2	1
MW-6S	1.3	ug/l	Cadmium, total	7440-43-9	04/18/2000	2	1
MW-6S	0.77	ug/l	Cadmium, total	7440-43-9	08/18/2009	2	1
MW-7	**2**	**ug/l**	**Cadmium, total**	**7440-43-9**	**03/16/1998**	**2**	**1**
MW-7	1.4	ug/l	Cadmium, total	7440-43-9	04/18/2000	2	1
MW-7	**6**	**ug/l**	**Cadmium, total**	**7440-43-9**	**04/26/2001**	**2**	**1**
MW-7	**5.5**	**ug/l**	**Cadmium, total**	**7440-43-9**	**02/18/2002**	**2**	**1**
MW-7	**3.7**	**ug/l**	**Cadmium, total**	**7440-43-9**	**02/19/2003**	**2**	**1**
MW-6S	5.9	ug/l	Carbon disulfide	75-15-0	04/18/2000	700	100
MW-6S	27	ug/l	Carbon disulfide	75-15-0	08/26/2003	700	100
MW-7	48	ug/l	Carbon disulfide	75-15-0	03/16/1998	700	100
MW-7	58	ug/l	Carbon disulfide	75-15-0	04/20/1998	700	100
MW-7	0.64	ug/l	Carbon disulfide	75-15-0	08/31/2010	700	100
MW-6D	9500	ug/l	Chloride	SW301	08/31/2010		NE
MW-6S	13000	ug/l	Chloride	16887-00-6	02/24/2010		NE
MW-6S	9700	ug/l	Chloride	SW301	08/31/2010		NE
MW-7	22900	ug/l	Chloride	16887-00-6	02/24/2010		NE
MW-7	9800	ug/l	Chloride	SW301	08/31/2010		NE
P-18	4900	ug/l	Chloride	SW301	08/31/2010		NE
MW-6D	2.8	ug/l	Chlorobenzene	108-90-7	02/18/2008	50	3
MW-6D	2	ug/l	Chlorobenzene	108-90-7	08/19/2008	50	3
MW-6D	2.2	ug/l	Chlorobenzene	108-90-7	02/24/2009	50	3
MW-6D	2.6	ug/l	Chlorobenzene	108-90-7	08/18/2009	50	3
MW-6D	2.3	ug/l	Chlorobenzene	108-90-7	02/24/2010	50	3
MW-6D	2.2	ug/l	Chlorobenzene	108-90-7	08/31/2010	50	3

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Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6S	4.7	ug/l	Chlorobenzene	108-90-7	08/23/2007	50	3
MW-6S	3.9	ug/l	Chlorobenzene	108-90-7	02/18/2008	50	3
MW-6S	3.6	ug/l	Chlorobenzene	108-90-7	08/19/2008	50	3
MW-6S	2.7	ug/l	Chlorobenzene	108-90-7	02/24/2009	50	3
MW-6S	3	ug/l	Chlorobenzene	108-90-7	08/18/2009	50	3
MW-6S	2.9	ug/l	Chlorobenzene	108-90-7	02/24/2010	50	3
MW-6S	2.7	ug/l	Chlorobenzene	108-90-7	08/31/2010	50	3
MW-7	0.44	ug/l	Chlorobenzene	108-90-7	02/18/2008	50	3
MW-7	0.48	ug/l	Chlorobenzene	108-90-7	02/24/2009	50	3
MW-7	0.37	ug/l	Chlorobenzene	108-90-7	08/18/2009	50	3
MW-7	0.37	ug/l	Chlorobenzene	108-90-7	02/24/2010	50	3
MW-7	0.57	ug/l	Chlorobenzene	108-90-7	08/31/2010	50	3
MW-6D	0.75	ug/l	Chloroethane	75-00-3	08/19/2008	3000	10
MW-6S	2.95	ug/l	Chloroethane	75-00-3	10/15/2001	3000	10
MW-6S	1.4	ug/l	Chloroethane	75-00-3	08/19/2008	3000	10
MW-6D	1.4	ug/l	Chromium, total	7440-47-3	12/15/1997	10	10
MW-6D	4	ug/l	Chromium, total	7440-47-3	01/26/1998	10	10
MW-6D	6	ug/l	Chromium, total	7440-47-3	03/16/1998	10	10
MW-6D	1.8	ug/l	Chromium, total	7440-47-3	08/26/2003	10	10
MW-6D	2.6	ug/l	Chromium, total	7440-47-3	02/24/2004	10	10
MW-6D	7.3	ug/l	Chromium, total	7440-47-3	08/10/2004	10	10
MW-6D	0.74	ug/l	Chromium, total	7440-47-3	02/24/2010	10	10
MW-6S	3	ug/l	Chromium, total	7440-47-3	12/15/1997	10	10
MW-6S	5	ug/l	Chromium, total	7440-47-3	03/16/1998	10	10
MW-6S	2	ug/l	Chromium, total	7440-47-3	04/20/1998	10	10
MW-6S	1	ug/l	Chromium, total	7440-47-3	10/19/1998	10	10
MW-6S	4.6	ug/l	Chromium, total	7440-47-3	08/10/2004	10	10
MW-6S	0.81	ug/l	Chromium, total	7440-47-3	02/24/2010	10	10
MW-7	2	ug/l	Chromium, total	7440-47-3	01/26/1998	10	10
MW-7	4	ug/l	Chromium, total	7440-47-3	03/16/1998	10	10
MW-7	2	ug/l	Chromium, total	7440-47-3	04/20/1998	10	10
MW-7	5.1	ug/l	Chromium, total	7440-47-3	04/18/2000	10	10
MW-7	**38**	**ug/l**	**Chromium, total**	**7440-47-3**	**04/26/2001**	**10**	10
MW-7	**41**	**ug/l**	**Chromium, total**	**7440-47-3**	**02/18/2002**	**10**	10
MW-7	**34**	**ug/l**	**Chromium, total**	**7440-47-3**	**02/19/2003**	**10**	10
MW-7	2.4	ug/l	Chromium, total	7440-47-3	08/26/2003	10	10
MW-7	3.3	ug/l	Chromium, total	7440-47-3	02/24/2004	10	10
MW-7	3.8	ug/l	Chromium, total	7440-47-3	02/23/2005	10	10
MW-7	9.2	ug/l	Chromium, total	7440-47-3	02/23/2006	10	10
MW-7	0.54	ug/l	Chromium, total	7440-47-3	08/18/2009	10	10
MW-7	0.75	ug/l	Chromium, total	7440-47-3	02/24/2010	10	10
P-18	2.15	ug/l	Chromium Total	7440-47-3	08/31/2010	10	10
MW-6D	9.1	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2004	70	5
MW-6D	17	ug/l	cis-1,2-Dichloroethene	156-59-2	08/10/2004	70	5
MW-6D	21	ug/l	cis-1,2-Dichloroethene	156-59-2	02/23/2005	70	5
MW-6D	18	ug/l	cis-1,2-Dichloroethene	156-59-2	08/23/2005	70	5
MW-6D	23	ug/l	cis-1,2-Dichloroethene	156-59-2	02/23/2006	70	5
MW-6D	22	ug/l	cis-1,2-Dichloroethene	156-59-2	08/28/2006	70	5
MW-6D	21	ug/l	cis-1,2-Dichloroethene	156-59-2	02/15/2007	70	5
MW-6D	21.1	ug/l	cis-1,2-Dichloroethene	156-59-2	08/23/2007	70	5
MW-6D	22	ug/l	cis-1,2-Dichloroethene	156-59-2	02/18/2008	70	5
MW-6D	17	ug/l	cis-1,2-Dichloroethene	156-59-2	08/19/2008	70	5
MW-6D	17.8	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2009	70	5
MW-6D	16.6	ug/l	cis-1,2-Dichloroethene	156-59-2	08/18/2009	70	5
MW-6D	14.9	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2010	70	5

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Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6D	13	ug/l	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5
MW-6S	16	ug/l	cis-1,2-Dichloroethene	156-59-2	02/19/2003	70	5
MW-6S	28	ug/l	cis-1,2-Dichloroethene	156-59-2	08/26/2003	70	5
MW-6S	43	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2004	70	5
MW-6S	50	ug/l	cis-1,2-Dichloroethene	156-59-2	08/10/2004	70	5
MW-6S	30	ug/l	cis-1,2-Dichloroethene	156-59-2	02/23/2005	70	5
MW-6S	31	ug/l	cis-1,2-Dichloroethene	156-59-2	08/23/2005	70	5
MW-6S	29	ug/l	cis-1,2-Dichloroethene	156-59-2	09/15/2005	70	5
MW-6S	28	ug/l	cis-1,2-Dichloroethene	156-59-2	02/23/2006	70	5
MW-6S	34	ug/l	cis-1,2-Dichloroethene	156-59-2	08/28/2006	70	5
MW-6S	32	ug/l	cis-1,2-Dichloroethene	156-59-2	02/15/2007	70	5
MW-6S	34.9	ug/l	cis-1,2-Dichloroethene	156-59-2	08/23/2007	70	5
MW-6S	25	ug/l	cis-1,2-Dichloroethene	156-59-2	02/18/2008	70	5
MW-6S	24	ug/l	cis-1,2-Dichloroethene	156-59-2	08/19/2008	70	5
MW-6S	16.9	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2009	70	5
MW-6S	14.8	ug/l	cis-1,2-Dichloroethene	156-59-2	08/18/2009	70	5
MW-6S	13.3	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2010	70	5
MW-6S	13	ug/l	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5
MW-7	7	ug/l	cis-1,2-Dichloroethene	156-59-2	08/26/2003	70	5
MW-7	8.8	ug/l	cis-1,2-Dichloroethene	156-59-2	08/10/2004	70	5
MW-7	8.5	ug/l	cis-1,2-Dichloroethene	156-59-2	02/23/2006	70	5
MW-7	26	ug/l	cis-1,2-Dichloroethene	156-59-2	08/28/2006	70	5
MW-7	20	ug/l	cis-1,2-Dichloroethene	156-59-2	02/15/2007	70	5
MW-7	40.9	ug/l	cis-1,2-Dichloroethene	156-59-2	08/23/2007	70	5
MW-7	30	ug/l	cis-1,2-Dichloroethene	156-59-2	02/18/2008	70	5
MW-7	17	ug/l	cis-1,2-Dichloroethene	156-59-2	08/18/2008	70	5
MW-7	31.5	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2009	70	5
MW-7	37.3	ug/l	cis-1,2-Dichloroethene	156-59-2	08/18/2009	70	5
MW-7	36.5	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2010	70	5
MW-7	42	ug/l	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5
P-18	1.7	ug/l	cis-1,2-Dichloroethene	156-59-2	08/23/2007	70	5
P-18	0.47	ug/l	cis-1,2-Dichloroethene	156-59-2	02/18/2008	70	5
P-18	1.5	ug/l	cis-1,2-Dichloroethene	156-59-2	08/19/2008	70	5
P-18	0.78	ug/l	cis-1,2-Dichloroethene	156-59-2	02/24/2009	70	5
P-18	1.4	ug/l	cis-1,2-Dichloroethene	156-59-2	08/18/2009	70	5
P-18	1.9	ug/l	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5
MW-6D	9	ug/l	Cobalt, total	7440-48-4	12/15/1997		10
MW-6D	3	ug/l	Cobalt, total	7440-48-4	03/16/1998		10
MW-6D	7.3	ug/l	Cobalt, total	7440-48-4	08/26/2003		10
MW-6D	6.2	ug/l	Cobalt, total	7440-48-4	08/10/2004		10
MW-6D	18	ug/l	Cobalt, total	7440-48-4	02/15/2007		10
MW-6D	6.4	ug/l	Cobalt, total	7440-48-4	02/24/2009		10
MW-6D	15.6	ug/l	Cobalt, total	7440-48-4	08/18/2009		10
MW-6S	42	ug/l	Cobalt, total	7440-48-4	12/15/1997		10
MW-6S	6	ug/l	Cobalt, total	7440-48-4	01/26/1998		10
MW-6S	29	ug/l	Cobalt, total	7440-48-4	03/16/1998		10
MW-6S	13	ug/l	Cobalt, total	7440-48-4	04/20/1998		10
MW-6S	1	ug/l	Cobalt, total	7440-48-4	10/19/1998		10
MW-6S	9.2	ug/l	Cobalt, total	7440-48-4	05/19/1999		10
MW-6S	14	ug/l	Cobalt, total	7440-48-4	10/18/1999		10
MW-6S	5.3	ug/l	Cobalt, total	7440-48-4	04/18/2000		10
MW-6S	5.3	ug/l	Cobalt, total	7440-48-4	10/23/2000		10
MW-6S	15	ug/l	Cobalt, total	7440-48-4	04/26/2001		10
MW-6S	19	ug/l	Cobalt, total	7440-48-4	10/15/2001		10
MW-6S	26	ug/l	Cobalt, total	7440-48-4	02/18/2002		10
MW-6S	22	ug/l	Cobalt, total	7440-48-4	08/20/2002		10
MW-6S	29	ug/l	Cobalt, total	7440-48-4	02/19/2003		10

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Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6S	23	ug/l	Cobalt, total	7440-48-4	08/26/2003		10
MW-6S	35	ug/l	Cobalt, total	7440-48-4	02/24/2004		10
MW-6S	20	ug/l	Cobalt, total	7440-48-4	08/10/2004		10
MW-6S	34	ug/l	Cobalt, total	7440-48-4	02/23/2005		10
MW-6S	22	ug/l	Cobalt, total	7440-48-4	08/23/2005		10
MW-6S	23	ug/l	Cobalt, total	7440-48-4	02/23/2006		10
MW-6S	22	ug/l	Cobalt, total	7440-48-4	08/28/2006		10
MW-6S	33	ug/l	Cobalt, total	7440-48-4	02/15/2007		10
MW-6S	4.1	ug/l	Cobalt, total	7440-48-4	02/18/2008		10
MW-6S	20.3	ug/l	Cobalt, total	7440-48-4	08/19/2008		10
MW-6S	31.9	ug/l	Cobalt, total	7440-48-4	02/24/2009		10
MW-6S	23.7	ug/l	Cobalt, total	7440-48-4	08/18/2009		10
MW-6S	39.8	ug/l	Cobalt, total	7440-48-4	02/24/2010		10
MW-6S	5.81	ug/l	Cobalt, total	7440-48-4	08/31/2010		10
MW-7	24	ug/l	Cobalt, total	7440-48-4	01/26/1998		10
MW-7	20	ug/l	Cobalt, total	7440-48-4	03/16/1998		10
MW-7	15	ug/l	Cobalt, total	7440-48-4	04/20/1998		10
MW-7	5	ug/l	Cobalt, total	7440-48-4	10/20/1998		10
MW-7	6.3	ug/l	Cobalt, total	7440-48-4	05/19/1999		10
MW-7	20	ug/l	Cobalt, total	7440-48-4	04/26/2001		10
MW-7	20	ug/l	Cobalt, total	7440-48-4	02/18/2002		10
MW-7	24	ug/l	Cobalt, total	7440-48-4	02/19/2003		10
MW-7	29	ug/l	Cobalt, total	7440-48-4	08/26/2003		10
MW-7	20	ug/l	Cobalt, total	7440-48-4	02/24/2004		10
MW-7	13	ug/l	Cobalt, total	7440-48-4	08/10/2004		10
MW-7	24	ug/l	Cobalt, total	7440-48-4	02/23/2005		10
MW-7	14	ug/l	Cobalt, total	7440-48-4	08/23/2005		10
MW-7	35	ug/l	Cobalt, total	7440-48-4	02/23/2006		10
MW-7	26	ug/l	Cobalt, total	7440-48-4	08/28/2006		10
MW-7	38	ug/l	Cobalt, total	7440-48-4	02/15/2007		10
MW-7	17600	ug/l	Cobalt, total	7440-48-4	08/23/2007		10
MW-7	16100	ug/l	Cobalt, total	7440-48-4	02/18/2008		10
MW-7	55900	ug/l	Cobalt, total	7440-48-4	08/18/2008		10
MW-7	46.9	ug/l	Cobalt, total	7440-48-4	02/24/2009		10
MW-7	61	ug/l	Cobalt, total	7440-48-4	08/18/2009		10
MW-7	52.9	ug/l	Cobalt, total	7440-48-4	02/24/2010		10
MW-7	60.1	ug/l	Cobalt, total	7440-48-4	08/31/2010		10
P-18	3.51	ug/l	Cobalt, total	7440-48-4	08/31/2010		10
MW-6D	20	ug/l	Copper	7440-50-8	12/15/1997	1000	10
MW-6D	3.3	ug/l	Copper	7440-50-8	08/20/2002	1000	10
MW-6D	3.2	ug/l	Copper	7440-50-8	02/19/2003	1000	10
MW-6D	12	ug/l	Copper	7440-50-8	08/26/2003	1000	10
MW-6D	4.5	ug/l	Copper	7440-50-8	08/10/2004	1000	10
MW-6D	2.3	ug/l	Copper	7440-50-8	02/23/2005	1000	10
MW-6D	19.7	ug/l	Copper	7440-50-8	08/31/2010	1000	10
MW-6S	0.84	ug/l	Copper	7440-50-8	02/24/2009	1000	10
MW-6S	0.48	ug/l	Copper	7440-50-8	02/24/2010	1000	10
MW-6S	277	ug/l	Copper	7440-50-8	08/31/2010	1000	10
MW-7	21	ug/l	Copper	7440-50-8	04/26/2001	1000	10
MW-7	21	ug/l	Copper	7440-50-8	02/18/2002	1000	10
MW-7	2.3	ug/l	Copper	7440-50-8	08/20/2002	1000	10
MW-7	18	ug/l	Copper	7440-50-8	02/19/2003	1000	10
MW-7	4.3	ug/l	Copper	7440-50-8	02/24/2004	1000	10
MW-7	4.2	ug/l	Copper	7440-50-8	02/23/2005	1000	10
MW-7	10	ug/l	Copper	7440-50-8	02/23/2006	1000	10
MW-7	1.5	ug/l	Copper	7440-50-8	02/18/2008	1000	10
MW-7	4.1	ug/l	Copper	7440-50-8	02/24/2009	1000	10

