SHIELD ENGINEERING, INC.

April 23, 2014

Mr. C. Brian Wootton,
Solid Waste Section
Division of Waste Management
NCDENR
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Subject: **City of Albemarle Landfill**
Monitoring Well MW-29
DSWM Permit No. 84-01
Shield Project 1110192

Dear Mr. Wootton:

Last year Shield Engineering, Inc. (Shield) had submitted a letter to the Solid Waste Section (SWS) dated April 25, 2013 in which some changes in monitored natural attenuation sampling schedule were proposed for the above referenced landfill. Subsequently, the SWS called a meeting in Raleigh to discuss this letter. At that meeting on June 26, 2013 we reviewed the proposed sampling schedules for wells along the old southwestern property boundary (i.e., an area also known as the West Plume: MW-2, MW-6, MW-7, MW-24, and MW-25). The meeting was summarized in your letter to Shield dated July 16, 2013. The only unknown from that meeting was the sampling schedule and laboratory analyses that would be required for the proposed Monitoring Well MW-29.

MW-29 Installation and Sampling

Monitoring Well MW-29 was designed similar to the hydrologically upgradient Monitoring Well MW-6. Similar well depth and screen interval depth range from Monitoring Well MW-6 were used for this proposed monitoring well. For your ease of reference, the well construction record for the previously installed Monitoring Well MW-6 is attached.

The proposed location for this new well was established based on several factors. The first factor for establishing the approximate location of this proposed monitoring well was to measure a

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tentative location through the woods at about 250 feet from the nearest "Approximate Edge of Waste" marker. The second factor in locating this well was accessibility for the drill rig to the proposed drill site, since the buffer zone within the recently purchased property was largely wooded. The third factor in locating this well was based on the general direction of groundwater flow in this area, with the goal of locating this well hydraulically downgradient from Monitoring Well MW-6. Together these factors enabled the drill site for the well to be located.

Derry's Well Drilling, a licensed well contractor, drilled the borehole for this well and installed and set the well screen and casing on August 2, 2013. The locking cover and concrete pad were installed on August 3, 2013. The well completion record for Monitoring Well MW-29 is attached. The well was subsequently developed in readiness for the sampling. The cuttings from the drilling were used to construct the boring log for Monitoring Well MW-29, which is attached.

Monitoring Well MW-29 was sampled on August 8, 2013. The laboratory analyses conducted on the groundwater sample collected from this well included monitored natural attenuation (MNA) parameters and the Appendix I constituent list.

Monitoring Well MW-29 was surveyed in November 2013 and is shown on the attached map with the other monitoring wells for this site. The survey data are included on the Boring Log for this well.

Results

The analytical results for the Appendix I inorganic constituents for this monitoring well are exhibited in Table 1. Only those organic constituents that were detected in this well are included in Table 1. As a result of these detected constituents, a second sampling was considered necessary to provide additional laboratory data to better assess the future sampling schedule for this well. The well was allowed to remain undisturbed for several months before the next sampling. Monitoring Well MW-29 was resampled on January 21, 2014 and these results are also included in Table 1.

The most recent analyses for this well exhibited no exceedances of the North Carolina Groundwater Standards (i.e., 15A NCAC 2L.0202) (NC 2L Groundwater Standards). Only two inorganic constituents (i.e., cobalt and vanadium) exceeded the North Carolina Interim Maximum Allowable Concentrations (IMAC). Cobalt is ubiquitous at this site as is evident for the latest sampling event performed at this site and reported to the SWS (see Table 4: ***Report of Semi-Annual Sampling and Analysis, January 2014*** [copy of Table 4 attached to this letter]). A copy of this table is attached. A review of this semi-annual report and table will show that even the upgradient monitoring wells at this site (i.e., MW-1, MW-8D, and MW-19) all exhibit cobalt and two of these upgradient wells also exhibit vanadium, above the IMACs.

Three organic constituents were detected in the laboratory analyses of both groundwater samples from this well. In general the constituent concentrations are lower in the second sampling event. In all instances the concentrations for these three organic constituents are below the NC 2L Groundwater Standards. Each of these three organic constituents have been detected intermittently during previous sampling events in Monitoring Well MW-6, though not since January 2013. Whereas in Monitoring Well MW-7 has only exhibited methylene chloride twice before (April 1998 and January 2008), trichlorofluoromethane once before (January 2012), and 1,1-dichloroethane has been consistently detected (except for four none detects) since February 2000.

The presence of the two inorganics at these low concentrations in Monitoring Well MW-29 is not considered to be a concern, due to their prevalence across the site. Additionally, none of the analytical results for the organic constituents in Monitoring Well MW-29 exhibited exceedances above the NC 2L Groundwater Standards.

As agreed at our meeting of June 26, 2013 and summarized in the July 16, 2013 letter from SWS, the MNA parameters were sampled in Monitoring Well MW-29 as part of the initial sampling for this well in August 2013. For comparison, these MNA baseline data for Monitoring Well MW-29 were added to Table 2 which included the last complete sets of MNA data for the other monitoring wells in this area of the site (this table [without MW-29 data] was previously

submitted to SWS by e-mail on June 17, 2013). Using the MNA data presented in Table 2 a composite evaluation of the MNA parameters using tools presented by the United States Environmental Protection Agency (EPA) in their publication *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water*, dated September 1998 (EPA/600/R-98/128) was completed and were added to Table 3. The MNA composite score data for the other monitoring wells was previously submitted to SWS by e-mail on June 17, 2013. The total MNA composite score for Monitoring Well MW-29 was added to the data previously submitted to SWS for the other monitoring wells, as a basis of comparison (see Table 5). These data do indicate that groundwater present in Monitoring Well MW-29 is exhibiting limited evidence of anaerobic degradation.

Sampling Frequency Recommendations

In reviewing these analytical data, and placing these data in the context of the area of the West Plume, and integrating our discussion concerning this area the next step is the determination of the sampling frequency for this monitoring well. In the SWS letter of July 16, 2013 possible future sampling schedules for this monitoring well were laid out as follows:

- If no detections, then this well was to be sampled annually for Appendix I parameters; and
- If detections were identified, then "further MNA and possible additional Appendix II sampling maybe warranted."

On behalf of the City of Albemarle, Shield would like to propose the following sampling schedules for Monitoring Well MW-29:

- In order to place this monitoring well on the same schedule as the other wells in this area of the site, Shield recommends sampling this well for MNA parameters using the same schedule as the other five wells (i.e., MW-2, MW-6, MW-7, MW-24, and MW-25), which is every four years. In so doing, a comparative evaluation can be established for the whole area of the West Plume at the same time; and
- As for the regular organic and inorganic sampling, Shield recommends that this well be added to the regular semi-annual sampling (i.e., with MW-2, MW-6, and MW-7 in the area of the West Plume) for Appendix I constituents.

Shield recognizes that the presence of these organic constituents with the concentrations exhibited in Table 1 does require monitoring with some reasonable frequency. However, since these constituents have been occasionally identified in Monitoring Well MW-6, potentiometrically upgradient from Monitoring Well MW-29, Shield does not consider Appendix II sampling as being necessary at Monitoring Well MW-29. Instead, Shield considers a similar sampling frequency (semi-annual) for Monitoring Well MW-29 for those parameters (Appendix I) previously detected at Monitoring Well MW-6, as a reasonable basis for moving forward in monitoring this area (i.e., West Plume).

Closing

We appreciate your consideration of this matter and look forward to receiving a positive response to these proposed recommendations prior to our next sampling event in July 2014.

If you should have any questions please do not hesitate to contact David Wallace either by e-mail at dwallace@shieldengineering.com or by phone at 704-394-6913.

Sincerely,

SHIELD ENGINEERING, INC.