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Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-7	4.4	ug/l	Copper	7440-50-8	08/18/2009	1000	10
MW-8	3.69	ug/l	Copper	7440-50-8	08/31/2010	1000	10
P-18	28.4	ug/l	Copper	7440-50-8	08/31/2010	1000	10
MW-6D	6	ug/l	Cyanide	57-12-5	08/18/2009	70	10
MW-6S	**32**	**ug/l**	**Dichloromethane**	**75-09-2**	**02/19/2003**	**5**	**1**
MW-6S	**31**	**ug/l**	**Dichloromethane**	**75-09-2**	**08/26/2003**	**5**	**1**
MW-6S	**23**	**ug/l**	**Dichloromethane**	**75-09-2**	**02/24/2004**	**5**	**1**
MW-6S	**19**	**ug/l**	**Dichloromethane**	**75-09-2**	**08/10/2004**	**5**	**1**
MW-6S	**8.9**	**ug/l**	**Dichloromethane**	**75-09-2**	**02/23/2005**	**5**	**1**
MW-6S	**10**	**ug/l**	**Dichloromethane**	**75-09-2**	**09/15/2005**	**5**	**1**
MW-7	1	ug/l	Dichloromethane	75-09-2	02/18/2008	5	1
MW-6S	0.44	ug/l	Dichlorodifluoromethane	75-71-8	02/24/2010	1000	5
MW-6D	**33**	**ug/l**	**Lead, total**	**7439-92-1**	**12/15/1997**	**15**	**10**
MW-6D	8	ug/l	Lead, total	7439-92-1	01/26/1998	15	10
MW-6D	12	ug/l	Lead, total	7439-92-1	03/16/1998	15	10
MW-6D	14	ug/l	Lead, total	7439-92-1	08/26/2003	15	10
MW-6D	12	ug/l	Lead, total	7439-92-1	08/10/2004	15	10
MW-6D	3.35	ug/l	Lead, total	7439-92-1	08/31/2010	15	10
MW-6S	**22**	**ug/l**	**Lead, total**	**7439-92-1**	**12/15/1997**	**15**	**10**
MW-6S	1.7	ug/l	Lead, total	7439-92-1	03/16/1998	15	10
MW-6S	7	ug/l	Lead, total	7439-92-1	04/20/1998	15	10
MW-6S	7.6	ug/l	Lead, total	7439-92-1	08/26/2003	15	10
MW-6S	5.9	ug/l	Lead, total	7439-92-1	02/24/2004	15	10
MW-6S	3.15	ug/l	Lead, total	7439-92-1	08/31/2010	15	10
MW-7	**20**	**ug/l**	**Lead, total**	**7439-92-1**	**01/26/1998**	**15**	**10**
MW-7	**21**	**ug/l**	**Lead, total**	**7439-92-1**	**03/16/1998**	**15**	**10**
MW-7	**14**	**ug/l**	**Lead, total**	**7439-92-1**	**04/20/1998**	**15**	**10**
MW-7	**19**	**ug/l**	**Lead, total**	**7439-92-1**	**02/18/2002**	**15**	**10**
MW-7	**12**	**ug/l**	**Lead, total**	**7439-92-1**	**02/19/2003**	**15**	**10**
MW-7	**14**	**ug/l**	**Lead, total**	**7439-92-1**	**08/26/2003**	**15**	**10**
MW-7	9	ug/l	Lead, total	7439-92-1	02/23/2006	15	10
MW-7	**16.3**	**ug/l**	**Lead, total**	**7439-92-1**	**08/18/2008**	**15**	**10**
P-18	1.97	ug/l	Lead, total	7439-92-1	08/31/2010	15	10
MW-6D	0.09	ug/l	Mercury	7439-97-6	02/24/2009	1	0.2
MW-6S	0.7	ug/l	Mercury	7439-97-6	02/23/2006	1	0.2
MW-6S	0.24	ug/l	Mercury	7439-97-6	02/24/2009	1	0.2
MW-6S	0.14	ug/l	Mercury	7439-97-6	02/24/2010	1	0.2
MW-7	0.28	ug/l	Mercury	7439-97-6	02/18/2008	1	0.2
MW-7	0.22	ug/l	Mercury	7439-97-6	08/18/2008	1	0.2
MW-7	0.23	ug/l	Mercury	7439-97-6	02/24/2009	1	0.2
MW-7	0.23	ug/l	Mercury	7439-97-6	08/18/2009	1	0.2
MW-7	0.12	ug/l	Mercury	7439-97-6	02/24/2010	1	0.2
MW-6D	5	ug/l	Nickel	7440-02-0	05/19/1999	100	50
MW-6D	21	ug/l	Nickel	7440-02-0	08/26/2003	100	50
MW-6D	9	ug/l	Nickel	7440-02-0	08/10/2004	100	50
MW-6D	5.1	ug/l	Nickel	7440-02-0	02/23/2006	100	50
MW-6S	8.5	ug/l	Nickel	7440-02-0	05/19/1999	100	50
MW-6S	8.6	ug/l	Nickel	7440-02-0	10/18/1999	100	50
MW-6S	6	ug/l	Nickel	7440-02-0	04/18/2000	100	50
MW-6S	6.3	ug/l	Nickel	7440-02-0	10/23/2000	100	50
MW-6S	9.3	ug/l	Nickel	7440-02-0	10/15/2001	100	50
MW-6S	14	ug/l	Nickel	7440-02-0	02/18/2002	100	50

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Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6S	14	ug/l	Nickel	7440-02-0	08/20/2002	100	50
MW-6S	14	ug/l	Nickel	7440-02-0	02/19/2003	100	50
MW-6S	19	ug/l	Nickel	7440-02-0	08/26/2003	100	50
MW-6S	24	ug/l	Nickel	7440-02-0	02/24/2004	100	50
MW-6S	15	ug/l	Nickel	7440-02-0	08/10/2004	100	50
MW-6S	21	ug/l	Nickel	7440-02-0	02/23/2005	100	50
MW-6S	16	ug/l	Nickel	7440-02-0	02/23/2006	100	50
MW-6S	7.1	ug/l	Nickel	7440-02-0	08/23/2007	100	50
MW-6S	12.1	ug/l	Nickel	7440-02-0	08/19/2008	100	50
MW-6S	14.9	ug/l	Nickel	7440-02-0	02/24/2009	100	50
MW-6S	2.4	ug/l	Nickel	7440-02-0	08/18/2009	100	50
MW-6S	17.8	ug/l	Nickel	7440-02-0	02/24/2010	100	50
MW-6S	2.55	ug/l	Nickel	7440-02-0	08/31/2010	100	50
MW-7	9	ug/l	Nickel	7440-02-0	05/19/1999	100	50
MW-7	31	ug/l	Nickel	7440-02-0	04/26/2001	100	50
MW-7	35	ug/l	Nickel	7440-02-0	02/18/2002	100	50
MW-7	23	ug/l	Nickel	7440-02-0	02/19/2003	100	50
MW-7	6.6	ug/l	Nickel	7440-02-0	02/23/2006	100	50
MW-7	4.7	ug/l	Nickel	7440-02-0	08/18/2008	100	50
MW-7	1.7	ug/l	Nickel	7440-02-0	08/18/2009	100	50
MW-6D	**38**	**ug/l**	**Selenium, total**	**7782-49-2**	**10/18/1999**	**20**	**10**
MW-6D	16.5	ug/l	Selenium, total	7782-49-2	08/23/2007	20	10
MW-6D	9.1	ug/l	Selenium, total	7782-49-2	02/24/2009	20	10
MW-6D	6.1	ug/l	Selenium, total	7782-49-2	08/18/2009	20	10
MW-6S	54	ug/l	Selenium, total	7782-49-2	10/18/1999	20	10
MW-6S	8	ug/l	Selenium, total	7782-49-2	02/24/2004	20	10
MW-6S	6.1	ug/l	Selenium, total	7782-49-2	08/10/2004	20	10
MW-6S	5.8	ug/l	Selenium, total	7782-49-2	02/23/2005	20	10
MW-6S	6	ug/l	Selenium, total	7782-49-2	02/23/2006	20	10
MW-6S	17.3	ug/l	Selenium, total	7782-49-2	08/23/2007	20	10
MW-6S	5.4	ug/l	Selenium, total	7782-49-2	02/24/2009	20	10
MW-6S	4	ug/l	Selenium, total	7782-49-2	08/18/2009	20	10
MW-7	12.3	ug/l	Selenium, total	7782-49-2	08/23/2007	20	10
P-18	0.991	ug/l	Selenium, total	7782-49-2	08/31/2010	20	10
MW-6D	3.3	ug/l	Silver, total	7440-22-4	02/24/2009	20	10
MW-6D	3.2	ug/l	Silver, total	7440-22-4	08/18/2009	20	10
MW-6D	3.8	ug/l	Silver, total	7440-22-4	02/24/2010	20	10
MW-6D	3.51	ug/l	Silver, total	7440-22-4	08/31/2010	20	10
MW-6S	10	ug/l	Silver, total	7440-22-4	03/16/1998	20	10
MW-6S	**23**	**ug/l**	**Silver, total**	**7440-22-4**	**04/20/1998**	**20**	**10**
MW-6S	4.1	ug/l	Silver, total	7440-22-4	10/23/2000	20	10
MW-6S	1.3	ug/l	Silver, total	7440-22-4	02/24/2009	20	10
MW-6S	1.8	ug/l	Silver, total	7440-22-4	08/18/2009	20	10
MW-6S	2.3	ug/l	Silver, total	7440-22-4	02/24/2010	20	10
MW-6S	2.96	ug/l	Silver, total	7440-22-4	08/31/2010	20	10
MW-7	**210**	**ug/l**	**Silver, total**	**7440-22-4**	**01/26/1998**	**20**	**10**
MW-7	1.6	ug/l	Silver, total	7440-22-4	02/24/2009	20	10
MW-7	1.4	ug/l	Silver, total	7440-22-4	08/18/2009	20	10
MW-7	1.5	ug/l	Silver, total	7440-22-4	02/24/2010	20	10
MW-7	100	ug/l	Sulfide	18496-25-8	02/24/2009		1000
MW-7	170	ug/l	Sulfide	18496-25-8	08/31/2010		1000
MW-6D	**1.9**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/23/2007**	**0.7**	**1**
MW-6D	**1.1**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/18/2008**	**0.7**	**1**
MW-6D	0.64	ug/l	Tetrachloroethylene	127-18-4	08/19/2008	0.7	1

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Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6D	0.49	ug/l	Tetrachloroethylene	127-18-4	02/24/2009	0.7	1
MW-6S	**8.1**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/20/2002**	**0.7**	**1**
MW-6S	**8.7**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/24/2004**	**0.7**	**1**
MW-6S	**9.5**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/10/2004**	**0.7**	**1**
MW-6S	**1**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/23/2007**	**0.7**	**1**
MW-6S	0.62	ug/l	Tetrachloroethylene	127-18-4	02/18/2008	0.7	1
MW-7	**5**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/24/2004**	**0.7**	**1**
MW-7	**1.8**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/23/2007**	**0.7**	**1**
MW-7	**2.3**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/18/2008**	**0.7**	**1**
MW-7	**1.4**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/24/2009**	**0.7**	**1**
MW-7	**0.88**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/24/2010**	**0.7**	**1**
MW-7	0.64	ug/l	Tetrachloroethylene	127-18-4	08/31/2010	0.7	1
P-18	0.45	ug/l	Tetrachloroethylene	127-18-4	08/19/2008	0.7	1
MW-6D	2	ug/l	Thallium	7440-28-0	12/15/1997		5.5
MW-6D	2	ug/l	Thallium	7440-28-0	01/26/1998		5.5
MW-6D	2	ug/l	Thallium	7440-28-0	05/19/1999		5.5
MW-6D	5.5	ug/l	Thallium	7440-28-0	08/23/2007		5.5
MW-6S	1	ug/l	Thallium	7440-28-0	01/26/1998		5.5
MW-6S	4	ug/l	Thallium	7440-28-0	04/20/1998		5.5
MW-6S	0.07	ug/l	Thallium	7440-28-0	02/18/2008		5.5
MW-7	1	ug/l	Thallium	7440-28-0	01/26/1998		5.5
MW-7	0.12	ug/l	Thallium	7440-28-0	02/18/2008		5.5
P-18	0.274	ug/l	Thallium	7440-28-0	08/31/2010		5.5
MW-6D	4.08	ug/l	Tin	7440-31-5	08/31/2010		100
MW-6S	9.2	ug/l	Tin	7440-31-5	08/23/2007		100
MW-6S	2.7	ug/l	Tin	7440-31-5	02/24/2010		100
MW-6S	6.99	ug/l	Tin	7440-31-5	08/31/2010		100
MW-7	5.8	ug/l	Tin	7440-31-5	08/23/2007		100
MW-7	3.01	ug/l	Tin	7440-31-5	08/31/2010		100
MW-6D	0.35	ug/l	Toluene	108-88-3	02/24/2009	600	1
MW-6S	0.4	ug/l	Toluene	108-88-3	02/24/2009	600	1
MW-7	2.1	ug/l	Toluene	108-88-3	02/24/2009	600	1
MW-7	0.51	ug/l	trans-1,2-Dichloroethene	156-60-5	02/18/2008	100	5
MW-7	0.54	ug/l	trans-1,2-Dichloroethene	156-60-5	02/24/2010	100	5
MW-6D	0.62	ug/l	Trichloroethene	79-01-6	02/18/2008	2.8	1
MW-6D	0.48	ug/l	Trichloroethene	79-01-6	08/19/2008	2.8	1
MW-6S	**6**	**ug/l**	Trichloroethene	**79-01-6**	**08/20/2002**	**2.8**	1
MW-6S	**6.6**	**ug/l**	Trichloroethene	**79-01-6**	**02/19/2003**	**2.8**	1
MW-6S	**6.5**	**ug/l**	Trichloroethene	**79-01-6**	**02/24/2004**	**2.8**	1
MW-6S	**7.2**	**ug/l**	Trichloroethene	**79-01-6**	**08/10/2004**	**2.8**	1
MW-6S	0.58	ug/l	Trichloroethene	79-01-6	02/18/2008	2.8	1
MW-6S	0.45	ug/l	Trichloroethene	79-01-6	08/19/2008	2.8	1
MW-7	1.3	ug/l	Trichloroethene	79-01-6	08/23/2007	2.8	1
MW-7	1.6	ug/l	Trichloroethene	79-01-6	02/18/2008	2.8	1
MW-7	1.1	ug/l	Trichloroethene	79-01-6	02/24/2009	2.8	1
MW-7	1	ug/l	Trichloroethene	79-01-6	08/18/2009	2.8	1
MW-7	0.88	ug/l	Trichloroethene	79-01-6	02/24/2010	2.8	1
MW-7	0.69	ug/l	Trichloroethene	79-01-6	08/31/2010	2.8	1
MW-6D	23	ug/l	Vanadium	7440-62-2	03/16/1998		25
MW-6D	10	ug/l	Vanadium	7440-62-2	04/20/1998		25
MW-6D	12	ug/l	Vanadium	7440-62-2	08/26/2003		25
MW-6D	6.5	ug/l	Vanadium	7440-62-2	08/10/2004		25

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Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6D	0.73	ug/l	Vanadium	7440-62-2	02/24/2009		25
MW-6D	0.6	ug/l	Vanadium	7440-62-2	08/18/2009		25
MW-6S	0.87	ug/l	Vanadium	7440-62-2	02/24/2009		25
MW-7	7.1	ug/l	Vanadium	7440-62-2	05/19/1999		25
MW-7	50	ug/l	Vanadium	7440-62-2	04/26/2001		25
MW-7	53	ug/l	Vanadium	7440-62-2	02/18/2002		25
MW-7	44	ug/l	Vanadium	7440-62-2	02/19/2003		25
MW-7	11	ug/l	Vanadium	7440-62-2	02/23/2006		25
MW-7	1.9	ug/l	Vanadium	7440-62-2	02/24/2009		25
MW-7	2	ug/l	Vanadium	7440-62-2	08/18/2009		25
MW-7	0.51	ug/l	Vanadium	7440-62-2	02/24/2010		25
P-18	2.60	ug/l	Vanadium	7440-62-2	08/31/2010		25
MW-6S	**2.38**	**ug/l**	**Vinyl chloride**	**75-01-4**	**10/15/2001**	**0.03**	**1**
MW-6S	**8.3**	**ug/l**	**Vinyl chloride**	**75-01-4**	**02/24/2004**	**0.03**	**1**
MW-7	**1**	**ug/l**	**Vinyl chloride**	**75-01-4**	**08/23/2007**	**0.03**	**1**
MW-7	**1.8**	**ug/l**	**Vinyl chloride**	**75-01-4**	**02/18/2008**	**0.03**	**1**
MW-7	**1.6**	**ug/l**	**Vinyl chloride**	**75-01-4**	**02/24/2009**	**0.03**	**1**
MW-7	**1.9**	**ug/l**	**Vinyl chloride**	**75-01-4**	**08/18/2009**	**0.03**	**1**
MW-7	**1.6**	**ug/l**	**Vinyl chloride**	**75-01-4**	**02/24/2010**	**0.03**	**1**
MW-7	**1.8**	**ug/l**	**Vinyl chloride**	**75-01-4**	**08/31/2010**	**0.03**	**1**
MW-6S	11	ug/l	Xylene	1330-20-7	08/20/2002	500	5
MW-6S	12	ug/l	Xylene	1330-20-7	02/19/2003	500	5
MW-6S	15	ug/l	Xylene	1330-20-7	08/26/2003	500	5
MW-6S	25	ug/l	Xylene	1330-20-7	02/24/2004	500	5
MW-6S	26	ug/l	Xylene	1330-20-7	08/10/2004	500	5
MW-6S	15	ug/l	Xylene	1330-20-7	02/23/2005	500	5
MW-6S	12	ug/l	Xylene	1330-20-7	08/23/2005	500	5
MW-6S	3	ug/l	Xylene	1330-20-7	02/18/2008	500	5
MW-6S	2.4	ug/l	Xylene	1330-20-7	02/18/2008	500	5
MW-6S	1.9	ug/l	Xylene	1330-20-7	02/24/2009	500	5
MW-6S	1.1	ug/l	Xylene	1330-20-7	08/18/2009	500	5
MW-6S	0.75	ug/l	Xylene	1330-20-7	02/24/2010	500	5
MW-7	4.3	ug/l	Xylene	1330-20-7	02/18/2008	500	5
MW-7	7	ug/l	Xylene	1330-20-7	02/18/2008	500	5
MW-7	1.1	ug/l	Xylene	1330-20-7	02/24/2009	500	5
MW-7	1.4	ug/l	Xylene	1330-20-7	08/18/2009	500	5
MW-7	1.1	ug/l	Xylene	1330-20-7	02/24/2010	500	5
MW-7	0.51	ug/l	Xylene	1330-20-7	08/31/2010	500	5
MW-6D	20	ug/l	Zinc, total	7440-66-6	12/15/1997	1000	10
MW-6D	10	ug/l	Zinc, total	7440-66-6	04/20/1998	1000	10
MW-6D	18	ug/l	Zinc, total	7440-66-6	10/18/1999	1000	10
MW-6D	15	ug/l	Zinc, total	7440-66-6	04/18/2000	1000	10
MW-6D	11	ug/l	Zinc, total	7440-66-6	10/26/2000	1000	10
MW-6D	12	ug/l	Zinc, total	7440-66-6	08/20/2002	1000	10
MW-6D	53	ug/l	Zinc, total	7440-66-6	08/26/2003	1000	10
MW-6D	13	ug/l	Zinc, total	7440-66-6	02/24/2004	1000	10
MW-6D	37	ug/l	Zinc, total	7440-66-6	08/10/2004	1000	10
MW-6D	13	ug/l	Zinc, total	7440-66-6	02/23/2006	1000	10
MW-6D	30.8	ug/l	Zinc, total	7440-66-6	08/23/2007	1000	10
MW-6D	2	ug/l	Zinc, total	7440-66-6	02/18/2008	1000	10
MW-6D	4.1	ug/l	Zinc, total	7440-66-6	08/18/2009	1000	10
MW-6D	1.1	ug/l	Zinc, total	7440-66-6	02/24/2010	1000	10
MW-6D	29.1	ug/l	Zinc, total	7440-66-6	08/31/2010	1000	10
MW-6S	40	ug/l	Zinc, total	7440-66-6	12/15/1997	1000	10
MW-6S	10	ug/l	Zinc, total	7440-66-6	01/26/1998	1000	10

Table 1: Historic Detections
Cherokee County Lined Landfill

Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6S	40	ug/l	Zinc, total	7440-66-6	03/16/1998	1000	10
MW-6S	30	ug/l	Zinc, total	7440-66-6	04/20/1998	1000	10
MW-6S	20	ug/l	Zinc, total	7440-66-6	10/19/1998	1000	10
MW-6S	26	ug/l	Zinc, total	7440-66-6	10/18/1999	1000	10
MW-6S	21	ug/l	Zinc, total	7440-66-6	04/18/2000	1000	10
MW-6S	17	ug/l	Zinc, total	7440-66-6	10/23/2000	1000	10
MW-6S	32	ug/l	Zinc, total	7440-66-6	04/26/2001	1000	10
MW-6S	55	ug/l	Zinc, total	7440-66-6	10/15/2001	1000	10
MW-6S	54	ug/l	Zinc, total	7440-66-6	02/18/2002	1000	10
MW-6S	43	ug/l	Zinc, total	7440-66-6	08/20/2002	1000	10
MW-6S	51	ug/l	Zinc, total	7440-66-6	02/19/2003	1000	10
MW-6S	67	ug/l	Zinc, total	7440-66-6	08/26/2003	1000	10
MW-6S	66	ug/l	Zinc, total	7440-66-6	02/24/2004	1000	10
MW-6S	62	ug/l	Zinc, total	7440-66-6	08/10/2004	1000	10
MW-6S	50	ug/l	Zinc, total	7440-66-6	02/23/2005	1000	10
MW-6S	52	ug/l	Zinc, total	7440-66-6	08/23/2005	1000	10
MW-6S	37	ug/l	Zinc, total	7440-66-6	02/23/2006	1000	10
MW-6S	66	ug/l	Zinc, total	7440-66-6	02/15/2007	1000	10
MW-6S	47.4	ug/l	Zinc, total	7440-66-6	08/23/2007	1000	10
MW-6S	7.1	ug/l	Zinc, total	7440-66-6	02/18/2008	1000	10
MW-6S	32.6	ug/l	Zinc, total	7440-66-6	08/19/2008	1000	10
MW-6S	45.8	ug/l	Zinc, total	7440-66-6	02/24/2009	1000	10
MW-6S	18.7	ug/l	Zinc, total	7440-66-6	08/18/2009	1000	10
MW-6S	39.1	ug/l	Zinc, total	7440-66-6	02/24/2010	1000	10
MW-6S	220	ug/l	Zinc, total	7440-66-6	08/31/2010	1000	10
MW-7	80	ug/l	Zinc, total	7440-66-6	01/26/1998	1000	10
MW-7	120	ug/l	Zinc, total	7440-66-6	03/16/1998	1000	10
MW-7	90	ug/l	Zinc, total	7440-66-6	04/20/1998	1000	10
MW-7	20	ug/l	Zinc, total	7440-66-6	10/20/1998	1000	10
MW-7	14	ug/l	Zinc, total	7440-66-6	10/19/1999	1000	10
MW-7	27	ug/l	Zinc, total	7440-66-6	04/18/2000	1000	10
MW-7	120	ug/l	Zinc, total	7440-66-6	04/26/2001	1000	10
MW-7	13	ug/l	Zinc, total	7440-66-6	10/15/2001	1000	10
MW-7	120	ug/l	Zinc, total	7440-66-6	02/18/2002	1000	10
MW-7	14	ug/l	Zinc, total	7440-66-6	08/20/2002	1000	10
MW-7	92	ug/l	Zinc, total	7440-66-6	02/19/2003	1000	10
MW-7	14	ug/l	Zinc, total	7440-66-6	08/26/2003	1000	10
MW-7	23	ug/l	Zinc, total	7440-66-6	02/24/2004	1000	10
MW-7	34	ug/l	Zinc, total	7440-66-6	02/23/2005	1000	10
MW-7	51	ug/l	Zinc, total	7440-66-6	02/23/2006	1000	10
MW-7	49.1	ug/l	Zinc, total	7440-66-6	08/23/2007	1000	10
MW-7	15.1	ug/l	Zinc, total	7440-66-6	02/18/2008	1000	10
MW-7	63.9	ug/l	Zinc, total	7440-66-6	08/18/2008	1000	10
MW-7	28	ug/l	Zinc, total	7440-66-6	02/24/2009	1000	10
MW-7	66.4	ug/l	Zinc, total	7440-66-6	08/18/2009	1000	10
MW-7	34.8	ug/l	Zinc, total	7440-66-6	02/24/2010	1000	10
MW-7	4.88	ug/l	Zinc, total	7440-66-6	08/31/2010	1000	10
P-18	147	ug/l	Zinc, total	7440-66-6	08/31/2010	1000	10

NOTE:
1. Table contains any historic detects in MW-6S, MW-6D, MW-7 or P-18
2. NCGW2L – North Carolina 15A NCAC 2L Groundwater Quality Standard
3. SWSL – Solid Waste Section Reporting Limit

Table 2: Historic VOC Exceedences
Cherokee County Lined Landfill

Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6S	**8.7**	**ug/l**	**1,1-Dichloroethane**	**75-34-3**	**08/20/2002**	**6**	**5**
MW-6S	5.3	ug/l	1,1-Dichloroethane	75-34-3	02/19/2003	6	5
MW-6S	**0.39**	**ug/l**	**1,2-Dichloroethane**	**107-06-2**	**02/24/2009**	**0.38**	**1**
MW-6S	13	ug/l	1,2-Dichlorobenzene	95-50-1	02/24/2004	20	5
MW-6D	3.8	ug/l	1,4-Dichlorobenzene	106-46-7	08/23/2007	6	1
MW-6D	5.7	ug/l	1,4-Dichlorobenzene	106-46-7	02/18/2008	6	1
MW-6D	**6.2**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/19/2008**	**6**	1
MW-6D	**6.8**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2009**	6	1
MW-6D	**7.9**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/18/2009**	**6**	1
MW-6D	3.8	ug/l	1,4-Dichlorobenzene	106-46-7	02/24/2010	6	1
MW-6D	**7.3**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2010**	**6**	**1**
MW-6D	**8.1**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/31/2010**	**6**	**1**
MW-6S	**9.9**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2004**	**6**	1
MW-6S	**16**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/10/2004**	**6**	1
MW-6S	**12**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/23/2005**	**6**	1
MW-6S	**14**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/23/2005**	**6**	1
MW-6S	**9**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**09/15/2005**	**6**	1
MW-6S	**15**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/23/2006**	**6**	1
MW-6S	**16**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/28/2006**	**6**	1
MW-6S	**16**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/15/2007**	**6**	1
MW-6S	**11**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/18/2008**	**6**	1
MW-6S	**12**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/19/2008**	**6**	1
MW-6S	**14.8**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2009**	6	1
MW-6S	**8.5**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2009**	6	1
MW-6S	**19**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/18/2009**	**6**	1
MW-6S	**15**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2010**	**6**	**1**
MW-6S	**18.7**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**02/24/2010**	**6**	**1**
MW-6S	**12**	**ug/l**	**1,4-Dichlorobenzene**	**106-46-7**	**08/31/2010**	**6**	**1**
MW-7	150	ug/l	Acetone	67-64-1	08/31/2010	700	100
MW-6D	**4.1**	**ug/l**	**Benzene**	**71-43-2**	**08/23/2007**	**1**	**1**
MW-6D	**2.7**	**ug/l**	**Benzene**	**71-43-2**	**02/18/2008**	**1**	**1**
MW-6D	**1.1**	**ug/l**	**Benzene**	**71-43-2**	**08/19/2008**	**1**	**1**
MW-6D	**1.7**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2009**	**1**	**1**
MW-6D	**2.5**	**ug/l**	**Benzene**	**71-43-2**	**08/18/2009**	**1**	**1**
MW-6D	**2.8**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2010**	**1**	**1**
MW-6S	**8.8**	**ug/l**	**Benzene**	**71-43-2**	**02/19/2003**	**1**	**1**
MW-6S	**8.4**	**ug/l**	**Benzene**	**71-43-2**	**08/26/2003**	**1**	**1**
MW-6S	**11**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2004**	**1**	**1**
MW-6S	**12**	**ug/l**	**Benzene**	**71-43-2**	**08/10/2004**	**1**	**1**
MW-6S	**6.3**	**ug/l**	**Benzene**	**71-43-2**	**02/23/2005**	**1**	**1**
MW-6S	**6.9**	**ug/l**	**Benzene**	**71-43-2**	**08/23/2005**	**1**	**1**
MW-6S	**6**	**ug/l**	**Benzene**	**71-43-2**	**09/15/2005**	**1**	**1**
MW-6S	**5.5**	**ug/l**	**Benzene**	**71-43-2**	**02/23/2006**	**1**	**1**
MW-6S	**5.8**	**ug/l**	**Benzene**	**71-43-2**	**08/28/2006**	**1**	**1**
MW-6S	**5.3**	**ug/l**	**Benzene**	**71-43-2**	**02/15/2007**	**1**	**1**
MW-6S	**4.5**	**ug/l**	**Benzene**	**71-43-2**	**08/23/2007**	**1**	**1**
MW-6S	**3.6**	**ug/l**	**Benzene**	**71-43-2**	**02/18/2008**	**1**	**1**
MW-6S	**2.2**	**ug/l**	**Benzene**	**71-43-2**	**08/19/2008**	**1**	**1**
MW-6S	**3**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2009**	**1**	**1**
MW-6S	**2.3**	**ug/l**	**Benzene**	**71-43-2**	**08/18/2009**	**1**	**1**
MW-6S	**2.5**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2010**	**1**	**1**

Table 2: Historic VOC Exceedences
Cherokee County Lined Landfill

Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-7	**5.7**	**ug/l**	**Benzene**	**71-43-2**	**02/15/2007**	**1**	**1**
MW-7	**3.6**	**ug/l**	**Benzene**	**71-43-2**	**08/23/2007**	**1**	**1**
MW-7	**7.6**	**ug/l**	**Benzene**	**71-43-2**	**02/18/2008**	**1**	**1**
MW-7	**1.3**	**ug/l**	**Benzene**	**71-43-2**	**08/18/2008**	**1**	**1**
MW-7	**4.3**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2009**	**1**	**1**
MW-7	**4.3**	**ug/l**	**Benzene**	**71-43-2**	**08/18/2009**	**1**	**1**
MW-7	**4.5**	**ug/l**	**Benzene**	**71-43-2**	**02/24/2010**	**1**	**1**
MW-6S	4.7	ug/l	Chlorobenzene	108-90-7	08/23/2007	50	3
MW-6S	3.9	ug/l	Chlorobenzene	108-90-7	02/18/2008	50	3
MW-6S	3.6	ug/l	Chlorobenzene	108-90-7	08/19/2008	50	3
MW-6S	3	ug/l	Chlorobenzene	108-90-7	08/18/2009	50	3
MW-6D	9.1	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/24/2004	70	5
MW-6D	17	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/10/2004	70	5
MW-6D	21	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/23/2005	70	5
MW-6D	18	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/23/2005	70	5
MW-6D	23	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/23/2006	70	5
MW-6D	22	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/28/2006	70	5
MW-6D	21	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/15/2007	70	5
MW-6D	21.1	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/23/2007	70	5
MW-6D	22	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/18/2008	70	5
MW-6D	17	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/19/2008	70	5
MW-6D	17.8	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/24/2009	70	5
MW-6D	16.6	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/18/2009	70	5
MW-6D	14.9	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/24/2010	70	5
MW-6S	16	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/19/2003	70	5
MW-6S	28	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/26/2003	70	5
MW-6S	43	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/24/2004	70	5
MW-6S	50	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/10/2004	70	5
MW-6S	30	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/23/2005	70	5
MW-6S	31	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/23/2005	70	5
MW-6S	29	ug/l	cis-1,2-Dichloroethylene	156-59-2	09/15/2005	70	5
MW-6S	28	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/23/2006	70	5
MW-6S	34	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/28/2006	70	5
MW-6S	32	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/15/2007	70	5
MW-6S	34.9	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/23/2007	70	5
MW-6S	25	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/18/2008	70	5
MW-6S	24	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/19/2008	70	5
MW-6S	16.9	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/24/2009	70	5
MW-6S	14.8	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/18/2009	70	5
MW-6S	13.3	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/24/2010	70	5
MW-7	7	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/26/2003	70	5
MW-7	8.8	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/10/2004	70	5
MW-7	8.5	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/23/2006	70	5
MW-7	26	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/28/2006	70	5
MW-7	20	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/15/2007	70	5
MW-7	40.9	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/23/2007	70	5
MW-7	30	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/18/2008	70	5
MW-7	17	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/18/2008	70	5
MW-7	31.5	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/24/2009	70	5
MW-7	37.3	ug/l	cis-1,2-Dichloroethylene	156-59-2	08/18/2009	70	5
MW-7	36.5	ug/l	cis-1,2-Dichloroethylene	156-59-2	02/24/2010	70	5
MW-6S	**32**	**ug/l**	**Dichloromethane**	**75-09-2**	**02/19/2003**	**5**	**1**
MW-6S	**31**	**ug/l**	**Dichloromethane**	**75-09-2**	**08/26/2003**	**5**	**1**

Table 2: Historic VOC Exceedences
Cherokee County Lined Landfill

Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6S	**23**	**ug/l**	**Dichloromethane**	**75-09-2**	**02/24/2004**	**5**	**1**
MW-6S	**19**	**ug/l**	**Dichloromethane**	**75-09-2**	**08/10/2004**	**5**	**1**
MW-6S	**8.9**	**ug/l**	**Dichloromethane**	**75-09-2**	**02/23/2005**	**5**	**1**
MW-6S	**10**	**ug/l**	**Dichloromethane**	**75-09-2**	**09/15/2005**	**5**	**1**
MW-7	1	ug/l	Dichloromethane	75-09-2	02/18/2008	5	1
MW-6S	16.3	ug/l	1,3-Dichlorobenzene	541-73-1	08/23/2007	200	5
MW-6D	**1.9**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/23/2007**	**0.7**	**1**
MW-6D	**1.1**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/18/2008**	**0.7**	**1**
MW-6S	**8.1**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/20/2002**	**0.7**	**1**
MW-6S	**8.7**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/24/2004**	**0.7**	**1**
MW-6S	**9.5**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/10/2004**	**0.7**	**1**
MW-6S	**1**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/23/2007**	**0.7**	**1**
MW-7	**5**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/24/2004**	**0.7**	**1**
MW-7	**1.8**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**08/23/2007**	**0.7**	**1**
MW-7	**2.3**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/18/2008**	**0.7**	**1**
MW-7	**1.4**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/24/2009**	**0.7**	**1**
MW-7	**0.88**	**ug/l**	**Tetrachloroethylene**	**127-18-4**	**02/24/2010**	**0.7**	**1**
MW-7	2.1	ug/l	Toluene	108-88-3	02/24/2009	600	1
MW-6S	**6**	**ug/l**	Trichloroethene	**79-01-6**	**08/20/2002**	**2.8**	1
MW-6S	**6.6**	**ug/l**	Trichloroethene	**79-01-6**	**02/19/2003**	**2.8**	1
MW-6S	**6.5**	**ug/l**	Trichloroethene	**79-01-6**	**02/24/2004**	**2.8**	1
MW-6S	**7.2**	**ug/l**	Trichloroethene	**79-01-6**	**08/10/2004**	**2.8**	1
MW-7	1.3	ug/l	Trichloroethene	79-01-6	08/23/2007	2.8	1
MW-7	1.6	ug/l	Trichloroethene	79-01-6	02/18/2008	2.8	1
MW-7	1.1	ug/l	Trichloroethene	79-01-6	02/24/2009	2.8	1
MW-7	1	ug/l	Trichloroethene	79-01-6	08/18/2009	2.8	1
MW-6S	**2.38**	**ug/l**	**Vinyl chloride**	**75-01-4**	**10/15/2001**	**0.03**	1
MW-6S	**8.3**	**ug/l**	**Vinyl chloride**	**75-01-4**	**02/24/2004**	**0.03**	1
MW-7	**1**	**ug/l**	**Vinyl chloride**	**75-01-4**	**08/23/2007**	**0.03**	1
MW-7	**1.8**	**ug/l**	**Vinyl chloride**	**75-01-4**	**02/18/2008**	**0.03**	1
MW-7	**1.6**	**ug/l**	**Vinyl chloride**	**75-01-4**	**02/24/2009**	**0.02**	1
MW-7	**1.9**	**ug/l**	**Vinyl chloride**	**75-01-4**	**08/18/2009**	**0.02**	1
MW-7	**1.6**	**ug/l**	**Vinyl chloride**	**75-01-4**	**02/24/2010**	**0.02**	**1**
MW-7	**1.8**	**ug/l**	**Vinyl chloride**	**75-01-4**	**08/31/2010**	**0.02**	**1**
MW-6S	11	ug/l	Xylene	1330-20-7	08/20/2002	500	5
MW-6S	12	ug/l	Xylene	1330-20-7	02/19/2003	500	5
MW-6S	15	ug/l	Xylene	1330-20-7	08/26/2003	500	5
MW-6S	25	ug/l	Xylene	1330-20-7	02/24/2004	500	5
MW-6S	26	ug/l	Xylene	1330-20-7	08/10/2004	500	5
MW-6S	15	ug/l	Xylene	1330-20-7	02/23/2005	500	5
MW-6S	12	ug/l	Xylene	1330-20-7	08/23/2005	500	5
MW-7	7	ug/l	Xylene	1330-20-7	02/18/2008	500	5

NOTE:
1. Table contains historic VOC exceedences of 2L or SWSL in MW-6S, MW-6D, MW-7 or P-18
2. NCGW2L – North Carolina 15A NCAC 2L Groundwater Quality Standard
3. SWSL – Solid Waste Section Reporting Limit
4. 2L exceedences shown in **BOLD**

Table 3: Area of Concern Sampling Detections
Cherokee County Lined Landfill

Well ID	Obs Value	Unit	Parameter Name	CAS RN	Sample Date	NCGW2L	SWSL
MW-6D	0.54	ug/L	1,1-Dichloroethane	75-34-3	08/31/2010	6	1
MW-6D	**8.1**	**ug/L**	**1,4-Dichlorobenzene**	**106-46-7**	**08/31/2010**	**6**	**1**
MW-6D	9500	ug/L	Chloride	SW301	08/31/2010	250000	5000
MW-6D	2.2	ug/L	Chlorobenzene	108-90-7	08/31/2010	50	1
MW-6D	13	ug/L	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	1
MW-6D	2.4	ug/L	PCB-1016/1242	1336-36-3	08/31/2010		0.50
MW-6S	**12**	**ug/L**	**1,4-Dichlorobenzene**	**106-46-7**	**08/31/2010**	**6**	**1**
MW-6S	9700	ug/L	Chloride	SW301	08/31/2010	250000	5000
MW-6S	2.7	ug/L	Chlorobenzene	108-90-7	08/31/2010	50	1
MW-6S	13	ug/L	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	1
MW-7	0.62	ug/L	1,1-Dichloroethane	75-34-3	08/31/2010	6	1
MW-7	0.64	ug/L	1,4-Dichlorobenzene	106-46-7	08/31/2010	6	1
MW-7	150	ug/L	Acetone	67-64-1	08/31/2010	700	5
MW-7	1.0	ug/L	Benzene	71-43-2	08/31/2010	1	1
MW-7	2.9	ug/L	Bis(2-ethylhexyl)phthalate	117-81-7	08/31/2010	3	5
MW-7	0.64	ug/L	Carbon disulfide	75-15-0	08/31/2010	700	5
MW-7	9800	ug/L	Chloride	SW301	08/31/2010	250000	5000
MW-7	0.57	ug/L	Chlorobenzene	108-90-7	08/31/2010	50	1
MW-7	42	ug/L	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	1
MW-7	170	ug/L	Sulfide	18496-25-8	08/31/2010		100
MW-7	0.64	ug/L	Tetrachloroethene	127-18-4	08/31/2010	0.7	1
MW-7	0.69	ug/L	Trichloroethene	79-01-6	08/31/2010	2.8	1
MW-7	**1.8**	**ug/L**	**Vinyl chloride**	**75-01-4**	**08/31/2010**	**0.03**	**1**
MW-7	0.51	ug/L	Xylenes (Total)	1330-20-7	08/31/2010	500	1
MW-8	4700	ug/L	Chloride	SW301	08/31/2010	250000	NE
P-17	0.73	ug/L	1,4-Dichlorobenzene	106-46-7	08/31/2010	6	1
P-17	5600	ug/L	Chloride	SW301	08/31/2010	250000	NE
P-17	3.2	ug/L	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5
P-18	0.42	ug/L	1,1-Dichloroethane	75-34-3	08/31/2010	6	5
P-18	0.57	ug/L	1,4-Dichlorobenzene	106-46-7	08/31/2010	6	1
P-18	4900	ug/L	Chloride	SW301	08/31/2010	250000	NE
P-18	1.9	ug/L	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5
P-18D	13	ug/L	Carbon disulfide	75-15-0	08/31/2010	700	100
P-18D	15000	ug/L	Chloride	SW301	08/31/2010	250000	NE
P-19	0.90	ug/L	1,4-Dichlorobenzene	106-46-7	08/31/2010	6	1
P-19	5200	ug/L	Chloride	SW301	08/31/2010	250000	NE
P-19	0.86	ug/L	Chloromethane	74-87-3	08/31/2010	3	1
P-19	0.90	ug/L	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5
P-20D	2400	ug/L	Chloride	SW301	08/31/2010	250000	NE
P-20D	3.0	ug/L	Di-n-butylphthalate	84-74-2	08/31/2010	700	10
P-20S	1.0	ug/L	Benzene	71-43-2	08/31/2010	1	1
P-20S	0.52	ug/L	Benzene	71-43-2	10/5/2010	1	1
P-20S	5200	ug/L	Chloride	SW301	08/31/2010	250000	NE
P-20S	11	ug/L	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5
P-20S	8.2	ug/L	cis-1,2-Dichloroethene	156-59-2	10/5/2010	70	5
P-20S	**0.82**	**ug/L**	**Tetrachloroethene**	**127-18-4**	**08/31/2010**	**0.7**	**1**
P-20S	0.55	ug/L	Tetrachloroethene	127-18-4	10/5/2010	0.7	1
P-20S	0.44	ug/L	Trichloroethene	79-01-6	10/5/2010	2.8	1
P-21	4300	ug/L	Chloride	SW301	08/31/2010	250000	NE
P-21	5.2	ug/L	cis-1,2-Dichloroethene	156-59-2	08/31/2010	70	5

NOTE:
1. Table contains detects for wells located within the area of concern
2. NCGW2L – North Carolina 15A NCAC 2L Groundwater Quality Standard
3. SWSL – Solid Waste Section Reporting Limit
4. 2L exceedences shown in **BOLD**

Plates

LEGEND

- EXISTING CONTOURS
- PROPOSED SUBGRADE CONTOUR
- PROPERTY LINE
- EXISITING PATH
- FENCE
- PHASE I LINER LIMITS TEMPORARY ANCHOR TRENCH
- PHASE I LINER LIMITS PERMANENT ANCHOR TRENCH
- NEW MSWLF LINED UNITS (AREAL LIMITS)
- REF # — ARCHAEOLOGICAL SITES
- WETLANDS
- 19 — U.S. ROUTE
- MW-1 — MONITORING WELL LOCATION
- P-17 — EXISTING PIEZOMETER LOCATION
- SW-4 — SURFACE WATER LOCATION

NOTES

1. THE LANDFILL FACILITY IS LOCATED IN A SEISMIC IMPACT ZONE.
2. THE HIGHEST ELEVATION ON THE 100 YEAR FLOOD HAZARD IS APPROXIMATELY 1650'.
3. THE WETLAND SITES WILL BE FLAGGED AND LEFT UNDISTURBED.