NORTH CAROLINA PROFESSIONAL ENGINEER J. DAVID WALLACE

J. David Wallace, P.E.20055
Senior Engineer

Keith A. Anthony, P.E.
Chief Engineer

JDW/KAA

Attachments: Tables 1 through 3, and 5.
Table 4: ***Report of Semi-Annual Sampling and Analysis, January 2014***
Well Construction Record for Monitoring Well MW-6
Well Construction Record for Monitoring Well MW-29
Boring Log for Monitoring Well MW-29
Groundwater Contour Map (January 2014)
Laboratory Analytical Report for Aug 2013 (only MW-29)
Laboratory Analytical Report for Jan 2014 (Active C&D and Closed MSWLF)

cc: Mr. Ervin Lane, Solid Waste Section, DWM
Ms. Nina Underwood, Public Works Director
Mr. Darren Preslar, Landfill Superintendent

TABLE 1
SUMMARY OF ANALYTICAL DATA FOR MW-29
CITY OF ALBEMARLE LANDFILL
STONY GAP ROAD
ALBEMARLE, NORTH CAROLINA

PARAMETER	UNITS	NC 2L IMAC	NC 2L Groundwater Standards	SAMPLING DATES	
				MW-29	MW-29
				8/8/2013	1/21/2014
VOLATILE ORGANIC COMPOUNDS					
1,1-Dichloroethane	µg/l	NE	6	**1.6J**	**1.1J**
Methylene Chloride	µg/l	NE	5	**0.98J**	**1**
Trichlorofluoromethene	µg/l	NE	2000	**4**	**0.86J**
Total Volatile Organic Compounds				**6.58**	**2.96**
INORGANICS					
Antimony	µg/l	1	NE	**2.39JD**	ND
Arsenic	µg/l	NE	10	**17.1**	ND
Barium	µg/l	NE	700	**13.9J**	**43.1J**
Beryllium	µg/l	4	NE	ND	ND
Cadmium	µg/l	NE	2	ND	ND
Chromium	µg/l	NE	10	**4.11J**	ND
Cobalt	µg/l	1	NE	**23.2**	**2.8J**
Copper	µg/l	NE	1000	**16.6**	ND
Iron	µg/l	NE	300	**6140**	ND
Lead	µg/l	NE	15	**8.47J**	ND
Nickel	µg/l	NE	100	**5.23J**	ND
Selenium	µg/l	NE	20	ND	ND
Silver	µg/l	NE	20	ND	ND
Thallium	µg/l	0.28	NE	ND	ND
Vanadium	µg/l	0.3	NE	**10.3J**	**1.95J**
Zinc	µg/l	NE	1000	**7.44J**	**4.04J**
FINAL FIELD MEASUREMENTS					
pH	SU	NE	6.5-8.5	6.86	7.35
Temperature	°C	NE	NE	18.1	13.9
Conductivity	µS/cm	NE	NE	198.5	250.6
Dissolved Oxygen	mg/l	NE	NE	3.06	1.79
Turbidity	NTU	NE	NE	3	1
Oxidation Reduction Potential	mV	NE	NE	134	130

NOTES:
1) Standards were taken from the North Carolina Administrative Code, Title 15A, Chapter 2L, Section .0202 Groundwater Quality Standards (NC 2L Standards).
2) µg/l - micrograms per liter
3) mg/l - milligrams per liter
4) SU - standard units
5) °C - degrees Celsius
6) µS/cm - microSiemens per Centimeter
7) NTU - nephelometric turbidity unit
8) mV - millivolt
9) J - The analyte was positively identified but the value is estimated below the laboratory reporting limit.
10) ND - Not detected at or above laboratory method detection limits.
11) NE - Not established
12) IMAC - Interim Maximum Allowable Concentrations

- Either NC2L or IMAC is exceeded

TABLE 2
MONITORED NATURAL ATTENUATION DATA - WEST PLUME
CITY OF ALBEMARLE LANDFILL
STONY GAP ROAD
ALBEMARLE, NORTH CAROLINA

PARAMETER	UNITS	NC 2L Groundwater Standards	GROUNDWATER SAMPLE IDENTIFICATION									
			MW-1	MW-2	MW-3	MW-6	MW-7	MW-9	MW-10	MW-24	MW-25	MW-29
			1/18/2011	1/18/2011	1/19/2011	1/19/2011	1/19/2011	1/19/2011	1/19/2011	1/19/2011	1/19/2011	8/8/2013
VOLATILE ORGANIC COMPOUNDS												
Benzene	µg/l	1	ND	ND	ND	**0.4**	**2.6**	ND	ND	ND	ND	ND
Cis-1,2-Dichloroethene	µg/l	70	ND	ND	**0.62**	ND	**1.7**	ND	ND	ND	ND	ND
Chlorobenzene	µg/l	50	ND	**0.82**	**2.8**	**0.74**	**5.4**	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	6	ND	ND	**1.1**	**2.7**	**3.1**	ND	ND	ND	ND	**1.6**
1,4-Dichlorobenzene	µg/l	6	ND	ND	**0.65**	**0.66**	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethene	µg/l	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	µg/l	0.7	ND	ND	ND	**1.4**	**0.64**	ND	ND	ND	ND	ND
Toluene	µg/l	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	µg/l	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	µg/l	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Volatile Organic Compounds			**0**	**0.82**	**5.17**	**5.9**	**13.44**	**0**	**0**	**0**	**0**	**1.6**
NATURAL ATTENUATION INDICATORS												
Alkalinity	mg/l	NE	**8.2**	**29.9**	**490**	**37.6**	**176**	**24**	**673**	**97.4**	**47.6**	**62**
Methane	µg/l	NE	**0.38**	**100**	**258**	**500**	**140**	**6.3**	**5.3**	**1.5**	**1.6**	ND
Ethane	µg/l	NE	ND	**0.038**	**0.031**	**0.017**	**0.029**	ND	ND	ND	ND	ND
Ethene	µg/l	NE	**0.024**	ND	ND	**0.12**	ND	ND	ND	ND	ND	ND
Nitrate	mg/l	10	**0.051**	**<.025**	**<.025**	**2.3**	**<.025**	**0.23**	**170**	**<.025**	**1.2**	**2.6**
Sulfide	µg/l	NE	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**
COD	mg/l	NE	**59**	**70**	**70**	**5.3**	**31**	**31**	**100**	**31**	**74**	**15**
BOD	mg/l	NE	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	NA
Total Chloride	mg/l	250	**4.1**	**42**	**100**	**11**	**140**	**51**	**580**	**21**	**25**	**13**
Total Iron	mg/l	0.3	**11**	**11**	**1.26**	**0.543**	**0.703**	**1.35**	**0.565**	**4.3**	**7.43**	**6.14**
Total Organic Carbon	mg/l	NE	**12**	**13**	**19**	**2.2**	**7.1**	**3.7**	**15**	**2.9**	**7**	ND
Total Sulfate	mg/l	250	**26**	**190**	**150**	**4.3**	**4.1**	**14**	**17**	**6.6**	**35**	**2.8**
Hydrogen	nM	NE	**0.78**	**0.96**	**1.44**	**1.3**	**1.1**	**1.2**	**0.82**	**0.98**	**1.2**	**120**
Acetic Acid	mg/l	NE	ND	ND	ND	ND	ND	ND	ND	**0.076**	ND	ND
Butyric Acid	mg/l	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lactic Acid	mg/l	NE	**0.14**	ND	ND	**0.2**	**0.16**	**0.13**	**0.21**	ND	ND	ND
Propionic Acid	mg/l	NE	ND	ND	ND	ND	ND	ND	ND	**0.076**	ND	ND
Pyruvic Acid	mg/l	NE	ND	ND	ND	ND	**0.29**	ND	**0.21**	ND	ND	ND
FINAL FIELD MEASUREMENTS												
pH	s.u.	6.5-8.5	4.89	5.99	6.8	5.6	6.38	6.47	6.87	6.79	6.11	6.86
Temperature	°C	NE	12.7	16.1	15.4	15	15.2	10.5	12.8	15.3	14.6	18.1
Conductivity	µS/cm	NE	130	468	1247	181	1197	318	346	367	2.21	198.5
Dissolved Oxygen	mg/l	NE	0.9	0.4	0.5	0.6	0.8	1.6	0.8	0.4	0.8	3.06
Carbon Dioxide - Dissolved	mg/l	NE	30	>100	>100	90	>100	>100	30	50	60	22.3
Turbidity	NTU	NE	72.1	136	19.1	20.3	12.8	96.1	73.6	19.8	80.7	3
Oxidation Reduction Potential	mV	NE	231	121	-112	416	396	124	71	381	156	134