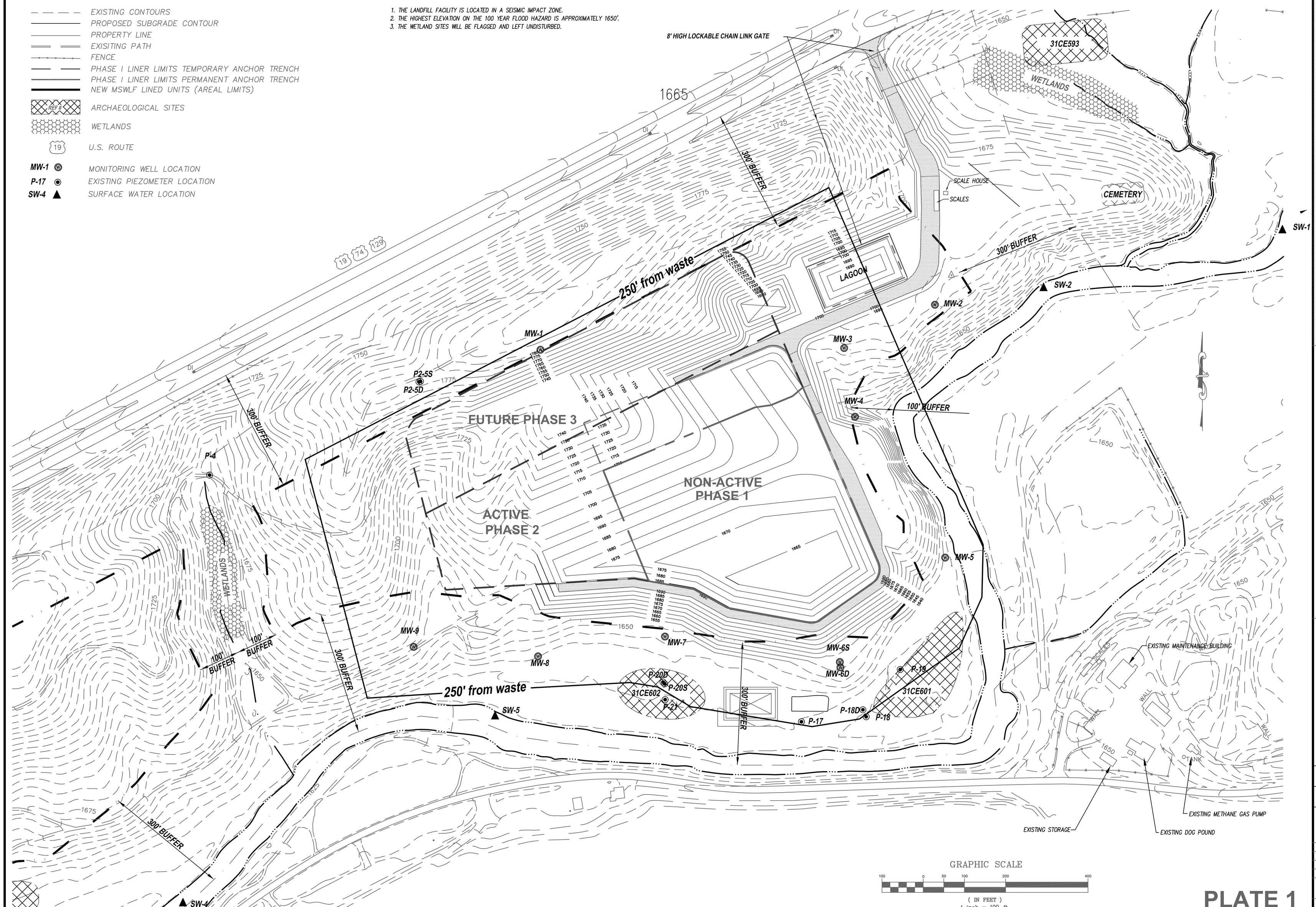


PLATE 1

Municipal Engineering Services Company, P.A.
LICENSE NUMBER: C-0281
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 27529 (704) 262-1767

SUBTITLE D LINED LANDFILL
CHEROKEE COUNTY
NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

GENERAL SITE MAP
WITH SAMPLING LOCATIONS

SCALE:	1"=100'
DATE:	9/24/2010
DRWN. BY:	M. GERMAN
CHKD. BY:	M. BROWN
PROJECT NUMBER	G10054.0
DRAWING NO.	PLATE 1
SHEET NO.	1 OF 1

LEGEND

- EXISTING CONTOURS
- PROPOSED SUBGRADE CONTOUR
- PROPERTY LINE
- EXISITING PATH
- FENCE
- PHASE I LINER LIMITS TEMPORARY ANCHOR TRENCH
- PHASE I LINER LIMITS PERMANENT ANCHOR TRENCH
- NEW MSWLF LINED UNITS (AREAL LIMITS)
- REF # — ARCHAEOLOGICAL SITES
- WETLANDS
- 19 — U.S. ROUTE
- MW-1 — MONITORING WELL LOCATION
- P-17 — PIEZOMETER LOCATION
- SW-4 — SURFACE WATER SAMPLING LOCATION
- EQUIPOTENTIAL CONTOURS
- 1708.11 — GROUNDWATER ELEVATION (UPPERMOST USED FOR CONTOURING)

NOTES

1. THE LANDFILL FACILITY IS LOCATED IN A SEISMIC IMPACT ZONE.
2. THE WETLAND SITES WILL BE FLAGGED AND LEFT UNDISTURBED.
3. THE WATER TABLE ELEVATIONS ARE BASED ON WATER LEVELS MEASURED ON 8/31/10

Cherokee County Subtitle D Lined MSWLF
August 31, 2010

WELL #	TOP OF PIPE ELEVATION (FT)	DEPTH TO WATER (FT)	WATER ELEVATION (FT)
MW-1	1803.60	95.49	1708.11
MW-2	1691.36	57.14	1634.22
MW-3	1689.41	34.22	1655.19
MW-4	1663.34	17.39	1645.95
MW-5	1638.14	9.82	1628.32
MW-6S	1661.17	16.52	1644.65
MW-6D	1658.12	26.70	1631.42
MW-7	1649.62	21.35	1628.27
MW-8	1642.02	11.89	1630.13
MW-9	1664.88	24.64	1640.24
P2-5S	1780.18	86.78	1693.40
P2-5D	1780.25	107.18	1673.07
P-4	1679.20	7.60	1671.60
P-17	1638.09	12.21	1625.88
P-18	1636.98	10.40	1626.58
P-18D	1637.08	9.54	1627.54
P-19	1636.29	9.05	1627.24
P-20S	1638.61	13.09	1625.52
P-20D	1638.25	12.57	1625.68
P-21	1637.15	11.72	1625.43

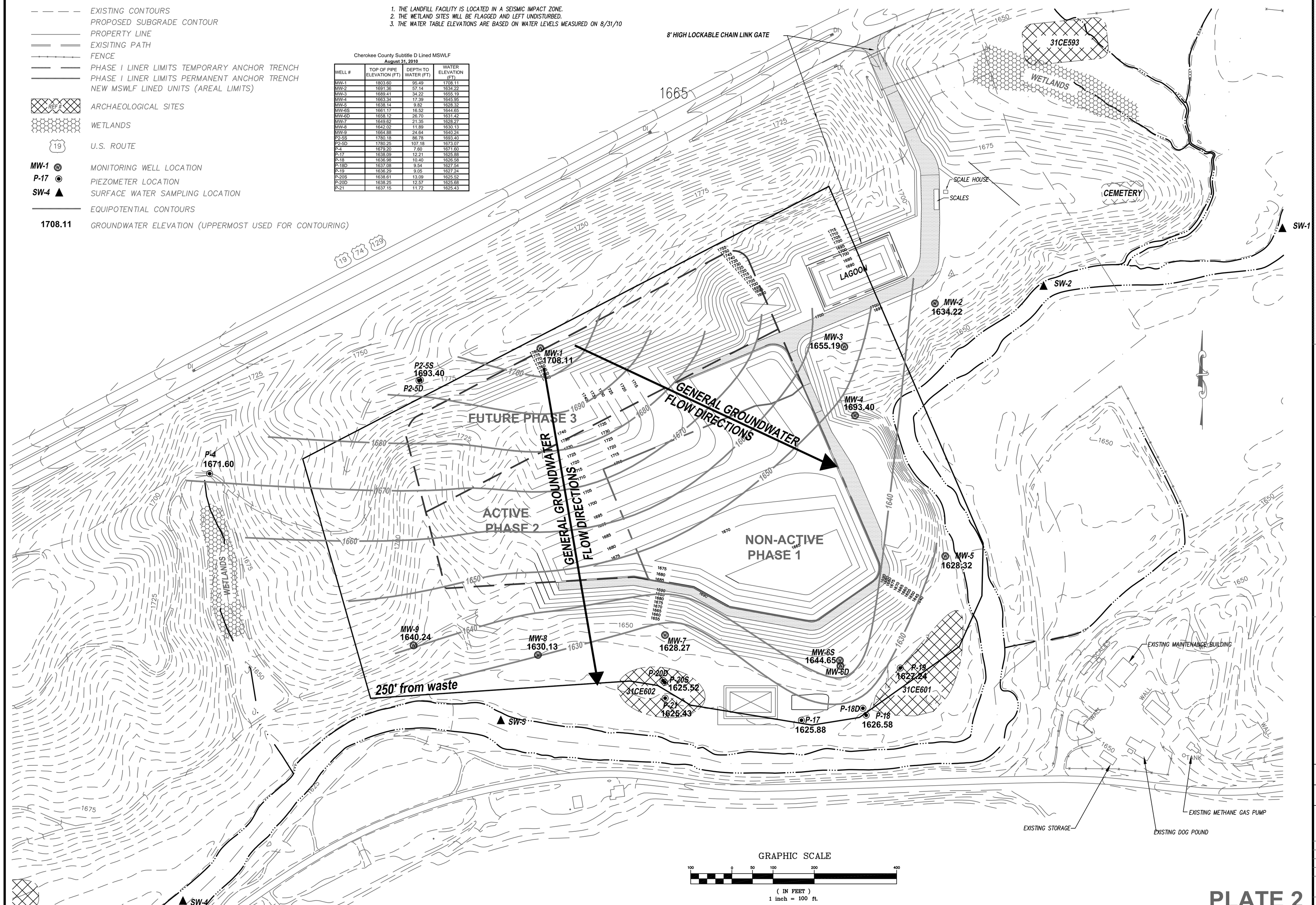


PLATE 2

Municipal Engineering Services Company, P.A.
LICENSE NUMBER: C-0281
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 27529 (704) 262-1767

SUBTITLE D LINED LANDFILL
CHEROKEE COUNTY
NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

SINGLE DAY POTENTIOMETRIC MAP
UPPERMOST AQUIFER 8/31/10

SCALE:	1"=100'
DATE:	09/25/2010
DRWN. BY:	M. GERMAN
CHKD. BY:	M. BROWN
PROJECT NUMBER	G10054.0
DRAWING NO.	PLATE 2
SHEET NO.	1 OF 1

APPENDIX A

NEW WELLS

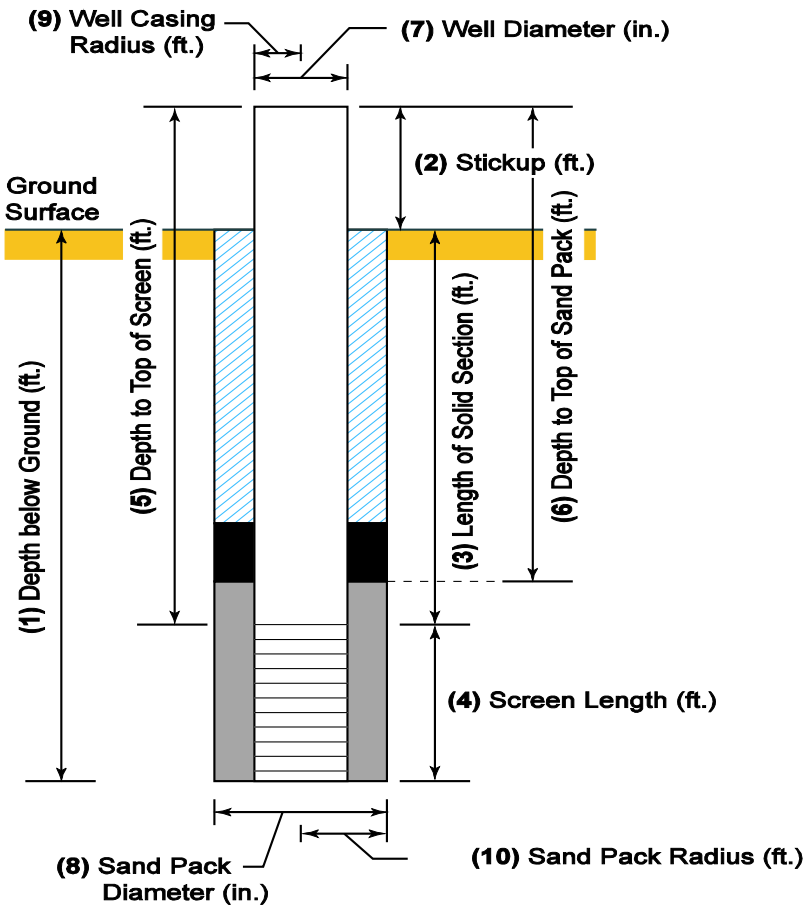
Table A-1. Piezometer geometry summary

Well	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
P-18D	54.43	3.14	44.43	10	47.57	42	2	8.5	0.08	0.35
P-20S	20.43	3.02	5.43	15	8.45	5.01	2	8	0.08	0.33
P-20D	42.92	2.32	32.92	10	35.24	31	2	10.25	0.08	0.43
P-21	17.20	3.02	7.20	10	10.22	5.50	2	4.25	0.08	0.18

NOTE:

1. Parameters in the table are numbered (1) through (10), and correspond to the numbers in the diagram.

2. All data in this table is in units of feet except for well diameter (7) and and pack diameter (8) which are in units of inches.



LOG OF BORING: P-18D

Cherokee County MSWLF **Project No. G10054.0**

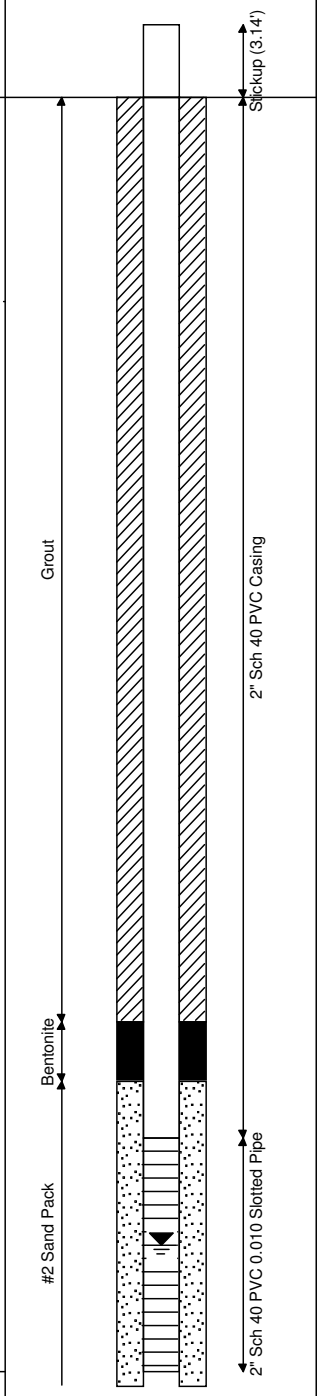
Drilling contractor: Landprobe
Drill rig & method: 8.5" ID HSA, 6" DTH, NQ Core
Logged by: J. Pfohl

Date started: 6/18/2010
Date ended: 6/18/2010
Completion depth: 54.43 ft
Stickup height: 3.14 ft

Surface elevation: 1633.94 ft (MSL)
Top of pipe elevation: 1637.08 ft (MSL)
Depth to water (TOB):
Depth to water (24hrs): 48.98 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
5				PWR, river cobbles
10				HSA Refusal - Top of Rock - 1625.24 amsl, Grey schist
15				
20				
25				
30				Run 1 (30.7' - 33.35') REC: 2.65'/2.65' = 100%, RQD: 2.08'/2.65' = 78.5% Biotite Schist, medium grey, very competent, mica, pyrite, garnet
35				Run 2 (33.35' - 34.90') REC: 1.55'/1.55' = 100%, RQD: 1.45'/1.55 = 93.6% Biotite Schist, light to med grey, very competent, some mica, pyrite, garnet
				Run 3 (34.90' - 40.20') REC: 5.3'/5.3' = 100%, RQD: 5.3'/5.3' = 100%, Biotite Schist, medium grey, very competent, some pyrite, mica, garnet
40				Run 4 (40.20'-48.80') REC: 8.6'/8.6' = 100%, RQD: 8.3'/8.6' = 96.5% Biotite schist, medium grey, very competent, some mica, pyrite, garnet
45				
50				Run 5 (48.80' - 51.47') REC: 2.67'/3.67' = 100%, RQD: 1.44'/2.67' = 53.9% Biotite schist, same as above
				Run 6 (51.47' - 54.43') REC: 2.85'/2.96' = 96.3%, RQD: 2.55'/2.96 = 86.1% Biotite schist, same as above
55				Boring terminated at 54.4 feet

Well Diagram



Municipal Engineering Services Company, P.A.
Operation/Construction Managers Civil/Sanitary Engineers Environmental Studies
PO Box 97, Garner, North Carolina 27529 (919) 772-5393 PO Box 349, Boone, North Carolina 28607 (828) 262-1767

LOG OF BORING: P-20S

Cherokee County Lined MSWLF **Project No. G10054.0**

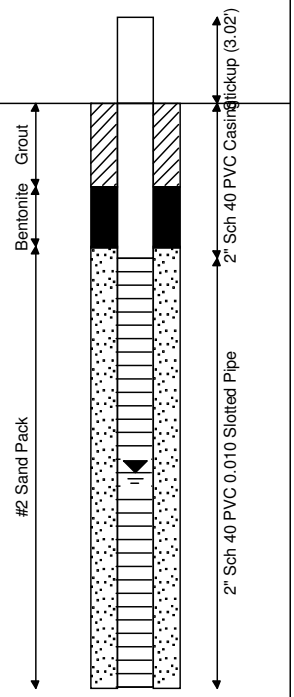
Drilling contractor: Landprobe
Drill rig & method: 8.00" OD HSA 4.25" ID HSA w/SPT
Logged by: J. Pfohl

Date started: 6/15/2010
Date ended: 6/15/2010
Completion depth: 20.43 ft
Stickup height: 3.02 ft

Surface elevation: 1635.59 ft (MSL)
Top of pipe elevation: 1638.61 ft (MSL)
Depth to water (TOB):
Depth to water (24hrs): 12.92 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
	4		X	Sandy Silt; brown, moderately dense, dry
5				
	3		X	No Recovery - Sample was "blow up"
10				
				PWR; very dense
15				
	6		X	PWR; brown, schist
20				Boring terminated at 20.4 feet
25				
30				
35				
40				
45				

Well Diagram



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LOG OF BORING: P-20D

Cherokee County Lined MSWLF **Project No. G10054.0**

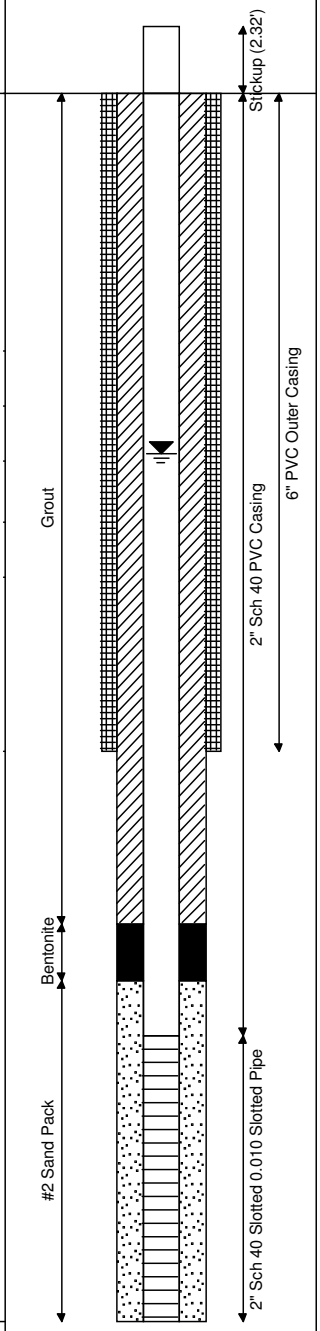
Drilling contractor: Landprobe
Drill rig & method: 10.25" HSA, 5.5" DTH 4"DTH
Logged by: J.Pfohl

Date started: 8/25/2010
Date ended: 6/30/2010
Completion depth: 42.92 ft
Stickup height: 2.32 ft

Surface elevation: 1635.93 ft (MSL)
Top of pipe elevation: 1638.25 ft (MSL)
Depth to water (TOB):
Depth to water (24hrs): 12.57 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Silty Sand; brown, moderately dense, dry
5				
10				PWR; river cobbles, poorly sorted
				Saprolite; brown, less dense, saturated
				PWR; poorly sorted river cobbles, moderately dense, saturated
15				Saprolite; brown, less dense, saturated
				PWR; river cobbles and large angular fragments, very dense, saturated
20				
				HSA Refusal- Top of Rock (1612.93 amsl) - Light grey Marble, very competent
25				
30				
35				
40				
				Boring terminated at 42.9 feet
45				

Well Diagram



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LOG OF BORING: P-21

Cherokee Lined MSWLF **Project No. G10054.0**

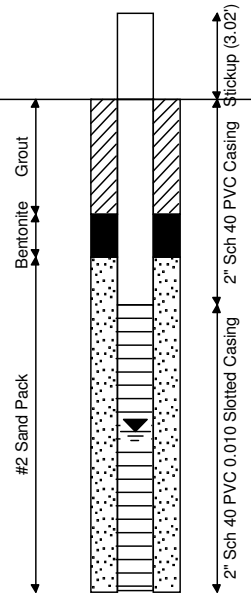
Drilling contractor: Landprobe
Drill rig & method: 4.25" ID HSA
Logged by: J. Pfohl

Date started: 6/22/2010
Date ended: 6/22/2010
Completion depth: 17.20 ft
Stickup height: 3.02 ft

Surface elevation: 1634.13 ft (MSL)
Top of pipe elevation: 1637.15 ft (MSL)
Depth to water (TOB):
Depth to water (24hrs): 11.58 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				Sandy Silt
5				
				PWR; grinding, river cobbles
10				
15				PWR; saprolite, less dense
				Boring terminated at 17.2 feet
20				
25				
30				
35				
40				
45				

Well Diagram



Municipal Engineering Services Company, P.A.
Operation/Construction Managers Civil/Sanitary Engineers Environmental Studies
PO Box 97, Garner, North Carolina 27529 (919) 772-5393 PO Box 349, Boone, North Carolina 28607 (828) 262-1767

NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR CERTIFICATION # 3290-A

1. WELL CONTRACTOR:

Brunson L King
Well Contractor (Individual) Name

Landprobe
Well Contractor Company Name

6004 Ponders Ct.
Street Address

Greenville SC 29615
City or Town State Zip Code

(828) 288-1265
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) P-18D

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 6/23/10

4. WELL LOCATION:

10160 US 19 Marble NC 28905
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Marble COUNTY Cherokee

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

LATITUDE 36 ° ' " DMS **OR** 35.1779 DD

LONGITUDE 75 ° ' " DMS **OR** 83.9082 DD

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

5. FACILITY (Name of the business where the well is located.)

Cherokee Co. Lined MSWLF
Facility Name Facility ID# (if applicable)

10160 US 19 Marble NC 28905
Street Address

Marble NC 28905
City or Town State Zip Code

Mr. Robert Allen
Contact Name

75 Peachtree Street (Courthouse)
Mailing Address

Murphy NC 28906
City or Town State Zip Code

(828) 837-4518
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 54.43

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: 48.98 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** na **METHOD OF TEST** na

f. **DISINFECTION: Type** na **Amount** na

g. **WATER ZONES** (depth):

Top 7	Bottom 8.70	Top 12	Bottom 15
Top 50	Bottom 53	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 8.70	Ft. 6	sch40	PVC
Top 0	Bottom 29	Ft. 5	sch40	PVC
Top	Bottom	Ft.		

8. GROUT:

Depth		Material	Method
Top 39.50	Bottom 42	Ft. Bent. Chips	Gravity
Top 0	Bottom 39.50	Ft. Neat Cement	Tremie
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 44.43	Bottom 54.43	Ft. 2 in.	0.01 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 42.00	Bottom 54.43	Ft. #2	Silica Filter Sand
Top	Bottom	Ft.	
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0	5.5	Soil-Brown
5.5	8.7	PWR-River Cobbles
8.7	54.43	Rock-Gray

12. REMARKS:

~~Deeper Double Cased Counterpart to P-18~~

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

Brunson L King 7-15-10
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Brunson L King
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR CERTIFICATION # 3290-A

1. WELL CONTRACTOR:

Brunson L King
Well Contractor (Individual) Name

Landprobe
Well Contractor Company Name

6004 Ponders Ct.
Street Address

Greenville | SC | 29615
City or Town | State | Zip Code

(828) 288-1265
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) P-20S

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 6/15/10

4. WELL LOCATION:

10160 US 19 Marble NC 28905
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Marble COUNTY Cherokee

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

LATITUDE 36 ° ' " DMS **OR** 35.1780 DD

LONGITUDE 75 ° ' " DMS **OR** 83.9099 DD

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

5. FACILITY (Name of the business where the well is located.)

Cherokee Co. Lined MSWLF
Facility Name | Facility ID# (if applicable)

10160 US 19 Marble NC 28905
Street Address

Marble | NC | 28905
City or Town | State | Zip Code

Mr. Robert Allen
Contact Name

75 Peachtree Street (Courthouse)
Mailing Address

Murphy | NC | 28906
City or Town | State | Zip Code

(828) 837-4518
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 20.43

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: 12.92 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** na **METHOD OF TEST** na

f. **DISINFECTION: Type** na **Amount** na

g. **WATER ZONES** (depth):

Top 9.92	Bottom 20.43	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 5.43	Ft. 2"	sch40	PVC
Top	Bottom	Ft.	sch40	PVC
Top	Bottom	Ft.		

8. GROUT:

Depth		Material	Method
Top 2.90	Bottom 5.01	Ft. Bent. Chips	Gravity
Top 0	Bottom 2.90	Ft. Neat Cement	Gravity
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 5.43	Bottom 20.43	Ft. 2 in.	0.01 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 5.01	Bottom 20.43	Ft. #2	Silica Filter Sand
Top	Bottom	Ft.	
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0	11	Soil-Brown
11	20.43	PWR-River Cobbles
		Refusal @ 24' BGS in adjacent
		Abandoned B-20D

12. REMARKS:

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

Brunson L King — 7-15-10
SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE

Brunson L King
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR CERTIFICATION # 3362-A

1. WELL CONTRACTOR:

Joseph Smith
Well Contractor (Individual) Name

Landprobe
Well Contractor Company Name

6004 Ponders Ct.
Street Address

Greenville SC 29615
City or Town State Zip Code

(828) 288-1265
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) P-20D

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 8/30/10

4. WELL LOCATION:

10160 US 19 Marble NC 28905
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Marble COUNTY Cherokee

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

LATITUDE 36 Á ' " DMS **OR** 35.1780 DD

LONGITUDE 75 Á ' " DMS **OR** 83.9099 DD

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

5. FACILITY (Name of the business where the well is located.)

Cherokee Co. Lined MSWLF
Facility Name Facility ID# (if applicable)

10160 US 19 Marble NC 28905
Street Address

Marble NC 28905
City or Town State Zip Code

Mr. Robert Allen
Contact Name

75 Peachtree Street (Courthouse)
Mailing Address

Murphy NC 28906
City or Town State Zip Code

(828) 837-4518
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 42.92' BGS

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: 12.57 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.30 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** na **METHOD OF TEST** na

f. **DISINFECTION: Type** na **Amount** na

g. **WATER ZONES** (depth):

Top 39	Bottom 39.5	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 23	Ft. 6"	sch40	PVC
Top 0	Bottom 30	Ft. 5"	sch40	PVC
Top 0	Bottom 32.92	Ft. 2"	sch40	PVC

8. GROUT:

Depth		Material	Method
Top 29	Bottom 31	Ft. Bent. Chips	Gravity
Top 0	Bottom 29	Ft. Neat Cement	Tremie
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 32.92	Bottom 42.92	Ft. 2 in.	0.01 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 31	Bottom 42.92	Ft. #2	Silica Filter Sand
Top	Bottom	Ft.	
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0	9	Soil-Brown
9	23	PWR-River Cobbles
23	42.92	Rock-Gray

12. REMARKS:

Double cased well adjacent to P-20S

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 9-8-10

Joseph Smith
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR CERTIFICATION # 3290-A

1. WELL CONTRACTOR:

Brunson L King
Well Contractor (Individual) Name

Landprobe
Well Contractor Company Name

6004 Ponders Ct.
Street Address

Greenville SC 29615
City or Town State Zip Code

(828) 288-1265
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) P-21

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 6/22/10

4. WELL LOCATION:

10160 US 19 Marble NC 28905
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Marble COUNTY Cherokee

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

LATITUDE 36 ° ' " DMS **OR** 35.1779 DD

LONGITUDE 75 ° ' " DMS **OR** 83.9098 DD

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

5. FACILITY (Name of the business where the well is located.)

Cherokee Co. Lined MSWLF
Facility Name Facility ID# (if applicable)

10160 US 19 Marble NC 28905
Street Address

Marble NC 28905
City or Town State Zip Code

Mr. Robert Allen
Contact Name

75 Peachtree Street (Courthouse)
Mailing Address

Murphy NC 28906
City or Town State Zip Code

(828) 837-4518
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 17.20

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: 11.58 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3.00 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** na **METHOD OF TEST** na

f. **DISINFECTION: Type** na **Amount** na

g. **WATER ZONES** (depth):

Top 9.58	Bottom 17.20	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 7.20	Ft. 2"	sch40	PVC
Top	Bottom	Ft.	sch40	PVC
Top	Bottom	Ft.		

8. GROUT:

Depth		Material	Method
Top 4	Bottom 5.50	Ft. Bent. Chips	Gravity
Top 0	Bottom 4	Ft. Neat Cement	Gravity
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 7.20	Bottom 17.20	Ft. 2 in.	0.01 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 5.50	Bottom 17.20	Ft. #2	Silica Filter Sand
Top	Bottom	Ft.	
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0	8	Soil-Brown
8	15	PWR-River Cobbles-Dense
15	17.20	PWR-River Cobbles-Less Dense

12. REMARKS:

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

Brunson L King 7-15-10
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Brunson L King
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

EXISTING WELLS

LOG OF BORING: P-17

Cherokee County Subtitle D LF Phase 1 Assessment **Project No. G05007.0**

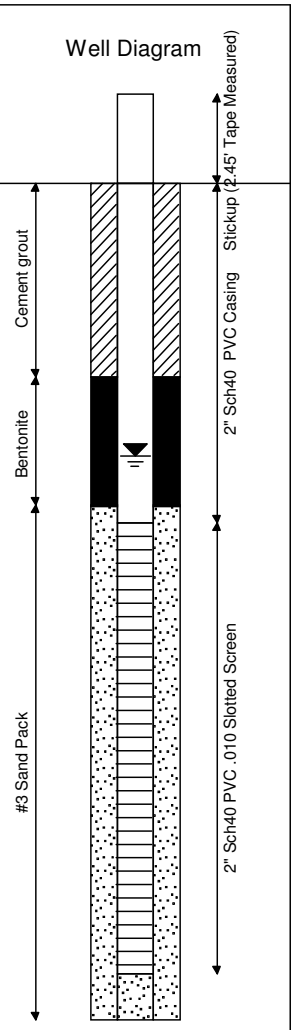
Drilling contractor: Engineering Tectonics
Drill rig & method: 6.25"O.D Air Tricomb, 4" OD DTH
Logged by: J. Pfohl

Date started: 1/10/2006
Date ended: 1/19/2006
Completion depth: 13.00 ft
Stickup height: 2.45 ft

Surface elevation: 1635.64 ft (MSL)
Top of pipe elevation: 1638.09 ft (MSL)
Depth to water (TOB): 6.50 ft
Depth to water (24hrs): 4.24 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
	9			SILTY SAND; Br. Yellow fine grained sand, light gray silt partings, fine root debris, dry.
5	18			SILTY SAND; Same as above but with river gravel.
10				HEAVILY WEATHERED ROCK; Gray w/ rounded river gravel.
				Boring terminated at 13.0 feet
15				
20				

Well Diagram



Municipal Engineering Services Company, P.A.
Operation/Construction Managers Civil/Sanitary Engineers Environmental Studies
PO Box 97, Garner, North Carolina 27529 (919) 772-5393 *PO Box 349, Boone, North Carolina 28607 (828) 262-1767*

LOG OF BORING: P-18

Cherokee County Subtitle D LF Phase 1 Assessment **Project No. G05007.0**

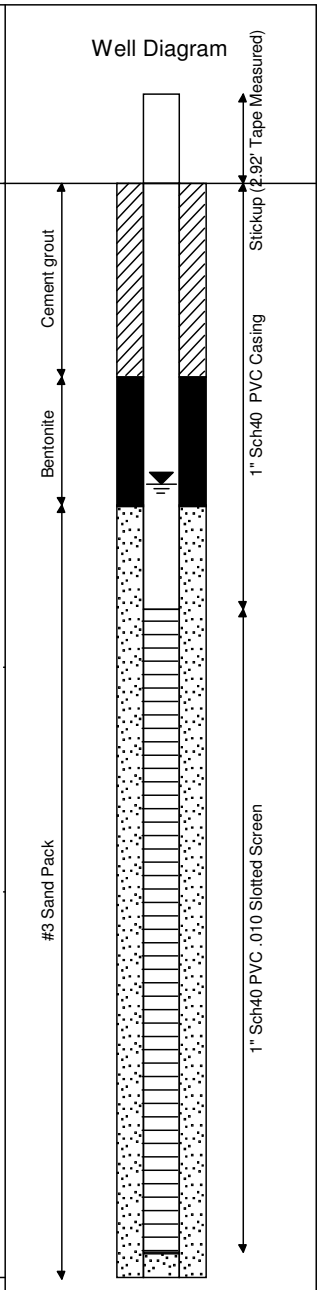
Drilling contractor: Engineering Tectonics
Drill rig & method: 5.875"O.D Air Tricomb, NQ2 Core
Logged by: J. Pfohl

Date started: 1/10/2006
Date ended: 1/17/2006
Completion depth: 17.00 ft
Stickup height: 2.92 ft

Surface elevation: 1634.06 ft (MSL)
Top of pipe elevation: 1636.98 ft (MSL)
Depth to water (TOB): 6.75 ft
Depth to water (24hrs): 4.66 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
	9			SILTY SAND; Br. Yellow fine grained sand, light gray silt partings, fine root debris, dry.
	5			SILTY SAND; Same as above but with/out root debris.
5				
	23			HEAVILY WEATHERED ROCK;
10				
				RUN #1;(REC) 4'/4'=100%, (RQD)4'/4'=100%. (13'-17') Biotite Gneiss-Gray, highlycompetent, pyrite and some garnet and mica.
15				
				Boring terminated at 17.0 feet
20				

Well Diagram



Municipal Engineering Services Company, P.A.
Operation/Construction Managers Civil/Sanitary Engineers Environmental Studies
PO Box 97, Garner, North Carolina 27529 (919) 772-5393 *PO Box 349, Boone, North Carolina 28607 (828) 262-1767*

LOG OF BORING: P-19

Cherokee County Subtitle D LF Phase 1 Assessment **Project No. G05007.0**

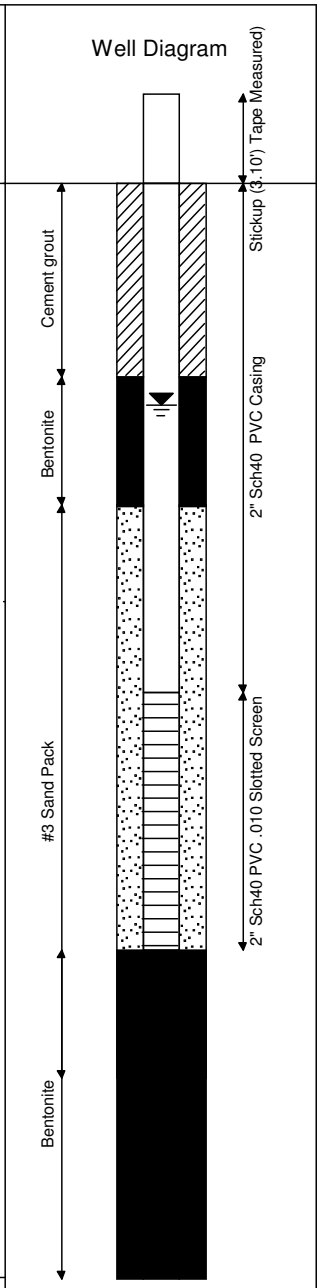
Drilling contractor: Engineering Tectonics
Drill rig & method: 3.5"O.D Air Casing Advancer, NQ2 Core
Logged by: J. Pfohl

Date started: 1/18/2006
Date ended: 1/18/2006
Completion depth: 17.00 ft
Stickup height: 3.10 ft

Surface elevation: 1633.19 ft (MSL)
Top of pipe elevation: 1636.29 ft (MSL)
Depth to water (TOB): 3.50 ft
Depth to water (24hrs): 3.44 ft

Depth (ft)	SPT (bpf)	Soil Type Symbol	Sample	Description of Material & Remarks
				SILTY SAND; Br. Yellow fine grained sand, dry.
5				
				RUN #1;(REC) 1.75/2.5'=70%, (RQD) 0.25'/2.5'=10%. (6.5'-9') Quartzite, Brownish Gray, Highly weathered & fractured, fractures predominately parallel. Iron stained fractures, pyrite and some garnet and mica.
				RUN #2;(REC) 8'/8'=65.8%, (RQD) 8'/8"=100%. (9'-17') Biotite Schist; Gray,Very competent, pyrite and some garnet and mica.
10				
15				
				Boring terminated at 17.0 feet
20				

Well Diagram



Municipal Engineering Services Company, P.A.
Operation/Construction Managers Civil/Sanitary Engineers Environmental Studies
PO Box 97, Garner, North Carolina 27529 (919) 772-5393 *PO Box 349, Boone, North Carolina 28607 (828) 262-1767*

NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR CERTIFICATION # 2091

1. WELL CONTRACTOR:

Ronald Barron
Well Contractor (Individual) Name

Engineering Tectonics
Well Contractor Company Name

STREET ADDRESS 1720 Vargrave St.