NOTES: 1) Standards were taken from the North Carolina Administrative Code, Title 15A, Chapter 2L, Section .0202 Groundwater Quality Standards (NC 2L Standards).
2) µg/l - micrograms per liter
3) mg/l - milligrams per liter
4) s.u - standard units
5) °C - degrees Celsius
6) µs/cm - microSiemens per Centimeter
7) NTU - nephelometric turbidity unit
8) mV - millivolt
9) J - The analyte was positively identified but the value is estimated below the laboratory reporting limit.
10) ND - Not detected at or above laboratory method detection limits.
11) NE - Not established

East Plume at LANDFILL
West Plume at LANDFILL

TABLE 3
MONITORED NATURAL ATTENUATION DATA - WEST PLUME
CITY OF ALBEMARLE LANDFILL
STONY GAP ROAD
ALBEMARLE, NORTH CAROLINA

PARAMETER	UNITS	NC 2L Groundwater Standards	MW-1	MW-2	MW-3	MW-6	MW-7	MW-9	MW-10	MW-24	MW-25	MW-29
			1/18/2011	1/18/2011	1/19/2011	1/19/2011	1/19/2011	1/19/2011	1/19/2011	1/19/2011	1/19/2011	8/8/2013
VOLATILE ORGANIC COMPOUNDS												
BTEX	µg/l	1										
Cis-1,2-Dichloroethene	µg/l	70			2		2					
Chlorobenzene	µg/l	50										
1,1-Dichloroethane	µg/l	6			2	2	2					2
1,4-Dichlorobenzene	µg/l	6										
Trans-1,2-Dichloroethene	µg/l	100										
Tetrachloroethene	µg/l	0.7										
Trichloroethene	µg/l	3										
Vinyl Chloride	µg/l	0.03										
NATURAL ATTENUATION INDICATORS												
Alkalinity	mg/l	NE		1	1	1	1	1	1	1	1	1
Methane	µg/l	NE				3						
Ethane	µg/l	NE										
Ethene	µg/l	NE										
Nitrate	mg/l	10	2	2	2		2	2		2		
Sulfide	µg/l	NE										
Total Chloride	mg/l	250		2	2	2	2	2	2	2	2	2
Total Iron	mg/l	0.3	3	3	3			3		3	3	3
Total Organic Carbon	mg/l	NE										
Total Sulfate	mg/l	250				2	2	2	2	2		2
Hydrogen	nM	NE			3	3	3	3			3	3
Volatile Fatty Acids	mg/l	NE	2			2	2	2	2	2		
FINAL FIELD MEASUREMENTS												
pH	s.u.	6.5-8.5	-2									
Temperature	°C	NE										
Dissolved Oxygen	mg/l	NE		3	3					3		
Carbon Dioxide - Dissolved	mg/l	NE		1	1	1	1	1			1	
Oxidation Reduction Potential	mV	NE			2							
		∑	5	12	21	16	17	16	7	15	10	13

NOTES: Monitoring Well MW-1 is background well

	SCORE FOR ASSESSING ANAEROBIC DEGRADATION	**WELLS AT LANDFILL SITE**
<6	Inadequate evidence for anaerobic degradation	None
6 - 14	Limited evidence for anaerobic degradation	**MW-2, MW-10, MW-25. MW-29**
15 - 20	Adequate evidence for anaerobic degradation	**MW-6, MW-7, MW-9, MW-24**
>20	Strong evidence for anaerobic degradation	**MW-3**

East Plume at LANDFILL
West Plume at LANDFILL

TABLE 4

ANALYTICAL INORGANIC PARAMETERS FOR GROUNDWATER SAMPLES - JANUARY 2014
CITY OF ALBEMARLE LANDFILL
STANLY COUNTY, NORTH CAROLINA

	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Tin	Vanadium	Zinc
SWSL	0.006	0.01	0.1	0.001	0.001	0.01	0.01	0.01	0.01	0.0002	0.05	0.01	0.01	0.0055	0.1	0.025	0.01
NC 2L	NE	0.01	0.7	NE	0.002	0.01	NE	1.0	0.015	0.001	0.1	0.02	0.02	NE	NE	NE	1
IMAC	0.001	--	--	0.004	--	--	0.001	--	--	--	--	--	--	0.00028	2	0.0003	--
ACTIVE C&D AND CLOSED MSWLF																	
MW-1	0.000299J	0.00712J	0.038J	ND	ND	0.0018J	0.00559J	0.00965J	ND	NA	0.0045J	ND	ND	ND	NA	0.00212J	**0.05**
MW-2	0.00125J	0.0063J	0.0275J	ND	ND	ND	**0.0372**	**0.0104**	ND	NA	0.0256J	ND	ND	ND	NA	ND	**0.0213**
MW-3	ND	**0.0163**	0.0166J	ND	ND	ND	**0.0321**	ND	ND	NA	0.00362J	ND	ND	ND	NA	ND	ND
MW-4R	ND	0.00636J	0.00389J	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND	0.00461J
MW-5R	ND	0.00695J	0.00988J	ND	ND	ND	0.00187J	ND	ND	NA	ND	ND	ND	ND	NA	ND	0.00519J
MW-6	ND	ND	0.00459J	ND	ND	ND	0.00155J	0.00327J	ND	NA	0.00455J	ND	ND	ND	NA	ND	0.00545J
MW-7	ND	0.00949J	0.0279J	ND	**0.00109**	ND	0.00578J	ND	ND	NA	0.00914J	ND	ND	ND	NA	ND	0.00487J
MW-8D	ND	0.00892J	0.00893J	ND	ND	ND	0.00645J	ND	ND	NA	0.00268J	ND	ND	ND	NA	0.0014J	**0.0125**
MW-9	ND	ND	0.0119J	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND	ND
MW-10	ND	ND	0.0756J	ND	ND	ND	0.00545J	0.00161J	ND	NA	0.0266J	ND	ND	ND	NA	ND	0.00567J
MW-11	ND	0.00659J	0.079J	ND	ND	**0.0443**	0.005J	**0.0125**	ND	NA	0.0295J	ND	ND	ND	NA	**0.0254**	**0.0226**
MW-12	ND	**0.0273**	0.0545J	ND	ND	0.00608J	**0.142**	ND	0.00214J	ND	**0.0869**	ND	0.00345J	ND	ND	ND	ND
MW-13	ND	**0.0246**	**0.195**	ND	ND	0.00668J	**0.113**	ND	0.00604J	ND	0.00599J	ND	0.00474J	ND	ND	ND	0.00555J
MW-23	ND	0.00745J	0.0498J	ND	ND	ND	**0.026**	ND	ND	ND	0.0112J	ND	ND	ND	ND	ND	0.00529J
MW-29	ND	ND	0.0431J	ND	ND	ND	0.0028J	ND	ND	NA	ND	ND	ND	ND	NA	0.00195J	0.00404J
SUBTITLE D LINED MSWLF																	
MW-14	0.000377J	ND	0.00375J	ND	ND	ND	0.00357J	ND	0.00223J	NA	0.0178J	ND	ND	ND	NA	ND	0.00438J
MW-15	0.00128J	ND	0.0239J	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	0.00292J	0.00675J
MW-16S	ND	ND	0.0222J	ND	ND	0.0014J	**0.03**	0.00428J	ND	NA	0.0116J	ND	ND	ND	NA	ND	0.00588J
MW-16D	ND	0.00587J	0.054J	ND	ND	0.00198J	**0.0853**	0.00793J	ND	NA	0.0141J	ND	ND	ND	NA	ND	0.00555J
MW-17	ND	ND	0.0103J	ND	ND	ND	0.00148J	0.0022J	ND	NA	ND	ND	ND	ND	NA	ND	0.00444J
MW-18	ND	ND	0.00917J	ND	ND	0.00154J	ND	ND	ND	NA	0.00187J	ND	ND	ND	NA	0.00156J	0.00458J
MW-19	ND	0.00802J	0.00674J	ND	ND	ND	0.00306J	ND	0.00272J	NA	ND	ND	ND	ND	NA	ND	0.00777J
MW-22	ND	ND	0.0239j	ND	ND	ND	**0.0109**	ND	ND	NA	0.00468J	ND	ND	ND	NA	ND	0.00464J
MW-26	ND	ND	0.0036J	ND	ND	0.00154J	ND	ND	ND	NA	0.00327J	ND	ND	ND	NA	ND	0.00594J
MW-27	ND	ND	0.0381J	ND	ND	0.00185J	**0.0176**	ND	ND	NA	0.0146J	ND	ND	ND	NA	ND	0.00545J
LEACHATE SAMPLE																	
LAGOON	0.00189J	0.05	0.167	ND	ND	0.0333	0.025	ND	ND	NA	0.025J	ND	ND	ND	NA	0.0141J	0.156
QUALITY CONTROL/QUALITY ASSURANCE SAMPLES																	
Field Blank	ND	ND	0.00106	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND	ND
Equip. Blank	ND	ND	0.00105J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:

1) All data reported in Milligrams per Liter (mg/L)
2) Analyses are for Total Metals.
3) SWSL= North Carolina Solid Waste Section Limits
4) NC 2L = North Carolina 2L Groundwater Standard as found in 15A NCAC 2L.0202
5) IMAC = Interim Maximum Allowable Concentrations established under 15A NCAC 2L .020
6) NE = Not Established.
7) ND = Not detected at or Above the Minimum Detection Level (MDL).
8) NS = Not Sampled (Dry)
9) NA = Not Analyzed
10) J = Estimated value, see Laboratory Report.
11) **Bold** = Result exceeds SWSL; Shading = Result exceeds NC 2L Groundwater Standard or IMAC.

(1) Monitoring Well MW-1 was Dry

Prepared/Date:	R. Sutley	2/27/2014
Checked/Date:	D. Hefner	2/27/2014

TABLE 5
SUMMARY OF NATURAL ATTENUATION DATA (UPDATED 3/21/14)
CITY OF ALBEMARLE LANDFILL
ALBEMARLE, NORTH CAROLINA

Well Grouping	Well ID / Date	ANAEROBIC BIODEGRADATION SCORES				
		Jul-09	Jan-10	Jul-10	Jan-11	Aug-13
Background Well	**MW-1**	10	7	10	5	NA
WEST PLUME	**MW-2**	8	15	17	12	NA
	MW-6	12	10	11	16	NA
	MW-7	15	17	21	17	NA
	MW-24	12	13	9	15	NA
	MW-25	8	17	17	10	NA
	MW-29	NA	NA	NA	NA	13
EAST PLUME	**MW-3**	9	15	19	21	NA
	MW-9	17	14	19	16	NA
	MW-10	14	12	16	7	NA

Reference: *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water,* September 1998 (EPA/600/R-98/128)

TOTAL SCORE FOR ASSESSING ANAEROBIC BIODEGRADATION

<6	Inadequate evidence for anaerobic degradation
6 - 14	Limited evidence for anaerobic degradation
15 - 20	Adequate evidence for anaerobic degradation
>20	Strong evidence for anaerobic degradation

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. SERIAL NO.
Lat. Long. RO
Minor Basin
Basin Code
Header Ent. GW-1 Ent.

WELL CONSTRUCTION RECORD

ILLING CONTRACTOR: GAI Consultants

ILLER REGISTRATION NUMBER: 446

STATE WELL CONSTRUCTION PERMIT NUMBER: N/A

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Albemarle County: Stanly
SR 1720
(Road, Community, or Subdivision and Lot No.)

OWNER City of Albemarle
ADDRESS Attn: James Coble PO Box 190
(Street or Route No.)
Albemarle NC 28001
City or Town State Zip Code

DATE DRILLED 9-8-94 USE OF WELL Monitoring
TOTAL DEPTH 37.0
CUTTINGS COLLECTED YES [ ] NO [x]
DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]
STATIC WATER LEVEL Below Top of Casing: 20.00 FT.
(Use "+" if Above Top of Casing)
TOP OF CASING IS 1.95 FT. Above Land Surface*
sing Terminated at/or below land surface is illegal unless a variance is issued accordance with 15A NCAC 2C .0118
YIELD (gpm): N/A METHOD OF TEST
WATER ZONES (depth): 25.5 - 37.0

CHLORINATION: Type N/A Amount

DEPTH From To	DRILLING LOG Formation Description
0 - 7	Red and tan sandy silt
7 - 24	Tan mudstone, thin bedded, weathered, fractured
24 - 37	Gray mudstone, slightly weathered, fractured

If additional space is needed use back of form

CASING:

From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
+1.95	20.5		2"	Sch 40	PVC

GROUT:

From	To	Ft.	Material	Method
0	15.0		cement	tremie
15.0	17.5		bentonite	pellets

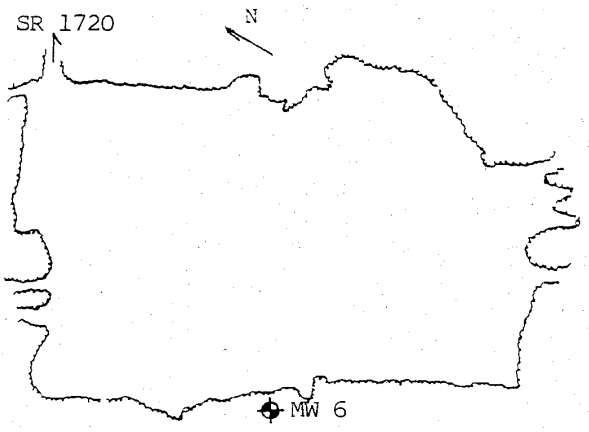
SCREEN:

From	To	Ft.	Diameter	Slot Size	Material
20.5	35.5		2 in.	.010 in.	PVC
			in.	in.	
			in.	in.	

SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
17.5	37.0		filter	sand

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



MARKS: Monitoring Well 6

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

Edward L Cerstin Jr 10/5/94
SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner.

REV. 9/91

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Dwight L. Huneycutt

Well Contractor Name

4070-A

NC Well Contractor Certification Number

Derry's Well Drilling, Inc.

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 8/3/13 **Well ID#** MW-29

5a. Well Location:

City of Albemarle - Landfill

Facility/Owner Name

Facility ID# (if applicable)

40592 Stony Gap Rd., Albemarle, NC 28001

Physical Address, City, and Zip

Stanly

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

_____ N _____ W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

*For multiple injection or non-water supply wells **ONLY** with the **same construction**, you can submit one form.*

9. Total well depth below land surface: 35 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 17 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 2 **(in.)**

12. Well construction method: Rotary

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) N/A **Method of test:** Air

13b. Disinfection type: Granular **Amount:** 1/2 lb.

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	20 ft.	2 in.	SCH 40	PVC

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
21 ft.	35 ft.	2 in.	.020	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	17 ft.	Cement	Gravity
18 ft.	20 ft.	Bentonite	Gravity
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
20 ft.	35 ft.	#2 Filter Sand	Gravity
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	6 ft.	Red Dirt
7 ft.	11 ft.	Brown Dirt
12 ft.	35 ft.	Blue Rock
ft.	ft.	
ft.	ft.	
ft.	ft.	Seams: 30', 34'
ft.	ft.	

21. REMARKS

22. Certification:

Dwight L. Huneycutt 8/30/13

Signature of Certified Well Contractor Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

BORING LOG

SHIELD ENGINEERING, INC.