Winston-Salem NC 27107
City or Town State Zip Code

(336)- 724-6994
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) D-17

STATE WELL PERMIT#(if applicable) n/a

DWQ or OTHER PERMIT #(if applicable) n/a

WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use) _____

DATE DRILLED 1-19-06

TIME COMPLETED 3:15 AM ☐ PM ☒

3. WELL LOCATION:

CITY: Marble COUNTY Cherokee

10160 US19 28905
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☐ Flat ☐ Ridge ☒ Other River Bottom
(check appropriate box)

LATITUDE 35 1778164

LONGITUDE 83 9067661

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

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

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

FACILITY ID #(if applicable) n/a

NAME OF FACILITY Cherokee Co. Landfill

STREET ADDRESS 10160 US19

Marble NC 28905
City or Town State Zip Code

CONTACT PERSON Jeff Clark

MAILING ADDRESS 75 Peachtree St.

Murphy NC 28906
City or Town State Zip Code

(828)- 837-2621
Area code - Phone number

5. WELL DETAILS:

a. **TOTAL DEPTH:** 12.82

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

c. **WATER LEVEL** Below Top of Casing: 9.69 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.46 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** n/a **METHOD OF TEST** n/a

f. **DISINFECTION: Type** n/a **Amount** n/a

g. **WATER ZONES** (depth):

From 9 To 10 From ____ To ____
From ____ To ____ From ____ To ____
From ____ To ____ From ____ To ____

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From +2.46	To 5.28	Ft.	2"	Sch40	PVC
From ____	To ____	Ft.			
From ____	To ____	Ft.			

7. GROUT:

	Depth		Material	Method
From 0	To 3	Ft.	Portland	Tremie
From ____	To ____	Ft.		
From ____	To ____	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From 5.28	To 12.82	Ft.	2" in.	.010 in.	PVC
From ____	To ____	Ft.	in.	in.	
From ____	To ____	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 5'	To 12.82	Ft.	#3	Sand
From 3	To 5	Ft.	3/8	Bentonite
From ____	To ____	Ft.		

10. DRILLING LOG

From	To	Formation Description
0	3'	Dry Silt
3'	8'	River Boulders
8'	12.82	Rock & Boulders

11. REMARKS:

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

Ronald Barron For Eng. Tectonics 2-1-06
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ronald Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR CERTIFICATION # 2091

1. WELL CONTRACTOR:

Ronald Barron
Well Contractor (Individual) Name

Engineering Tectonics
Well Contractor Company Name

STREET ADDRESS 1720 Vargrove St.

Winston-Salem NC 27107
City or Town State Zip Code

(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) P-18

STATE WELL PERMIT#(if applicable) n/a

DWQ or OTHER PERMIT #(if applicable) n/a

WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use) _____

DATE DRILLED 1-17-06

TIME COMPLETED 11:45 AM ☒ PM ☐

3. WELL LOCATION:

CITY: Marble COUNTY Cherokee

10160 US19 28905
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☐ Flat ☐ Ridge ☒ Other River Bottom
(check appropriate box)

LATITUDE 35 1779286

LONGITUDE 83 9082205

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

Latitude/longitude source: ☒ GPS ☐ Topographic map

(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

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

FACILITY ID #(if applicable) n/a

NAME OF FACILITY Cherokee Co. Landfill

STREET ADDRESS 10160 US19

Marble NC 28905
City or Town State Zip Code

CONTACT PERSON Jeff Clark

MAILING ADDRESS 75 Peachtree St.

Murphy NC 28906
City or Town State Zip Code

(828) 837-2621
Area code - Phone number

5. WELL DETAILS:

a. **TOTAL DEPTH:** 16.6'

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

c. **WATER LEVEL** Below Top of Casing: 7.16 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.92 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** n/a **METHOD OF TEST** n/a

f. **DISINFECTION: Type** n/a **Amount** n/a

g. **WATER ZONES** (depth):

From	To	From	To
7	8		

6. CASING:

	Depth From	Depth To	Diameter	Thickness/ Weight	Material
	+2.92	6.6 Ft.	1	Sch40	PVC
		Ft.			
		Ft.			

7. GROUT:

	Depth From	Depth To	Material	Method
	0	3 Ft.	Portland	Tremie
		Ft.		
		Ft.		

8. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	6.6	16.6 Ft.	1 in.	.010 in.	PVC
		Ft.	in.	in.	
		Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth From	Depth To	Size	Material
	5	16.6 Ft.	#3	Sand
	3	5 Ft.	3/8	Bentonite
		Ft.		

10. DRILLING LOG

From	To	Formation Description
0	3'	Brn silt
3'	11'	River Boulders
11'	16'6	Rock

11. REMARKS:

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

Ronald Barron For Eng. Tectonics 2-1-06
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ronald Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR CERTIFICATION # 2091

1. WELL CONTRACTOR:

Ronald Barron
Well Contractor (Individual) Name

Engineering Tectonics
Well Contractor Company Name

STREET ADDRESS 1720 Vargrove St.

Winston-Salem NC 27107
City or Town State Zip Code

(336) 724-6994
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable) P-19

STATE WELL PERMIT#(if applicable) n/a

DWQ or OTHER PERMIT #(if applicable) n/a

WELL USE (Check Applicable Box) Monitoring ☒ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use) _____

DATE DRILLED 1-18-06

TIME COMPLETED 5:30 AM ☐ PM ☒

3. WELL LOCATION:

CITY: Marble COUNTY Cherokee

10160 US19 28905
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☐ Flat ☐ Ridge ☒ Other River Bottom
(check appropriate box)

LATITUDE 35 1782077

LONGITUDE 83 9060053

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

Latitude/longitude source: ☒ GPS ☐ Topographic map

(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

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

FACILITY ID #(if applicable) n/a

NAME OF FACILITY Cherokee Co. Landfill

STREET ADDRESS 10160 US19

Marble NC 28905
City or Town State Zip Code

CONTACT PERSON Jeff Clark

MAILING ADDRESS 75 Peachtree St.

Murphy NC 28906
City or Town State Zip Code

(828) 837-2621
Area code - Phone number

5. WELL DETAILS:

a. **TOTAL DEPTH:** 11.9'

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

c. **WATER LEVEL** Below Top of Casing: 6.32 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 3.1 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** n/a **METHOD OF TEST** n/a

f. **DISINFECTION: Type** n/a **Amount** n/a

g. **WATER ZONES** (depth):

From	To	From	To
7	8		

6. CASING:

From	To	Depth Ft.	Diameter	Thickness/ Weight	Material
+3.1	7.9		2"	Sch 40	PVC

7. GROUT:

From	To	Ft.	Material	Method
0	3		Portland	Tremie

8. SCREEN:

From	To	Ft.	Diameter in.	Slot Size in.	Material
7.9	11.9		2	.010	PVC

9. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
5	11.9		#3	Sand
3	5		3/8	Bentonite

10. DRILLING LOG

From	To	Formation Description
0	3	Brn Silt
3	6.5	River Boulders
6.5	11.9	Rock

11. REMARKS:

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

Ronald Barron for Eng. Tectonics 2-1-06
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ronald Barron
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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

Form GW-1b
Rev. 7/05

APPENDIX B

Environmental Conservation Laboratories, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515
www.encolabs.com

Monday, September 27, 2010

Municipal Engineering Services (MU001)

Attn: Jonathan Pfohl

P.O. Box 97

Garner, NC 27529

RE: Laboratory Results for
Project Number: G10007.0 SW, Project Name/Desc: Cherokee Co. SWs
ENCO Workorder: C009813

Dear Jonathan Pfohl,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, September 3, 2010.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 38.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: SW-5 **Lab ID: C009813-04** **Sampled: 08/31/10 10:35** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/07/10 10:48	9/8/2010 03:22

Client ID: MW-1 **Lab ID: C009847-01** **Sampled: 08/31/10 07:30** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/09/10 07:24	9/9/2010 14:30

Client ID: MW-6S **Lab ID: C009847-06** **Sampled: 08/31/10 16:30** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/09/10 07:24	9/9/2010 16:56

Client ID: MW-6D MS/MSD **Lab ID: C009847-07** **Sampled: 08/31/10 17:10** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/09/10 07:24	9/9/2010 12:33

Client ID: MW-7 **Lab ID: C009847-08** **Sampled: 08/31/10 18:00** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/09/10 07:24	9/9/2010 17:25

Client ID: MW-8 **Lab ID: C009847-09** **Sampled: 08/31/10 20:10** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/09/10 07:24	9/9/2010 17:55

Client ID: P-17 **Lab ID: C009848-01** **Sampled: 08/31/10 13:50** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/09/10 07:24	9/9/2010 18:53

Client ID: P-18 **Lab ID: C009848-02** **Sampled: 08/31/10 14:25** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/09/10 07:24	9/9/2010 19:23

Client ID: P-18D **Lab ID: C009848-03** **Sampled: 08/31/10 12:45** **Received: 09/03/10 09:20**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/09/10 07:24	9/9/2010 19:52

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Client ID: P-19	Lab ID: C009848-04	Sampled: 08/31/10 15:00	Received: 09/03/10 09:20

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/10/10 08:38	9/10/2010 15:13

Client ID: P-20S	Lab ID: C009848-05	Sampled: 08/31/10 16:00	Received: 09/03/10 09:20

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/10/10 08:38	9/10/2010 15:41

Client ID: P-20D	Lab ID: C009848-06	Sampled: 08/31/10 13:10	Received: 09/03/10 09:20

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/10/10 08:38	9/10/2010 16:10

Client ID: P-21	Lab ID: C009848-07	Sampled: 08/31/10 15:30	Received: 09/03/10 09:20

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	09/14/10	09/10/10 08:38	9/10/2010 16:39

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: MW-6S **Lab ID: C009847-06**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,4-Dichlorobenzene	12		1	0.38	1.0	1	ug/L	EPA 8260B	
Chlorobenzene	2.7	J	1	0.27	1.0	3	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	13		1	0.36	1.0	5	ug/L	EPA 8260B	

Client ID: MW-6D MS/MSD **Lab ID: C009847-07**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	0.54	J	1	0.33	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	8.1		1	0.38	1.0	1	ug/L	EPA 8260B	
Chlorobenzene	2.2	J	1	0.27	1.0	3	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	13		1	0.36	1.0	5	ug/L	EPA 8260B	

Client ID: MW-7 **Lab ID: C009847-08**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	0.62	J	1	0.33	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	0.64	J	1	0.38	1.0	1	ug/L	EPA 8260B	
Acetone	150		1	1.5	5.0	100	ug/L	EPA 8260B	
Benzene	1.0		1	0.20	1.0	1	ug/L	EPA 8260B	
Carbon disulfide	0.64	J	1	0.54	5.0	100	ug/L	EPA 8260B	
Chlorobenzene	0.57	J	1	0.27	1.0	3	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	42		1	0.36	1.0	5	ug/L	EPA 8260B	
Tetrachloroethene	0.64	J	1	0.36	1.0	1	ug/L	EPA 8260B	
Trichloroethene	0.69	J	1	0.38	1.0	1	ug/L	EPA 8260B	
Vinyl chloride	1.8		1	0.30	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)	0.51	J	1	0.40	1.0	5	ug/L	EPA 8260B	

Client ID: P-17 **Lab ID: C009848-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,4-Dichlorobenzene	0.73	J	1	0.38	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	3.2	J	1	0.36	1.0	5	ug/L	EPA 8260B	

Client ID: P-18 **Lab ID: C009848-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	0.42	J	1	0.33	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	0.57	J	1	0.38	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	1.9	J	1	0.36	1.0	5	ug/L	EPA 8260B	

Client ID: P-18D **Lab ID: C009848-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Carbon disulfide	13	J	1	0.54	5.0	100	ug/L	EPA 8260B	

Client ID: P-19 **Lab ID: C009848-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,4-Dichlorobenzene	0.90	J	1	0.38	1.0	1	ug/L	EPA 8260B	
Chloromethane	0.86	J	1	0.34	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	0.90	J	1	0.36	1.0	5	ug/L	EPA 8260B	

Client ID: P-20S **Lab ID: C009848-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes

Client ID: P-20S **Lab ID: C009848-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Benzene	1.0		1	0.20	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	11		1	0.36	1.0	5	ug/L	EPA 8260B	
Tetrachloroethene	0.82	J	1	0.36	1.0	1	ug/L	EPA 8260B	

Client ID: P-21 **Lab ID: C009848-07**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
cis-1,2-Dichloroethene	5.2		1	0.36	1.0	5	ug/L	EPA 8260B	

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ANALYTICAL RESULTS

Description: SW-5 **Lab Sample ID:** C009813-04 **Received:** 09/03/10 09:20

Matrix: Ground Water **Sampled:** 08/31/10 10:35 **Work Order:** C009813

Project: Cherokee Co. SWs **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/08/10 03:22	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/08/10 03:22	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/08/10 03:22	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/08/10 03:22	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/08/10 03:22	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/08/10 03:22	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/08/10 03:22	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/08/10 03:22	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/08/10 03:22	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/08/10 03:22	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/08/10 03:22	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/08/10 03:22	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/08/10 03:22	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/08/10 03:22	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/08/10 03:22	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/08/10 03:22	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/08/10 03:22	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/08/10 03:22	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	09/08/10 03:22	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/08/10 03:22	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/08/10 03:22	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/08/10 03:22	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/08/10 03:22	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/08/10 03:22	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/08/10 03:22	JKG	

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Description: SW-5 | **Lab Sample ID:** C009813-04 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 10:35 | **Work Order:** C009813

Project: Cherokee Co. SWs | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/08/10 03:22	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/08/10 03:22	JKG	
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/08/10 03:22	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*0I07020*	*EPA 8260B*	*09/08/10 03:22*	*JKG*	
Dibromofluoromethane	*42*	*1*	*50.0*	*85 %*	*68-117*	*0I07020*	*EPA 8260B*	*09/08/10 03:22*	*JKG*	
Toluene-d8	*42*	*1*	*50.0*	*85 %*	*69-110*	*0I07020*	*EPA 8260B*	*09/08/10 03:22*	*JKG*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: MW-1 | **Lab Sample ID:** C009847-01 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 07:30 | **Work Order:** C009847

Project: Cherokee Lined | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 14:30	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/09/10 14:30	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/09/10 14:30	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/09/10 14:30	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/09/10 14:30	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/09/10 14:30	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/09/10 14:30	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/09/10 14:30	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/09/10 14:30	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/09/10 14:30	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/09/10 14:30	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/09/10 14:30	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/09/10 14:30	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/09/10 14:30	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/09/10 14:30	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/09/10 14:30	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/09/10 14:30	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/09/10 14:30	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	09/09/10 14:30	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/09/10 14:30	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/09/10 14:30	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/09/10 14:30	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/09/10 14:30	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/09/10 14:30	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 14:30	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/09/10 14:30	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/09/10 14:30	JKG	

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Description: MW-1 | **Lab Sample ID:** C009847-01 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 07:30 | **Work Order:** C009847

Project: Cherokee Lined | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 14:30	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*0I09004*	*EPA 8260B*	*09/09/10 14:30*	*JKG*	
Dibromofluoromethane	*42*	*1*	*50.0*	*84 %*	*68-117*	*0I09004*	*EPA 8260B*	*09/09/10 14:30*	*JKG*	
Toluene-d8	*43*	*1*	*50.0*	*87 %*	*69-110*	*0I09004*	*EPA 8260B*	*09/09/10 14:30*	*JKG*	

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Description: MW-6S
Matrix: Ground Water
Project: Cherokee Lined

Lab Sample ID: C009847-06
Sampled: 08/31/10 16:30
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009847

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 16:56	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/09/10 16:56	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/09/10 16:56	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/09/10 16:56	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/09/10 16:56	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/09/10 16:56	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
1,4-Dichlorobenzene [106-46-7] ^	**12**		ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/09/10 16:56	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/09/10 16:56	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/09/10 16:56	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/09/10 16:56	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/09/10 16:56	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/09/10 16:56	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/09/10 16:56	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/09/10 16:56	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/09/10 16:56	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Chlorobenzene [108-90-7] ^	**2.7**	J	ug/L	1	0.27	1.0	3	EPA 8260B	09/09/10 16:56	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/09/10 16:56	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/09/10 16:56	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**13**		ug/L	1	0.36	1.0	5	EPA 8260B	09/09/10 16:56	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/09/10 16:56	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/09/10 16:56	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/09/10 16:56	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/09/10 16:56	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/09/10 16:56	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 16:56	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/09/10 16:56	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/09/10 16:56	JKG	

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Description: MW-6S
Matrix: Ground Water
Project: Cherokee Lined

Lab Sample ID: C009847-06
Sampled: 08/31/10 16:30
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009847

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 16:56	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*79 %*	*51-122*	*0I09004*	*EPA 8260B*	*09/09/10 16:56*	*JKG*	
Dibromofluoromethane	*41*	*1*	*50.0*	*82 %*	*68-117*	*0I09004*	*EPA 8260B*	*09/09/10 16:56*	*JKG*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*69-110*	*0I09004*	*EPA 8260B*	*09/09/10 16:56*	*JKG*	

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Description: MW-6D MS/MSD
Matrix: Ground Water
Project: Cherokee Lined

Lab Sample ID: C009847-07
Sampled: 08/31/10 17:10
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009847

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 12:33	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/09/10 12:33	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
1,1-Dichloroethane [75-34-3] ^	**0.54**	J	ug/L	1	0.33	1.0	5	EPA 8260B	09/09/10 12:33	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/09/10 12:33	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/09/10 12:33	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/09/10 12:33	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
1,4-Dichlorobenzene [106-46-7] ^	**8.1**		ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/09/10 12:33	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/09/10 12:33	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/09/10 12:33	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/09/10 12:33	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/09/10 12:33	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/09/10 12:33	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/09/10 12:33	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/09/10 12:33	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/09/10 12:33	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Chlorobenzene [108-90-7] ^	**2.2**	J	ug/L	1	0.27	1.0	3	EPA 8260B	09/09/10 12:33	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/09/10 12:33	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/09/10 12:33	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**13**		ug/L	1	0.36	1.0	5	EPA 8260B	09/09/10 12:33	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/09/10 12:33	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/09/10 12:33	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/09/10 12:33	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/09/10 12:33	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/09/10 12:33	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 12:33	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/09/10 12:33	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/09/10 12:33	JKG	