Report No.: **1110192-02** DATE: **8/23/13**

Client:

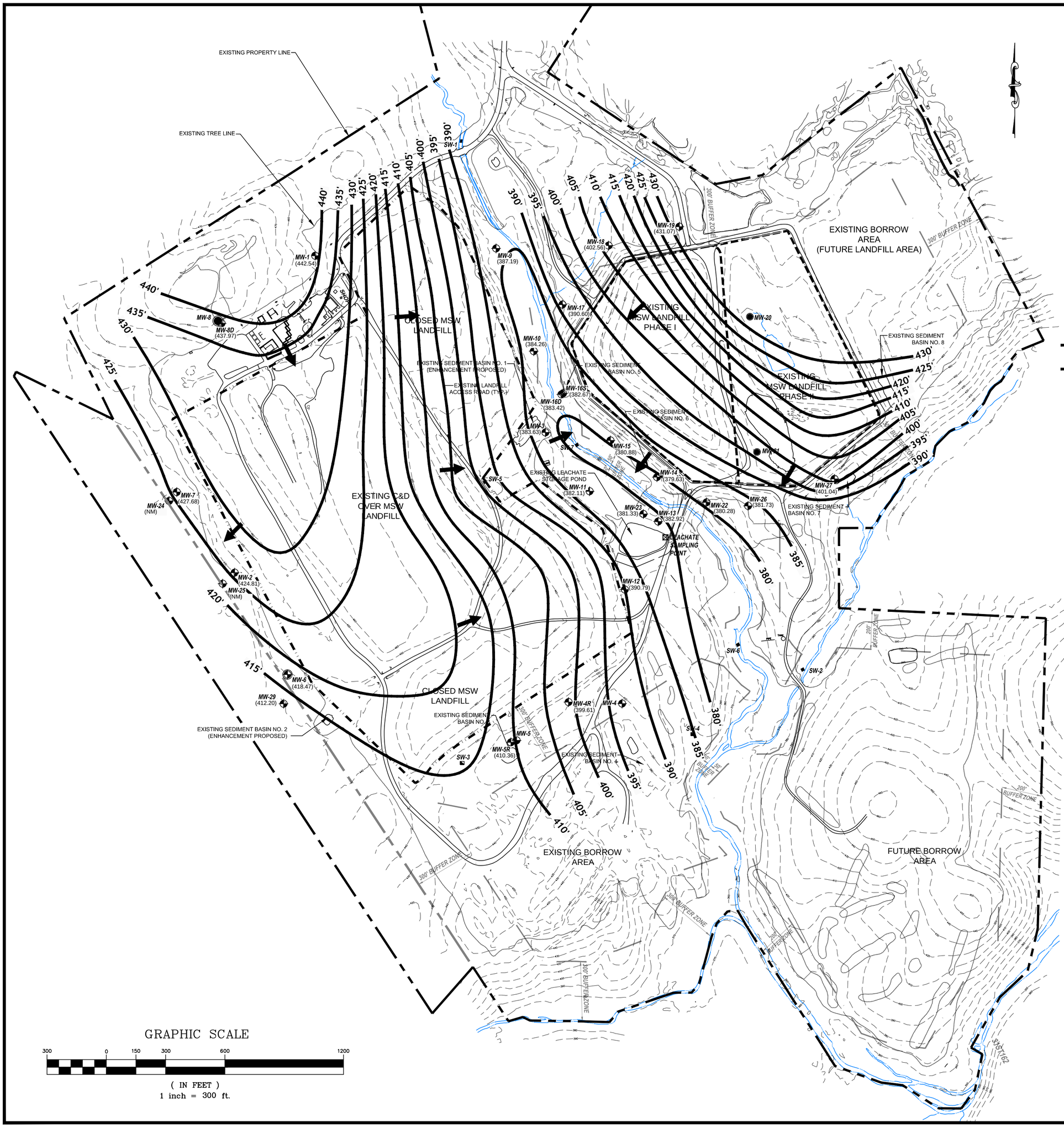
Project: **Albemarle Landfill**

Boring No.: **MW-29** | Total Depth **36.0'** | Elev: | Location:

Type of Boring: **Air Rotary** | Started: **8/2/13** | Completed: **8/2/13** | Driller: **Derry Drilling**

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (Feet)	OVA (ppm)	WELL LOG	REMARKS
		Orange, Tan, Brown fine to medium Sandy Clayey SILT with abundant small fragments of red, dark orange, tan and brown meta-mudstone					Meta-Mudstone of the CID Formation
	4.50	Tan, Light Brown Clayey SILT with very fine to medium sand (sand included black, red and brown glassy fragments) and pieces of white clay					Drilled material has ash-like texture
	11.00	As above with abundant rock fragments described as light brown, orange, tan meta-mudstone					Set 2" Dia Sch 40 PVC well to 35'
							Bentonite 14.5' to 17'
	19.00						
	20.00	Brown, Tan, Light Gray Meta-Mudstone fragments (large > 1-inch) with dark brown staining on bedding/fracture faces, and gray, dark gray meta-argillite rock fragments					Transition to Meta-Argillite layer
		Gray, Dark Gray Meta-Argillite with a few fragments of light gray, brown and tan meta-mudstone					0.010 Machine slotted screen set 20' to 35'
							Sand set 17' to 36'
	30.00	- brown seam (possible water)					
	34.00	- brown seam (possible water)					
	36.00	Boring terminated at 36 feet.					

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the last two increments of penetration is termed the standard penetration resistance, N.



LEGEND

- 2013 CONTOURS
- PROPERTY LINE
- FORMER SITE PROPERTY LINE
- ROAD
- WATER
- CLOSED MSWLF SANITARY UNIT
- EXISTING MSWLF SANITARY UNIT
- BUFFER ZONE
- SW-1 — SURFACE WATER SAMPLING LOCATION
- MW-4 — MONITORING WELL
- SW-3 — ABANDONED SURFACE WATER SAMPLING LOCATION
- MW-21 — ABANDONED MONITORING WELL
- LEACHATE SAMPLING POINT
- CULVERT PIPE
- CULVERT HEADWALL
- NAVD — NORTH AMERICAN VERTICAL DATUM
- (442.54) — GROUND-WATER ELEVATION (FEET ABOVE **NAVD) ON JANUARY 20 AND 22, 2014**
- GROUND-WATER CONTOUR (FEET ABOVE ABOVE NAVD)5-FT. CONTOUR INTERVAL
- INFERRED GROUND-WATER CONTOUR (FEET ABOVE NAVD)5-FT. CONTOUR INTERVAL
- GENERALIZED GROUND-WATER FLOW DIRECTION

NOTES:
1. REFERENCE: EROSION CONTROL MASTER PLAN (SHEET 1 OF 4) BY HODGES, HARBIN, NEWBERRY & TRIBBLE, INC. DATED MARCH 2011.
2. CONTOURS BY SPATIAL DATA CONSULTANTS, INC. PHOTOGRAPY DATED JULY 29, 2013.
3. METHANE WELLS WERE SURVEYED BY LAWRENCE ASSOCIATES NOVEMBER, 2013.

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

SHIELD ENGINEERING, INC.
4301 TAGGART CREEK ROAD
CHARLOTTE, NC 28208
704-394-6913
704-394-6968 fax
www.shieldengineering.com

GROUNDWATER CONTOUR MAP

CITY OF ALBEMARLE LANDFILL
STONY GAP ROAD
ALBEMARLE, NORTH CAROLINA
SHIELD #1110192-01

DATE :	02/04/14	DRAWN BY :	RBS
SCALE :	AS SHOWN	FIGURE :	2

H:\PROJECTS\2011\1110192 - CITY OF ALBEMARLE LANDFILL\FIGURES\GROUNDWATER ELEVATION CONTOUR MAPS 2014\GROUNDWATER CONTOUR MAP WITH SURVEYED MW-2014 REV 04-2014.DWG

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

Friday, August 23, 2013

Shield Engineering, Inc. (SH007)

Attn: Danny Hefner

4301 Taggart Creek Road

Charlotte, NC 28208

RE: Laboratory Results for
Project Number: 1110192, Project Name/Desc: Albemarle LF MW-29
ENCO Workorder(s): C309837

Dear Danny Hefner,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, August 9, 2013.