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Description: MW-6D MS/MSD
Matrix: Ground Water
Project: Cherokee Lined

Lab Sample ID: C009847-07
Sampled: 08/31/10 17:10
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009847

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 12:33	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*0I09004*	*EPA 8260B*	*09/09/10 12:33*	*JKG*	
Dibromofluoromethane	*42*	*1*	*50.0*	*84 %*	*68-117*	*0I09004*	*EPA 8260B*	*09/09/10 12:33*	*JKG*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*69-110*	*0I09004*	*EPA 8260B*	*09/09/10 12:33*	*JKG*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: MW-7 | **Lab Sample ID:** C009847-08 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 18:00 | **Work Order:** C009847

Project: Cherokee Lined | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 17:25	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/09/10 17:25	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
1,1-Dichloroethane [75-34-3] ^	**0.62**	J	ug/L	1	0.33	1.0	5	EPA 8260B	09/09/10 17:25	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/09/10 17:25	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/09/10 17:25	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/09/10 17:25	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
1,4-Dichlorobenzene [106-46-7] ^	**0.64**	J	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/09/10 17:25	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/09/10 17:25	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/09/10 17:25	JKG	
Acetone [67-64-1] ^	**150**		ug/L	1	1.5	5.0	100	EPA 8260B	09/09/10 17:25	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/09/10 17:25	JKG	
Benzene [71-43-2] ^	**1.0**		ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/09/10 17:25	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/09/10 17:25	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/09/10 17:25	JKG	
Carbon disulfide [75-15-0] ^	**0.64**	J	ug/L	1	0.54	5.0	100	EPA 8260B	09/09/10 17:25	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Chlorobenzene [108-90-7] ^	**0.57**	J	ug/L	1	0.27	1.0	3	EPA 8260B	09/09/10 17:25	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/09/10 17:25	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/09/10 17:25	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**42**		ug/L	1	0.36	1.0	5	EPA 8260B	09/09/10 17:25	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/09/10 17:25	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/09/10 17:25	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/09/10 17:25	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Tetrachloroethene [127-18-4] ^	**0.64**	J	ug/L	1	0.36	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/09/10 17:25	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/09/10 17:25	JKG	
Trichloroethene [79-01-6] ^	**0.69**	J	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/09/10 17:25	JKG	
Vinyl chloride [75-01-4] ^	**1.8**		ug/L	1	0.30	1.0	1	EPA 8260B	09/09/10 17:25	JKG	
Xylenes (Total) [1330-20-7] ^	**0.51**	J	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 17:25	JKG	

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Description:	MW-7	**Lab Sample ID:**	C009847-08	**Received:**	09/03/10 09:20
Matrix:	Ground Water	**Sampled:**	08/31/10 18:00	**Work Order:**	C009847
Project:	Cherokee Lined	**Sampled By:**	Jonathan Pfohl		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
4-Bromofluorobenzene	*39*	*1*	*50.0*	*79 %*	*51-122*	*0I09004*	*EPA 8260B*	*09/09/10 17:25*	*JKG*	
Dibromofluoromethane	*42*	*1*	*50.0*	*83 %*	*68-117*	*0I09004*	*EPA 8260B*	*09/09/10 17:25*	*JKG*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*69-110*	*0I09004*	*EPA 8260B*	*09/09/10 17:25*	*JKG*	

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Description: MW-8 | **Lab Sample ID:** C009847-09 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 20:10 | **Work Order:** C009847

Project: Cherokee Lined | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 17:55	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/09/10 17:55	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/09/10 17:55	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/09/10 17:55	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/09/10 17:55	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/09/10 17:55	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/09/10 17:55	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/09/10 17:55	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/09/10 17:55	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/09/10 17:55	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/09/10 17:55	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/09/10 17:55	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/09/10 17:55	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/09/10 17:55	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/09/10 17:55	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/09/10 17:55	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/09/10 17:55	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/09/10 17:55	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	09/09/10 17:55	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/09/10 17:55	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/09/10 17:55	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/09/10 17:55	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/09/10 17:55	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/09/10 17:55	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 17:55	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/09/10 17:55	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/09/10 17:55	JKG	

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Description:	MW-8	**Lab Sample ID:**	C009847-09	**Received:**	09/03/10 09:20
Matrix:	Ground Water	**Sampled:**	08/31/10 20:10	**Work Order:**	C009847
Project:	Cherokee Lined	**Sampled By:**	Jonathan Pfohl		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 17:55	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*0I09004*	*EPA 8260B*	*09/09/10 17:55*	*JKG*	
Dibromofluoromethane	*42*	*1*	*50.0*	*84 %*	*68-117*	*0I09004*	*EPA 8260B*	*09/09/10 17:55*	*JKG*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*69-110*	*0I09004*	*EPA 8260B*	*09/09/10 17:55*	*JKG*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: P-17 | **Lab Sample ID:** C009848-01 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 13:50 | **Work Order:** C009848

Project: Cherokee Lined Assessment | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 18:53	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/09/10 18:53	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/09/10 18:53	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/09/10 18:53	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/09/10 18:53	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/09/10 18:53	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
1,4-Dichlorobenzene [106-46-7] ^	**0.73**	J	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/09/10 18:53	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/09/10 18:53	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/09/10 18:53	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/09/10 18:53	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/09/10 18:53	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/09/10 18:53	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/09/10 18:53	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/09/10 18:53	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/09/10 18:53	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/09/10 18:53	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/09/10 18:53	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/09/10 18:53	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**3.2**	J	ug/L	1	0.36	1.0	5	EPA 8260B	09/09/10 18:53	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/09/10 18:53	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/09/10 18:53	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/09/10 18:53	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/09/10 18:53	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/09/10 18:53	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 18:53	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/09/10 18:53	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/09/10 18:53	JKG	

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Description: P-17 | **Lab Sample ID:** C009848-01 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 13:50 | **Work Order:** C009848

Project: Cherokee Lined Assessment | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 18:53	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*0I09004*	*EPA 8260B*	*09/09/10 18:53*	*JKG*	
Dibromofluoromethane	*41*	*1*	*50.0*	*82 %*	*68-117*	*0I09004*	*EPA 8260B*	*09/09/10 18:53*	*JKG*	
Toluene-d8	*43*	*1*	*50.0*	*87 %*	*69-110*	*0I09004*	*EPA 8260B*	*09/09/10 18:53*	*JKG*	

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Description: P-18 | **Lab Sample ID:** C009848-02 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 14:25 | **Work Order:** C009848

Project: Cherokee Lined Assessment | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 19:23	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/09/10 19:23	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
1,1-Dichloroethane [75-34-3] ^	**0.42**	J	ug/L	1	0.33	1.0	5	EPA 8260B	09/09/10 19:23	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/09/10 19:23	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/09/10 19:23	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/09/10 19:23	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
1,4-Dichlorobenzene [106-46-7] ^	**0.57**	J	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/09/10 19:23	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/09/10 19:23	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/09/10 19:23	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/09/10 19:23	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/09/10 19:23	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/09/10 19:23	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/09/10 19:23	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/09/10 19:23	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/09/10 19:23	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/09/10 19:23	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/09/10 19:23	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/09/10 19:23	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**1.9**	J	ug/L	1	0.36	1.0	5	EPA 8260B	09/09/10 19:23	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/09/10 19:23	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/09/10 19:23	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/09/10 19:23	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/09/10 19:23	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/09/10 19:23	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 19:23	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/09/10 19:23	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/09/10 19:23	JKG	

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Description: P-18 | **Lab Sample ID:** C009848-02 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 14:25 | **Work Order:** C009848

Project: Cherokee Lined Assessment | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 19:23	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*79 %*	*51-122*	*0I09004*	*EPA 8260B*	*09/09/10 19:23*	*JKG*	
Dibromofluoromethane	*41*	*1*	*50.0*	*82 %*	*68-117*	*0I09004*	*EPA 8260B*	*09/09/10 19:23*	*JKG*	
Toluene-d8	*42*	*1*	*50.0*	*85 %*	*69-110*	*0I09004*	*EPA 8260B*	*09/09/10 19:23*	*JKG*	

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Description: P-18D
Matrix: Ground Water
Project: Cherokee Lined Assessment

Lab Sample ID: C009848-03
Sampled: 08/31/10 12:45
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009848

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 19:52	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/09/10 19:52	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/09/10 19:52	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/09/10 19:52	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/09/10 19:52	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/09/10 19:52	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/09/10 19:52	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/09/10 19:52	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/09/10 19:52	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/09/10 19:52	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/09/10 19:52	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/09/10 19:52	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/09/10 19:52	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/09/10 19:52	JKG	
Carbon disulfide [75-15-0] ^	**13**	J	ug/L	1	0.54	5.0	100	EPA 8260B	09/09/10 19:52	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/09/10 19:52	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/09/10 19:52	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/09/10 19:52	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	09/09/10 19:52	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/09/10 19:52	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/09/10 19:52	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/09/10 19:52	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/09/10 19:52	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/09/10 19:52	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/09/10 19:52	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/09/10 19:52	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/09/10 19:52	JKG	

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Description: P-18D
Matrix: Ground Water
Project: Cherokee Lined Assessment

Lab Sample ID: C009848-03
Sampled: 08/31/10 12:45
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009848

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/09/10 19:52	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*0I09004*	*EPA 8260B*	*09/09/10 19:52*	*JKG*	
Dibromofluoromethane	*41*	*1*	*50.0*	*82 %*	*68-117*	*0I09004*	*EPA 8260B*	*09/09/10 19:52*	*JKG*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*69-110*	*0I09004*	*EPA 8260B*	*09/09/10 19:52*	*JKG*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: P-19 | **Lab Sample ID:** C009848-04 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 15:00 | **Work Order:** C009848

Project: Cherokee Lined Assessment | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/10/10 15:13	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/10/10 15:13	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/10/10 15:13	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/10/10 15:13	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/10/10 15:13	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/10/10 15:13	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
1,4-Dichlorobenzene [106-46-7] ^	**0.90**	J	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/10/10 15:13	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/10/10 15:13	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/10/10 15:13	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/10/10 15:13	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/10/10 15:13	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/10/10 15:13	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/10/10 15:13	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/10/10 15:13	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/10/10 15:13	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/10/10 15:13	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/10/10 15:13	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/10/10 15:13	JKG	
Chloromethane [74-87-3] ^	**0.86**	J	ug/L	1	0.34	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**0.90**	J	ug/L	1	0.36	1.0	5	EPA 8260B	09/10/10 15:13	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/10/10 15:13	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/10/10 15:13	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/10/10 15:13	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/10/10 15:13	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/10/10 15:13	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/10/10 15:13	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/10/10 15:13	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/10/10 15:13	JKG	

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Description: P-19 | **Lab Sample ID:** C009848-04 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 15:00 | **Work Order:** C009848

Project: Cherokee Lined Assessment | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/10/10 15:13	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*51-122*	*0I10007*	*EPA 8260B*	*09/10/10 15:13*	*JKG*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*68-117*	*0I10007*	*EPA 8260B*	*09/10/10 15:13*	*JKG*	
Toluene-d8	*48*	*1*	*50.0*	*97 %*	*69-110*	*0I10007*	*EPA 8260B*	*09/10/10 15:13*	*JKG*	

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Description: P-20S
Matrix: Ground Water
Project: Cherokee Lined Assessment

Lab Sample ID: C009848-05
Sampled: 08/31/10 16:00
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009848

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/10/10 15:41	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/10/10 15:41	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/10/10 15:41	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/10/10 15:41	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/10/10 15:41	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/10/10 15:41	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/10/10 15:41	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/10/10 15:41	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/10/10 15:41	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/10/10 15:41	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/10/10 15:41	JKG	
Benzene [71-43-2] ^	**1.0**		ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/10/10 15:41	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/10/10 15:41	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/10/10 15:41	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/10/10 15:41	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/10/10 15:41	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/10/10 15:41	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/10/10 15:41	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**11**		ug/L	1	0.36	1.0	5	EPA 8260B	09/10/10 15:41	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/10/10 15:41	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/10/10 15:41	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/10/10 15:41	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Tetrachloroethene [127-18-4] ^	**0.82**	J	ug/L	1	0.36	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/10/10 15:41	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/10/10 15:41	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/10/10 15:41	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/10/10 15:41	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/10/10 15:41	JKG	

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Description: P-20S
Matrix: Ground Water
Project: Cherokee Lined Assessment

Lab Sample ID: C009848-05
Sampled: 08/31/10 16:00
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009848

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/10/10 15:41	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*51-122*	*0I10007*	*EPA 8260B*	*09/10/10 15:41*	*JKG*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*68-117*	*0I10007*	*EPA 8260B*	*09/10/10 15:41*	*JKG*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*69-110*	*0I10007*	*EPA 8260B*	*09/10/10 15:41*	*JKG*	

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Description: P-20D
Matrix: Ground Water
Project: Cherokee Lined Assessment

Lab Sample ID: C009848-06
Sampled: 08/31/10 13:10
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009848

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/10/10 16:10	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/10/10 16:10	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/10/10 16:10	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/10/10 16:10	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/10/10 16:10	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/10/10 16:10	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/10/10 16:10	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/10/10 16:10	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/10/10 16:10	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/10/10 16:10	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/10/10 16:10	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/10/10 16:10	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/10/10 16:10	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/10/10 16:10	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/10/10 16:10	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/10/10 16:10	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/10/10 16:10	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/10/10 16:10	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	09/10/10 16:10	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/10/10 16:10	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/10/10 16:10	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/10/10 16:10	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/10/10 16:10	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/10/10 16:10	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/10/10 16:10	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/10/10 16:10	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/10/10 16:10	JKG	

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Description: P-20D
Matrix: Ground Water
Project: Cherokee Lined Assessment

Lab Sample ID: C009848-06
Sampled: 08/31/10 13:10
Sampled By: Jonathan Pfohl

Received: 09/03/10 09:20
Work Order: C009848

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/10/10 16:10	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*51-122*	*0I10007*	*EPA 8260B*	*09/10/10 16:10*	*JKG*	
Dibromofluoromethane	*48*	*1*	*50.0*	*97 %*	*68-117*	*0I10007*	*EPA 8260B*	*09/10/10 16:10*	*JKG*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*69-110*	*0I10007*	*EPA 8260B*	*09/10/10 16:10*	*JKG*	

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Description: P-21 | **Lab Sample ID:** C009848-07 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 15:30 | **Work Order:** C009848

Project: Cherokee Lined Assessment | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/10/10 16:39	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	09/10/10 16:39	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	09/10/10 16:39	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	09/10/10 16:39	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	09/10/10 16:39	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	09/10/10 16:39	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	09/10/10 16:39	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	09/10/10 16:39	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	09/10/10 16:39	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	09/10/10 16:39	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	09/10/10 16:39	JKG	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	09/10/10 16:39	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	09/10/10 16:39	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	09/10/10 16:39	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	09/10/10 16:39	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	09/10/10 16:39	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	09/10/10 16:39	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	09/10/10 16:39	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**5.2**		ug/L	1	0.36	1.0	5	EPA 8260B	09/10/10 16:39	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	09/10/10 16:39	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	09/10/10 16:39	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	09/10/10 16:39	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	09/10/10 16:39	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	09/10/10 16:39	JKG	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	09/10/10 16:39	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	09/10/10 16:39	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	09/10/10 16:39	JKG	

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Description: P-21 | **Lab Sample ID:** C009848-07 | **Received:** 09/03/10 09:20

Matrix: Ground Water | **Sampled:** 08/31/10 15:30 | **Work Order:** C009848

Project: Cherokee Lined Assessment | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	09/10/10 16:39	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*51-122*	*0I10007*	*EPA 8260B*	*09/10/10 16:39*	*JKG*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*68-117*	*0I10007*	*EPA 8260B*	*09/10/10 16:39*	*JKG*	
Toluene-d8	*49*	*1*	*50.0*	*97 %*	*69-110*	*0I10007*	*EPA 8260B*	*09/10/10 16:39*	*JKG*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0I07020 - EPA 5030B_MS

Blank (0I07020-BLK1) Prepared: 09/07/2010 10:48 Analyzed: 09/08/2010 00:56

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.40	U	1.0	ug/L							
1,1,1-Trichloroethane	0.27	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.33	U	1.0	ug/L							
1,1,2-Trichloroethane	0.37	U	1.0	ug/L							
1,1-Dichloroethane	0.33	U	1.0	ug/L							
1,1-Dichloroethene	0.24	U	1.0	ug/L							
1,2,3-Trichloropropane	0.55	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.42	U	1.0	ug/L							
1,2-Dichlorobenzene	0.27	U	1.0	ug/L							
1,2-Dichloroethane	0.65	U	1.0	ug/L							
1,2-Dichloropropane	0.20	U	1.0	ug/L							
1,4-Dichlorobenzene	0.38	U	1.0	ug/L							
2-Butanone	1.0	U	5.0	ug/L							
2-Hexanone	0.69	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.5	U	5.0	ug/L							
Acrylonitrile	2.1	U	10	ug/L							
Benzene	0.20	U	1.0	ug/L							
Bromochloromethane	0.42	U	1.0	ug/L							
Bromodichloromethane	0.37	U	1.0	ug/L							
Bromoform	0.71	U	1.0	ug/L							
Bromomethane	0.49	U	1.0	ug/L							
Carbon disulfide	0.54	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.27	U	1.0	ug/L							
Chloroethane	0.30	U	1.0	ug/L							
Chloroform	0.20	U	1.0	ug/L							
Chloromethane	0.34	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.36	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.28	U	1.0	ug/L							
Dibromochloromethane	0.32	U	1.0	ug/L							
Dibromomethane	0.37	U	1.0	ug/L							
Ethylbenzene	0.20	U	1.0	ug/L							
Iodomethane	0.52	U	5.0	ug/L							
Methylene chloride	0.53	U	1.0	ug/L							
Styrene	0.26	U	1.0	ug/L							
Tetrachloroethene	0.36	U	1.0	ug/L							
Toluene	0.27	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.34	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.38	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.54	U	1.0	ug/L							
Trichloroethene	0.38	U	1.0	ug/L							
Trichlorofluoromethane	0.28	U	1.0	ug/L							
Vinyl acetate	0.98	U	5.0	ug/L							
Vinyl chloride	0.30	U	1.0	ug/L							
Xylenes (Total)	0.40	U	1.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*79*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0I07020 - EPA 5030B_MS

Blank (0I07020-BLK1) Continued Prepared: 09/07/2010 10:48 Analyzed: 09/08/2010 00:56

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*42*			*ug/L*	*50.0*		*84*	*68-117*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*84*	*69-110*			

LCS (0I07020-BS1) Prepared: 09/07/2010 10:48 Analyzed: 09/08/2010 01:25

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	20		1.0	ug/L	20.0		98	75-133			
Benzene	24		1.0	ug/L	20.0		119	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		100	83-117			
Toluene	19		1.0	ug/L	20.0		96	71-118			
Trichloroethene	20		1.0	ug/L	20.0		100	75-115			
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*80*	*51-122*			
Surrogate: Dibromofluoromethane	*43*			*ug/L*	*50.0*		*86*	*68-117*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*87*	*69-110*			

Matrix Spike (0I07020-MS1) Prepared: 09/07/2010 10:48 Analyzed: 09/08/2010 01:54

Source: C010314-11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	20		1.0	ug/L	20.0	0.24 U	101	75-133			
Benzene	25		1.0	ug/L	20.0	0.20 U	125	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.27 U	103	83-117			
Toluene	20		1.0	ug/L	20.0	0.27 U	100	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.38 U	106	75-115			
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*80*	*51-122*			
Surrogate: Dibromofluoromethane	*39*			*ug/L*	*50.0*		*78*	*68-117*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*86*	*69-110*			

Matrix Spike Dup (0I07020-MSD1) Prepared: 09/07/2010 10:48 Analyzed: 09/08/2010 02:23