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,

Stephanie Franz

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 26.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 8401-MW29	Lab ID: C309837-01	Sampled: 08/08/13 11:20	Received: 08/09/13 10:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	09/05/13	08/13/13 09:31	8/14/2013 08:14
EPA 310.2	08/22/13	08/14/13 12:01	8/14/2013 14:26
EPA 353.2	08/10/13 11:20	08/09/13 14:59	8/9/2013 16:11
EPA 353.2	05/03/16	08/16/13 10:25	8/16/2013 12:01
EPA 6010C	02/04/14	08/09/13 15:55	8/13/2013 13:53
EPA 8260B	08/22/13	08/09/13 17:09	8/10/2013 11:45
RSK-175	08/22/13	08/15/13 14:01	8/15/2013 16:48
SM 2130B-2001	08/10/13 11:20	08/09/13 19:06	8/9/2013 19:06
SM 4500Cl E-1997	09/05/13	08/14/13 12:04	8/14/2013 14:02
SM 4500S2 D-2000	08/15/13	08/09/13 11:50	8/9/2013 12:25
SM 5220D-1997	09/05/13	08/12/13 10:59	8/12/2013 13:54
SM 5310B-2000	09/05/13	08/14/13 13:23	8/14/2013 21:18
VGC-13	08/22/13	08/21/13 10:45	8/21/2013 15:59

Client ID: 8401-MW29	Lab ID: C309837-01RE1	Sampled: 08/08/13 11:20	Received: 08/09/13 10:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 353.2	09/05/13	08/14/13 07:09	8/14/2013 12:44
EPA 6020A	02/04/14	08/09/13 16:02	8/13/2013 14:06

Client ID: 8401-Trip Blank	Lab ID: C309837-02	Sampled: 08/08/13 11:20	Received: 08/09/13 10:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	08/22/13	08/09/13 17:09	8/10/2013 12:15

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 8401-MW29 **Lab ID: C309837-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	1.6	J	1	0.13	1.0	5	ug/L	EPA 8260B	
Arsenic - Total	17.1		1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	13.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Carbon dioxide	22.3		1	0.690	2.50	NE	mg/L	RSK-175	
Chemical Oxygen Demand	15000		1	10000	10000	NE	ug/L	SM 5220D-1997	
Chloride	13000		1	1900	5000	NE	ug/L	SM 4500Cl E-1997	
Chromium - Total	4.11	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	23.2		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	16.6		1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	6140		1	22.0	50.0	300	ug/L	EPA 6010C	
Lead - Total	8.47	J	1	2.10	10.0	10	ug/L	EPA 6010C	
Methylene chloride	0.98	J	1	0.23	1.0	1	ug/L	EPA 8260B	
Nickel - Total	5.23	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Nitrate as N	2600	J	1	25	100	10000	ug/L	EPA 353.2	
Sulfate as SO4	2800	JB	1	40	5000	250000	ug/L	EPA 300.0	J-01
Total Alkalinity as CaCO3	62		1	14	15	NE	mg/L	EPA 310.2	
Trichlorofluoromethane	4.0		1	0.24	1.0	1	ug/L	EPA 8260B	
Turbidity	580	D	40	20	40	NE	NTU	SM 2130B-2001	
Vanadium - Total	10.3	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	7.44	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW29 **Lab ID: C309837-01RE1**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	2.39	JD	2	0.440	4.00	6	ug/L	EPA 6020A	
Nitrate/Nitrite as N	2600	D	10	410	1000	NE	ug/L	EPA 353.2	

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ANALYTICAL RESULTS

Description: 8401-MW29 | **Lab Sample ID:** C309837-01 | **Received:** 08/09/13 10:50

Matrix: Ground Water | **Sampled:** 08/08/13 11:20 | **Work Order:** C309837

Project: Albemarle LF MW-29 | **Sampled By:** Danny Hefner

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	08/10/13 11:45	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	08/10/13 11:45	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	08/10/13 11:45	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	08/10/13 11:45	REF	
1,1-Dichloroethane [75-34-3] ^	**1.6**	J	ug/L	1	0.13	1.0	5	EPA 8260B	08/10/13 11:45	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	08/10/13 11:45	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	08/10/13 11:45	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	08/10/13 11:45	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	08/10/13 11:45	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	08/10/13 11:45	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	08/10/13 11:45	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	08/10/13 11:45	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	08/10/13 11:45	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	08/10/13 11:45	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	08/10/13 11:45	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	08/10/13 11:45	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	08/10/13 11:45	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	08/10/13 11:45	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	08/10/13 11:45	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	08/10/13 11:45	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	08/10/13 11:45	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	08/10/13 11:45	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	08/10/13 11:45	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	08/10/13 11:45	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	08/10/13 11:45	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	08/10/13 11:45	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	08/10/13 11:45	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	08/10/13 11:45	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	08/10/13 11:45	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	08/10/13 11:45	REF	
Methylene chloride [75-09-2] ^	**0.98**	J	ug/L	1	0.23	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	08/10/13 11:45	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	08/10/13 11:45	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	08/10/13 11:45	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	08/10/13 11:45	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	08/10/13 11:45	REF	

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Description: 8401-MW29
Matrix: Ground Water
Project: Albemarle LF MW-29

Lab Sample ID: C309837-01
Sampled: 08/08/13 11:20
Sampled By: Danny Hefner

Received: 08/09/13 10:50
Work Order: C309837

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
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Trichlorofluoromethane [75-69-4] ^	**4.0**		ug/L	1	0.24	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	08/10/13 11:45	REF	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	08/10/13 11:45	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	08/10/13 11:45	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*49*	*1*	*50.0*	*99 %*	*51-122*	*3H09035*	*EPA 8260B*	*08/10/13 11:45*	*REF*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*68-117*	*3H09035*	*EPA 8260B*	*08/10/13 11:45*	*REF*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*67-127*	*3H09035*	*EPA 8260B*	*08/10/13 11:45*	*REF*	

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Description: 8401-MW29 | **Lab Sample ID:** C309837-01 | **Received:** 08/09/13 10:50

Matrix: Ground Water | **Sampled:** 08/08/13 11:20 | **Work Order:** C309837

Project: Albemarle LF MW-29 | **Sampled By:** Danny Hefner

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**2.39**	JD	ug/L	2	0.440	4.00	6	EPA 6020A	08/13/13 14:06	VLO	
Arsenic [7440-38-2] ^	**17.1**		ug/L	1	5.40	10.0	10	EPA 6010C	08/13/13 13:53	JDH	
Barium [7440-39-3] ^	**13.9**	J	ug/L	1	1.00	10.0	100	EPA 6010C	08/13/13 13:53	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	08/13/13 13:53	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	08/13/13 13:53	JDH	
Chromium [7440-47-3] ^	**4.11**	J	ug/L	1	1.40	10.0	10	EPA 6010C	08/13/13 13:53	JDH	
Cobalt [7440-48-4] ^	**23.2**		ug/L	1	1.10	10.0	10	EPA 6010C	08/13/13 13:53	JDH	
Copper [7440-50-8] ^	**16.6**		ug/L	1	1.60	10.0	10	EPA 6010C	08/13/13 13:53	JDH	
Iron [7439-89-6] ^	**6140**		ug/L	1	22.0	50.0	300	EPA 6010C	08/13/13 13:53	JDH	
Lead [7439-92-1] ^	**8.47**	J	ug/L	1	2.10	10.0	10	EPA 6010C	08/13/13 13:53	JDH	
Nickel [7440-02-0] ^	**5.23**	J	ug/L	1	1.80	10.0	50	EPA 6010C	08/13/13 13:53	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	08/13/13 13:53	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	08/13/13 13:53	JDH	
Thallium [7440-28-0] ^	0.220	UD	ug/L	2	0.220	2.00	5.5	EPA 6020A	08/13/13 14:06	VLO	
Vanadium [7440-62-2] ^	**10.3**	J	ug/L	1	1.40	10.0	25	EPA 6010C	08/13/13 13:53	JDH	
Zinc [7440-66-6] ^	**7.44**	J	ug/L	1	3.80	10.0	10	EPA 6010C	08/13/13 13:53	JDH	

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Description: 8401-MW29
Matrix: Ground Water
Project: Albemarle LF MW-29

Lab Sample ID: C309837-01
Sampled: 08/08/13 11:20
Sampled By: Danny Hefner

Received: 08/09/13 10:50
Work Order: C309837

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chemical Oxygen Demand [ECL-0035] ^	**15000**		ug/L	1	10000	10000	NE	SM 5220D-1997	08/12/13 13:54	JOC	
Chloride [16887-00-6] ^	**13000**		ug/L	1	1900	5000	NE	SM 4500Cl E-1997	08/14/13 14:02	JCS	
Nitrate as N [14797-55-8] ^	**2600**	J	ug/L	1	25	100	10000	EPA 353.2	08/16/13 12:01	JCS	
Nitrate/Nitrite as N [ECL-0010] ^	**2600**	D	ug/L	10	410	1000	NE	EPA 353.2	08/14/13 12:44	JCS	
Nitrite as N [14797-65-0] ^	17	U	ug/L	1	17	100	1000	EPA 353.2	08/09/13 16:11	JCS	
Sulfate as SO4 [14808-79-8] ^	**2800**	JB	ug/L	1	40	5000	250000	EPA 300.0	08/14/13 08:14	JCS	J-01
Sulfide [18496-25-8] ^	10	U	ug/L	1	10	100	1000	SM 4500S2 D-2000	08/09/13 12:25	JOC	
Total Alkalinity as CaCO3 [471-34-1] ^	**62**		mg/L	1	14	15	NE	EPA 310.2	08/14/13 14:26	JCS	
Turbidity [ECL-0177] ^	**580**	D	NTU	40	20	40	NE	SM 2130B-2001	08/09/13 19:06	JOC	

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Description:	8401-MW29	**Lab Sample ID:**	C309837-01	**Received:**	08/09/13 10:50
Matrix:	Ground Water	**Sampled:**	08/08/13 11:20	**Work Order:**	C309837
Project:	Albemarle LF MW-29	**Sampled By:**	Danny Hefner		

Classical Chemistry Parameters

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Total Organic Carbon [ECL-0165] ^	0.32	U	mg/L	1	0.32	1.0	NE	SM 5310B-2000	08/14/13 21:18	RSA	

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Description: 8401-MW29
Matrix: Ground Water
Project: Albemarle LF MW-29

Lab Sample ID: C309837-01
Sampled: 08/08/13 11:20
Sampled By: Danny Hefner

Received: 08/09/13 10:50
Work Order: C309837

Dissolved Gases by GC

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Carbon dioxide [124-38-9]	**22.3**		mg/L	1	0.690	2.50	NE	RSK-175	08/15/13 16:48	JDB	
Ethane [74-84-0]	0.00130	U	mg/L	1	0.00130	0.00200	NE	RSK-175	08/15/13 16:48	JDB	
Ethene [74-85-1]	0.00150	U	mg/L	1	0.00150	0.00300	NE	RSK-175	08/15/13 16:48	JDB	
Methane [74-82-8]	0.000400	U	mg/L	1	0.000400	0.00100	NE	RSK-175	08/15/13 16:48	JDB	

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Description: 8401-MW29
Matrix: Ground Water
Project: Albemarle LF MW-29

Lab Sample ID: C309837-01
Sampled: 08/08/13 11:20
Sampled By: Danny Hefner

Received: 08/09/13 10:50
Work Order: C309837

Volatile Fatty Acids by HPLC

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Acetic Acid [64-19-7]	0.031	U	mg/L	1	0.031	0.070	NE	VGC-13	08/21/13 15:59	JWJ	
Butyric Acid [107-92-6]	0.031	U	mg/L	1	0.031	0.070	NE	VGC-13	08/21/13 15:59	JWJ	
Hexanoic Acid [142-62-1]	0.078	U	mg/L	1	0.078	0.10		VGC-13	08/21/13 15:59	JWJ	QV-01
iso-Hexanoic Acid [646-07-1]	0.080	U	mg/L	1	0.080	0.10		VGC-13	08/21/13 15:59	JWJ	QV-01
iso-Pentanoic Acid [503-74-2]	0.043	U	mg/L	1	0.043	0.070		VGC-13	08/21/13 15:59	JWJ	QV-01
Lactic Acid/HIBA (2-Hydroxyisobutyric Acid) [50-21-5/594-61-6]	0.095	U	mg/L	1	0.095	0.14	NE	VGC-13	08/21/13 15:59	JWJ	
Pentanoic Acid [109-52-4]	0.052	U	mg/L	1	0.052	0.070		VGC-13	08/21/13 15:59	JWJ	
Propionic Acid [79-09-4]	0.063	U	mg/L	1	0.063	0.070	NE	VGC-13	08/21/13 15:59	JWJ	
Pyruvic Acid [127-17-3]	0.010	U	mg/L	1	0.010	0.070	NE	VGC-13	08/21/13 15:59	JWJ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
Trimethylacetic acid	*23*	*1*	*20.0*	*113 %*	*65-143*	*3H19012*	*VGC-13*	*08/21/13 15:59*	*JWJ*	

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

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Description: 8401-Trip Blank
Matrix: Ground Water
Project: Albemarle LF MW-29

Lab Sample ID: C309837-02
Sampled: 08/08/13 11:20
Sampled By: ENCO

Received: 08/09/13 10:50
Work Order: C309837

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	08/10/13 12:15	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	08/10/13 12:15	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	08/10/13 12:15	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	08/10/13 12:15	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	08/10/13 12:15	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	08/10/13 12:15	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	08/10/13 12:15	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	08/10/13 12:15	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	08/10/13 12:15	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	08/10/13 12:15	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	08/10/13 12:15	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	08/10/13 12:15	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	08/10/13 12:15	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	08/10/13 12:15	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	08/10/13 12:15	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	08/10/13 12:15	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	08/10/13 12:15	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	08/10/13 12:15	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	08/10/13 12:15	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	08/10/13 12:15	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	08/10/13 12:15	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	08/10/13 12:15	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	08/10/13 12:15	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	08/10/13 12:15	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	08/10/13 12:15	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	08/10/13 12:15	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	08/10/13 12:15	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	08/10/13 12:15	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	08/10/13 12:15	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	08/10/13 12:15	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	08/10/13 12:15	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	08/10/13 12:15	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	08/10/13 12:15	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	08/10/13 12:15	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	08/10/13 12:15	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	08/10/13 12:15	REF	

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Description: 8401-Trip Blank
Matrix: Ground Water
Project: Albemarle LF MW-29

Lab Sample ID: C309837-02
Sampled: 08/08/13 11:20
Sampled By: ENCO

Received: 08/09/13 10:50
Work Order: C309837

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	08/10/13 12:15	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	08/10/13 12:15	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*49*	*1*	*50.0*	*97 %*	*51-122*	*3H09035*	*EPA 8260B*	*08/10/13 12:15*	*REF*	
Dibromofluoromethane	*48*	*1*	*50.0*	*96 %*	*68-117*	*3H09035*	*EPA 8260B*	*08/10/13 12:15*	*REF*	
Toluene-d8	*50*	*1*	*50.0*	*101 %*	*67-127*	*3H09035*	*EPA 8260B*	*08/10/13 12:15*	*REF*	

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 3H09035 - EPA 5030B_MS

Blank (3H09035-BLK1) Prepared: 08/09/2013 17:09 Analyzed: 08/10/2013 04:55

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Tetrahydrofuran	0.80	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3H09035 - EPA 5030B_MS

Blank (3H09035-BLK1) Continued Prepared: 08/09/2013 17:09 Analyzed: 08/10/2013 04:55

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*47*			*ug/L*	*50.0*		*95*	*51-122*			
Surrogate: Dibromofluoromethane	*42*			*ug/L*	*50.0*		*85*	*68-117*			
Surrogate: Toluene-d8	*50*			*ug/L*	*50.0*		*99*	*67-127*			

LCS (3H09035-BS1) Prepared: 08/09/2013 17:09 Analyzed: 08/10/2013 05:24

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		104	75-133			
Benzene	20		1.0	ug/L	20.0		100	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		102	83-117			
Toluene	19		1.0	ug/L	20.0		95	71-118			
Trichloroethene	21		1.0	ug/L	20.0		105	74-119			
Surrogate: 4-Bromofluorobenzene	*47*			*ug/L*	*50.0*		*94*	*51-122*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*51*			*ug/L*	*50.0*		*103*	*67-127*			

Matrix Spike (3H09035-MS1) Prepared: 08/09/2013 17:09 Analyzed: 08/10/2013 05:54

Source: C309840-11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	24		1.0	ug/L	20.0	0.21 U	118	75-133			
Benzene	20		1.0	ug/L	20.0	0.15 U	99	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	101	83-117			
Toluene	20		1.0	ug/L	20.0	0.14 U	98	71-118			
Trichloroethene	22		1.0	ug/L	20.0	0.15 U	109	74-119			
Surrogate: 4-Bromofluorobenzene	*47*			*ug/L*	*50.0*		*95*	*51-122*			
Surrogate: Dibromofluoromethane	*42*			*ug/L*	*50.0*		*84*	*68-117*			
Surrogate: Toluene-d8	*50*			*ug/L*	*50.0*		*101*	*67-127*			

Matrix Spike Dup (3H09035-MSD1) Prepared: 08/09/2013 17:09 Analyzed: 08/10/2013 06:23