Source: C010314-11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	20		1.0	ug/L	20.0	0.24 U	102	75-133	0.8	20	
Benzene	25		1.0	ug/L	20.0	0.20 U	123	81-134	1	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.27 U	103	83-117	0	16	
Toluene	20		1.0	ug/L	20.0	0.27 U	99	71-118	1	17	
Trichloroethene	21		1.0	ug/L	20.0	0.38 U	103	75-115	3	18	
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*81*	*51-122*			
Surrogate: Dibromofluoromethane	*42*			*ug/L*	*50.0*		*85*	*68-117*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*87*	*69-110*			

Batch 0I09004 - EPA 5030B_MS

Blank (0I09004-BLK1) Prepared: 09/09/2010 07:24 Analyzed: 09/09/2010 10:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0I09004 - EPA 5030B_MS

Blank (0I09004-BLK1) Continued Prepared: 09/09/2010 07:24 Analyzed: 09/09/2010 10:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.40	U	1.0	ug/L							
1,1,1-Trichloroethane	0.27	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.33	U	1.0	ug/L							
1,1,2-Trichloroethane	0.37	U	1.0	ug/L							
1,1-Dichloroethane	0.33	U	1.0	ug/L							
1,1-Dichloroethene	0.24	U	1.0	ug/L							
1,2,3-Trichloropropane	0.55	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.42	U	1.0	ug/L							
1,2-Dichlorobenzene	0.27	U	1.0	ug/L							
1,2-Dichloroethane	0.65	U	1.0	ug/L							
1,2-Dichloropropane	0.20	U	1.0	ug/L							
1,4-Dichlorobenzene	0.38	U	1.0	ug/L							
2-Butanone	1.0	U	5.0	ug/L							
2-Hexanone	0.69	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.5	U	5.0	ug/L							
Acrylonitrile	2.1	U	10	ug/L							
Benzene	0.20	U	1.0	ug/L							
Bromochloromethane	0.42	U	1.0	ug/L							
Bromodichloromethane	0.37	U	1.0	ug/L							
Bromoform	0.71	U	1.0	ug/L							
Bromomethane	0.49	U	1.0	ug/L							
Carbon disulfide	0.54	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.27	U	1.0	ug/L							
Chloroethane	0.30	U	1.0	ug/L							
Chloroform	0.20	U	1.0	ug/L							
Chloromethane	0.34	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.36	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.28	U	1.0	ug/L							
Dibromochloromethane	0.32	U	1.0	ug/L							
Dibromomethane	0.37	U	1.0	ug/L							
Ethylbenzene	0.20	U	1.0	ug/L							
Iodomethane	0.52	U	5.0	ug/L							
Methylene chloride	0.53	U	1.0	ug/L							
Styrene	0.26	U	1.0	ug/L							
Tetrachloroethene	0.36	U	1.0	ug/L							
Toluene	0.27	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.34	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.38	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.54	U	1.0	ug/L							
Trichloroethene	0.38	U	1.0	ug/L							
Trichlorofluoromethane	0.28	U	1.0	ug/L							
Vinyl acetate	0.98	U	5.0	ug/L							
Vinyl chloride	0.30	U	1.0	ug/L							
Xylenes (Total)	0.40	U	1.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*79*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0I09004 - EPA 5030B_MS

Blank (0I09004-BLK1) Continued Prepared: 09/09/2010 07:24 Analyzed: 09/09/2010 10:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*40*			*ug/L*	*50.0*		*81*	*68-117*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*84*	*69-110*			

LCS (0I09004-BS1) Prepared: 09/09/2010 07:24 Analyzed: 09/09/2010 10:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0		94	75-133			
Benzene	24		1.0	ug/L	20.0		120	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		100	83-117			
Toluene	19		1.0	ug/L	20.0		97	71-118			
Trichloroethene	20		1.0	ug/L	20.0		100	75-115			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*51-122*			
Surrogate: Dibromofluoromethane	*41*			*ug/L*	*50.0*		*81*	*68-117*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*87*	*69-110*			

Matrix Spike (0I09004-MS1) Prepared: 09/09/2010 07:24 Analyzed: 09/09/2010 11:03

Source: C009847-07

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	22		1.0	ug/L	20.0	0.24 U	110	75-133			
Benzene	29		1.0	ug/L	20.0	0.20 U	143	81-134			QM-07
Chlorobenzene	24		1.0	ug/L	20.0	2.2	109	83-117			
Toluene	21		1.0	ug/L	20.0	0.27 U	106	71-118			
Trichloroethene	23		1.0	ug/L	20.0	0.38 U	114	75-115			
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*79*	*51-122*			
Surrogate: Dibromofluoromethane	*41*			*ug/L*	*50.0*		*83*	*68-117*			
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*85*	*69-110*			

Matrix Spike Dup (0I09004-MSD1) Prepared: 09/09/2010 07:24 Analyzed: 09/09/2010 11:34

Source: C009847-07

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	20		1.0	ug/L	20.0	0.24 U	100	75-133	9	20	
Benzene	26		1.0	ug/L	20.0	0.20 U	129	81-134	10	17	
Chlorobenzene	22		1.0	ug/L	20.0	2.2	99	83-117	9	16	
Toluene	19		1.0	ug/L	20.0	0.27 U	96	71-118	10	17	
Trichloroethene	21		1.0	ug/L	20.0	0.38 U	105	75-115	8	18	
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*79*	*51-122*			
Surrogate: Dibromofluoromethane	*41*			*ug/L*	*50.0*		*81*	*68-117*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*85*	*69-110*			

Batch 0I10007 - EPA 5030B_MS

Blank (0I10007-BLK1) Prepared: 09/10/2010 08:38 Analyzed: 09/10/2010 12:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0I10007 - EPA 5030B_MS

Blank (0I10007-BLK1) Continued Prepared: 09/10/2010 08:38 Analyzed: 09/10/2010 12:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.40	U	1.0	ug/L							
1,1,1-Trichloroethane	0.27	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.33	U	1.0	ug/L							
1,1,2-Trichloroethane	0.37	U	1.0	ug/L							
1,1-Dichloroethane	0.33	U	1.0	ug/L							
1,1-Dichloroethene	0.24	U	1.0	ug/L							
1,2,3-Trichloropropane	0.55	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.42	U	1.0	ug/L							
1,2-Dichlorobenzene	0.27	U	1.0	ug/L							
1,2-Dichloroethane	0.65	U	1.0	ug/L							
1,2-Dichloropropane	0.20	U	1.0	ug/L							
1,4-Dichlorobenzene	0.38	U	1.0	ug/L							
2-Butanone	1.0	U	5.0	ug/L							
2-Hexanone	0.69	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.5	U	5.0	ug/L							
Acrylonitrile	2.1	U	10	ug/L							
Benzene	0.20	U	1.0	ug/L							
Bromochloromethane	0.42	U	1.0	ug/L							
Bromodichloromethane	0.37	U	1.0	ug/L							
Bromoform	0.71	U	1.0	ug/L							
Bromomethane	0.49	U	1.0	ug/L							
Carbon disulfide	0.54	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.27	U	1.0	ug/L							
Chloroethane	0.30	U	1.0	ug/L							
Chloroform	0.20	U	1.0	ug/L							
Chloromethane	0.34	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.36	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.28	U	1.0	ug/L							
Dibromochloromethane	0.32	U	1.0	ug/L							
Dibromomethane	0.37	U	1.0	ug/L							
Ethylbenzene	0.20	U	1.0	ug/L							
Iodomethane	0.52	U	5.0	ug/L							
Methylene chloride	0.53	U	1.0	ug/L							
Styrene	0.26	U	1.0	ug/L							
Tetrachloroethene	0.36	U	1.0	ug/L							
Toluene	0.27	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.34	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.38	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.54	U	1.0	ug/L							
Trichloroethene	0.38	U	1.0	ug/L							
Trichlorofluoromethane	0.28	U	1.0	ug/L							
Vinyl acetate	0.98	U	5.0	ug/L							
Vinyl chloride	0.30	U	1.0	ug/L							
Xylenes (Total)	0.40	U	1.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0I10007 - EPA 5030B_MS

Blank (0I10007-BLK1) Continued Prepared: 09/10/2010 08:38 Analyzed: 09/10/2010 12:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*93*	*68-117*			
Surrogate: Toluene-d8	*49*			*ug/L*	*50.0*		*98*	*69-110*			

LCS (0I10007-BS1) Prepared: 09/10/2010 08:38 Analyzed: 09/10/2010 12:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		88	75-133			
Benzene	19		1.0	ug/L	20.0		93	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		97	83-117			
Toluene	20		1.0	ug/L	20.0		101	71-118			
Trichloroethene	19		1.0	ug/L	20.0		93	75-115			
Surrogate: 4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*51-122*			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*68-117*			
Surrogate: Toluene-d8	*49*			*ug/L*	*50.0*		*98*	*69-110*			

Matrix Spike (0I10007-MS1) Prepared: 09/10/2010 08:38 Analyzed: 09/10/2010 13:18

Source: C010180-06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.24 U	95	75-133			
Benzene	20		1.0	ug/L	20.0	0.20 U	98	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.27 U	103	83-117			
Toluene	21		1.0	ug/L	20.0	0.27 U	106	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.38 U	98	75-115			
Surrogate: 4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*103*	*51-122*			
Surrogate: Dibromofluoromethane	*47*			*ug/L*	*50.0*		*93*	*68-117*			
Surrogate: Toluene-d8	*51*			*ug/L*	*50.0*		*101*	*69-110*			

Matrix Spike Dup (0I10007-MSD1) Prepared: 09/10/2010 08:38 Analyzed: 09/10/2010 13:47

Source: C010180-06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.24 U	92	75-133	3	20	
Benzene	19		1.0	ug/L	20.0	0.20 U	95	81-134	2	17	
Chlorobenzene	20		1.0	ug/L	20.0	0.27 U	101	83-117	2	16	
Toluene	21		1.0	ug/L	20.0	0.27 U	104	71-118	1	17	
Trichloroethene	19		1.0	ug/L	20.0	0.38 U	97	75-115	1	18	
Surrogate: 4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*103*	*51-122*			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*93*	*68-117*			
Surrogate: Toluene-d8	*50*			*ug/L*	*50.0*		*99*	*69-110*			

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Environmental Conservation Laboratories, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515
www.encolabs.com

Tuesday, October 19, 2010

Municipal Engineering Services (MU001)

Attn: Mark Brown

P.O. Box 97

Garner, NC 27529

RE: Laboratory Results for
Project Number: [none], Project Name/Desc: Cherokee Lined MSWLF - P-20s BV
ENCO Workorder: C012069

Dear Mark Brown,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, October 6, 2010.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 10.

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PROJECT NARRATIVE

Client: Municipal Engineering Services (MU001)
Project: Cherokee Lined MSWLF - P-20BV
Lab ID: C012069

Overview

Environmental Conservation Laboratories, Inc. (ENCO) analyzed all submitted samples in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling by ENCO are discussed in the QC Remarks section below.

Quality Control Samples

No Comments

Quality Control Remarks

No Comments

Other Comments

The target analyte Chloromethane was detected in the Method Blank as an estmated (J) value. Since it was not present in the associated sample, the blank detection has minimal impact on data quality.

The analytical data presented in this report are consistent with the methods as referenced in the analytical report. Any exceptions or deviations are noted in the QC remarks section of this narrative or in the Flags/Notes and Definitions section of the report.

Released By:
Environmental Conservation Laboratories, Inc.

Chuck Smith
Project Manager

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: P-20S	Lab ID: C012069-01	Sampled: 10/05/10 09:00	Received: 10/06/10 10:00

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	10/19/10	10/12/10 12:49	10/13/2010 04:47

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: P-20S **Lab ID:** C012069-01

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Benzene	0.52	J	1	0.20	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	8.2		1	0.36	1.0	5	ug/L	EPA 8260B	
Tetrachloroethene	0.55	J	1	0.36	1.0	1	ug/L	EPA 8260B	
Trichloroethene	0.44	J	1	0.38	1.0	1	ug/L	EPA 8260B	

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ANALYTICAL RESULTS

Description: P-20S
Matrix: Ground Water
Project: Cherokee Lined MSWLF - P-20s BV

Lab Sample ID: C012069-01
Sampled: 10/05/10 09:00
Sampled By: Client

Received: 10/06/10 10:00
Work Order: C012069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	10/13/10 04:47	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	10/13/10 04:47	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	10/13/10 04:47	JKG	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	10/13/10 04:47	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/13/10 04:47	JKG	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	10/13/10 04:47	JKG	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	10/13/10 04:47	JKG	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	10/13/10 04:47	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/13/10 04:47	JKG	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/13/10 04:47	JKG	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	10/13/10 04:47	JKG	
Benzene [71-43-2] ^	**0.52**	J	ug/L	1	0.20	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	10/13/10 04:47	JKG	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	10/13/10 04:47	JKG	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	10/13/10 04:47	JKG	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	10/13/10 04:47	JKG	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/13/10 04:47	JKG	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	10/13/10 04:47	JKG	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	10/13/10 04:47	JKG	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**8.2**		ug/L	1	0.36	1.0	5	EPA 8260B	10/13/10 04:47	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	10/13/10 04:47	JKG	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	10/13/10 04:47	JKG	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	10/13/10 04:47	JKG	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Tetrachloroethene [127-18-4] ^	**0.55**	J	ug/L	1	0.36	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	10/13/10 04:47	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	10/13/10 04:47	JKG	
Trichloroethene [79-01-6] ^	**0.44**	J	ug/L	1	0.38	1.0	1	EPA 8260B	10/13/10 04:47	JKG	

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Description: P-20S
Matrix: Ground Water
Project: Cherokee Lined MSWLF - P-20s BV

Lab Sample ID: C012069-01
Sampled: 10/05/10 09:00
Sampled By: Client

Received: 10/06/10 10:00
Work Order: C012069

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	10/13/10 04:47	JKG	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	10/13/10 04:47	JKG	
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	10/13/10 04:47	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*101 %*	*51-122*	*0J12026*	*EPA 8260B*	*10/13/10 04:47*	*JKG*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*68-117*	*0J12026*	*EPA 8260B*	*10/13/10 04:47*	*JKG*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*69-110*	*0J12026*	*EPA 8260B*	*10/13/10 04:47*	*JKG*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0J12026 - EPA 5030B_MS

Blank (0J12026-BLK1) Prepared: 10/12/2010 12:49 Analyzed: 10/13/2010 01:57

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.40	U	1.0	ug/L							
1,1,1-Trichloroethane	0.27	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.33	U	1.0	ug/L							
1,1,2-Trichloroethane	0.37	U	1.0	ug/L							
1,1-Dichloroethane	0.33	U	1.0	ug/L							
1,1-Dichloroethene	0.24	U	1.0	ug/L							
1,2,3-Trichloropropane	0.55	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.42	U	1.0	ug/L							
1,2-Dichlorobenzene	0.27	U	1.0	ug/L							
1,2-Dichloroethane	0.65	U	1.0	ug/L							
1,2-Dichloropropane	0.20	U	1.0	ug/L							
1,4-Dichlorobenzene	0.38	U	1.0	ug/L							
2-Butanone	1.0	U	5.0	ug/L							
2-Hexanone	0.69	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.5	U	5.0	ug/L							
Acrylonitrile	2.1	U	10	ug/L							
Benzene	0.20	U	1.0	ug/L							
Bromochloromethane	0.42	U	1.0	ug/L							
Bromodichloromethane	0.37	U	1.0	ug/L							
Bromoform	0.71	U	1.0	ug/L							
Bromomethane	0.49	U	1.0	ug/L							
Carbon disulfide	0.54	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.27	U	1.0	ug/L							
Chloroethane	0.30	U	1.0	ug/L							
Chloroform	0.20	U	1.0	ug/L							
Chloromethane	**0.51**	**J**	1.0	ug/L							
cis-1,2-Dichloroethene	0.36	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.28	U	1.0	ug/L							
Dibromochloromethane	0.32	U	1.0	ug/L							
Dibromomethane	0.37	U	1.0	ug/L							
Ethylbenzene	0.20	U	1.0	ug/L							
Iodomethane	0.52	U	5.0	ug/L							
Methylene chloride	0.53	U	1.0	ug/L							
Styrene	0.26	U	1.0	ug/L							
Tetrachloroethene	0.36	U	1.0	ug/L							
Toluene	0.27	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.34	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.38	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.54	U	1.0	ug/L							
Trichloroethene	0.38	U	1.0	ug/L							
Trichlorofluoromethane	0.28	U	1.0	ug/L							
Vinyl acetate	0.98	U	5.0	ug/L							
Vinyl chloride	0.30	U	1.0	ug/L							
Xylenes (Total)	0.40	U	1.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*51-122*			

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0J12026 - EPA 5030B_MS

Blank (0J12026-BLK1) Continued Prepared: 10/12/2010 12:49 Analyzed: 10/13/2010 01:57

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*51*			*ug/L*	*50.0*		*102*	*68-117*			
Surrogate: Toluene-d8	*49*			*ug/L*	*50.0*		*98*	*69-110*			

LCS (0J12026-BS1) Prepared: 10/12/2010 12:49 Analyzed: 10/13/2010 02:26

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	21		1.0	ug/L	20.0		103	75-133			
Benzene	19		1.0	ug/L	20.0		96	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		102	83-117			
Toluene	19		1.0	ug/L	20.0		96	71-118			
Trichloroethene	21		1.0	ug/L	20.0		106	75-115			

Matrix Spike (0J12026-MS1) Prepared: 10/12/2010 12:49 Analyzed: 10/13/2010 02:54

Source: C012169-10

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	22		1.0	ug/L	20.0	0.24 U	110	75-133			
Benzene	20		1.0	ug/L	20.0	0.20 U	101	81-134			
Chlorobenzene	22		1.0	ug/L	20.0	0.27 U	111	83-117			
Toluene	21		1.0	ug/L	20.0	0.27 U	104	71-118			
Trichloroethene	22		1.0	ug/L	20.0	0.38 U	108	75-115			

Matrix Spike Dup (0J12026-MSD1) Prepared: 10/12/2010 12:49 Analyzed: 10/13/2010 03:22

Source: C012169-10

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	22		1.0	ug/L	20.0	0.24 U	110	75-133	0.3	20	
Benzene	20		1.0	ug/L	20.0	0.20 U	99	81-134	2	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.27 U	106	83-117	4	16	
Toluene	20		1.0	ug/L	20.0	0.27 U	99	71-118	4	17	
Trichloroethene	22		1.0	ug/L	20.0	0.38 U	108	75-115	0.09	18	

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr. Orlando, FL 32824 (407) 850-5314 Fax (407) 850-6945
4810 Executive Park Court, Suite 211 Jacksonville, FL 32216-6069 (904) 296-3007 Fax (904) 296-6210
102-4 Woodwinds Industrial Ct. Cary, NC 27511 (919) 467-3090 Fax (919) 467-3515
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Page 1 of 1

Client Name	Mangrove Engineering Services
Address	PO Box 97
City/ST/Zip	Garner NC 27529
Tel	(919) 772-5393
Fax	(919) 772-1176
Sampler's Name, Affiliation (Print)	Jim Pilkerson
Sampler's Signature	
Project Number	
Project Name (Site)	Chatham Co Med MSWLF - P-20s BV
PO # / Billing Info	
Reporting Contact	Mark Brown & Wayne Sullivan
Billing Contact	
Site Location / Time Zone	

Requested Analyses: App I VOCs

Requested Turnaround Times: Note: Rush requests subject to acceptance by the facility. ✓ Standard ___ Expedited Due ___/___/___

Lab Workorder: C012069

Preservation (Use Codes/Volume as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	App I VOCs	Sample Comments
	P-20s	10/5/10	900	Grab	GW	3	✓	

<- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time 10/6/10 1000
		Cooler #'s & Temps on Receipt 1.4°C		Condition Upon Receipt ✓ Acceptable	Unacceptable

Matrix: GW Groundwater SO Soil DW Drinking Water SE Sediment SW Surface Water WW Wastewater A Air O Other (detail in comments) Preservation: I Ice H HCl N HNO3 S H2SO4 NO NaOH O Other (detail in comments)

Note: All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form unless prior written agreements exist.