Source: C309840-11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	23		1.0	ug/L	20.0	0.21 U	113	75-133	4	20	
Benzene	20		1.0	ug/L	20.0	0.15 U	100	81-134	2	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	103	83-117	2	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	92	71-118	6	17	
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	107	74-119	1	22	
Surrogate: 4-Bromofluorobenzene	*46*			*ug/L*	*50.0*		*93*	*51-122*			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*93*	*68-117*			
Surrogate: Toluene-d8	*52*			*ug/L*	*50.0*		*103*	*67-127*			

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 3H09031 - EPA 3005A

Blank (3H09031-BLK1) Prepared: 08/09/2013 15:55 Analyzed: 08/13/2013 13:04

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 3H09031 - EPA 3005A

Blank (3H09031-BLK1) Continued Prepared: 08/09/2013 15:55 Analyzed: 08/13/2013 13:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	5.40	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Iron	22.0	U	50.0	ug/L							
Lead	2.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Selenium	5.00	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

LCS (3H09031-BS1) Prepared: 08/09/2013 15:55 Analyzed: 08/13/2013 13:07

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	185		10.0	ug/L	200		92	80-120			
Barium	195		10.0	ug/L	200		98	80-120			
Beryllium	18.8		1.00	ug/L	20.0		94	80-120			
Cadmium	18.9		1.00	ug/L	20.0		94	80-120			
Chromium	188		10.0	ug/L	200		94	80-120			
Cobalt	187		10.0	ug/L	200		93	80-120			
Copper	186		10.0	ug/L	200		93	80-120			
Iron	987		50.0	ug/L	1000		99	80-120			
Lead	189		10.0	ug/L	200		94	80-120			
Nickel	193		10.0	ug/L	200		97	80-120			
Selenium	184		10.0	ug/L	200		92	80-120			
Silver	196		10.0	ug/L	200		98	80-120			
Vanadium	191		10.0	ug/L	200		95	80-120			
Zinc	191		10.0	ug/L	200		95	80-120			

Matrix Spike (3H09031-MS1) Prepared: 08/09/2013 15:55 Analyzed: 08/13/2013 13:19

Source: C309337-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	192		10.0	ug/L	200	5.40 U	96	75-125			
Barium	324		10.0	ug/L	200	149	88	75-125			
Beryllium	18.8		1.00	ug/L	20.0	0.100 U	94	75-125			
Cadmium	18.4		1.00	ug/L	20.0	0.360 U	92	75-125			
Chromium	185		10.0	ug/L	200	1.40 U	93	75-125			
Cobalt	183		10.0	ug/L	200	1.10 U	91	75-125			
Copper	187		10.0	ug/L	200	1.60 U	94	75-125			
Iron	2290		50.0	ug/L	1000	1380	91	75-125			
Lead	185		10.0	ug/L	200	2.10 U	92	75-125			
Nickel	189		10.0	ug/L	200	1.80 U	94	75-125			
Selenium	191		10.0	ug/L	200	5.00 U	96	75-125			

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 3H09031 - EPA 3005A

Matrix Spike (3H09031-MS1) Continued Prepared: 08/09/2013 15:55 Analyzed: 08/13/2013 13:19

Source: C309337-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	195		10.0	ug/L	200	1.90 U	97	75-125			
Vanadium	191		10.0	ug/L	200	1.40 U	96	75-125			
Zinc	188		10.0	ug/L	200	3.80 U	94	75-125			

Matrix Spike Dup (3H09031-MSD1) Prepared: 08/09/2013 15:55 Analyzed: 08/13/2013 13:21

Source: C309337-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	193		10.0	ug/L	200	5.40 U	96	75-125	0.7	20	
Barium	327		10.0	ug/L	200	149	89	75-125	1	20	
Beryllium	18.8		1.00	ug/L	20.0	0.100 U	94	75-125	0.09	20	
Cadmium	18.6		1.00	ug/L	20.0	0.360 U	93	75-125	1	20	
Chromium	186		10.0	ug/L	200	1.40 U	93	75-125	0.3	20	
Cobalt	184		10.0	ug/L	200	1.10 U	92	75-125	0.6	20	
Copper	188		10.0	ug/L	200	1.60 U	94	75-125	0.3	20	
Iron	2310		50.0	ug/L	1000	1380	93	75-125	0.9	20	
Lead	186		10.0	ug/L	200	2.10 U	93	75-125	0.8	20	
Nickel	190		10.0	ug/L	200	1.80 U	95	75-125	0.7	20	
Selenium	187		10.0	ug/L	200	5.00 U	94	75-125	2	20	
Silver	196		10.0	ug/L	200	1.90 U	98	75-125	0.5	20	
Vanadium	192		10.0	ug/L	200	1.40 U	96	75-125	0.5	20	
Zinc	189		10.0	ug/L	200	3.80 U	94	75-125	0.6	20	

Post Spike (3H09031-PS1) Prepared: 08/09/2013 15:55 Analyzed: 08/13/2013 13:24

Source: C309337-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.187		0.0100	mg/L	0.200	0.00128	93	80-120			
Barium	0.322		0.0100	mg/L	0.200	0.149	86	80-120			
Beryllium	0.0185		0.00100	mg/L	0.0200	2.77E-5	92	80-120			
Cadmium	0.0182		0.00100	mg/L	0.0200	8.73E-5	91	80-120			
Chromium	0.182		0.0100	mg/L	0.200	0.000325	91	80-120			
Cobalt	0.181		0.0100	mg/L	0.200	0.000296	90	80-120			
Copper	0.184		0.0100	mg/L	0.200	-0.00148	93	80-120			
Iron	2.28		0.0500	mg/L	1.00	1.38	90	80-120			
Lead	0.182		0.0100	mg/L	0.200	-0.00146	92	80-120			
Nickel	0.187		0.0100	mg/L	0.200	0.000520	93	80-120			
Selenium	0.187		0.0100	mg/L	0.200	-0.00271	95	80-120			
Silver	0.190		0.0100	mg/L	0.200	0.000859	95	80-120			
Vanadium	0.188		0.0100	mg/L	0.200	0.000178	94	80-120			
Zinc	0.186		0.0100	mg/L	0.200	0.00107	93	80-120			

Batch 3H09033 - EPA 3005A

Blank (3H09033-BLK1) Prepared: 08/09/2013 16:02 Analyzed: 08/13/2013 11:44

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

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 3H09033 - EPA 3005A

Blank (3H09033-BLK1) Continued Prepared: 08/09/2013 16:02 Analyzed: 08/13/2013 11:44

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (3H09033-BS1) Prepared: 08/09/2013 16:02 Analyzed: 08/13/2013 11:48

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	204		2.00	ug/L	200		102	80-120			
Thallium	200		1.00	ug/L	200		100	80-120			

Matrix Spike (3H09033-MS1) Prepared: 08/09/2013 16:02 Analyzed: 08/13/2013 11:56

Source: C309508-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	206		2.00	ug/L	200	0.360	103	75-125			
Thallium	199		1.00	ug/L	200	0.110 U	99	75-125			

Matrix Spike Dup (3H09033-MSD1) Prepared: 08/09/2013 16:02 Analyzed: 08/13/2013 12:00

Source: C309508-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	208		2.00	ug/L	200	0.360	104	75-125	0.8	20	
Thallium	195		1.00	ug/L	200	0.110 U	98	75-125	2	20	

Post Spike (3H09033-PS1) Prepared: 08/09/2013 16:02 Analyzed: 08/13/2013 12:04

Source: C309508-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	214		2.00	ug/L	200	0.360	107	80-120			
Thallium	200		1.00	ug/L	200	0.0692	100	80-120			

Classical Chemistry Parameters - Quality Control

Batch 3H09017 - NO PREP

Blank (3H09017-BLK1) Prepared: 08/09/2013 11:50 Analyzed: 08/09/2013 12:25

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	10	U	100	ug/L							

LCS (3H09017-BS1) Prepared: 08/09/2013 11:50 Analyzed: 08/09/2013 12:25

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	0.40		0.10	mg/L	0.401		99	80-120			

Duplicate (3H09017-DUP1) Prepared: 08/09/2013 11:50 Analyzed: 08/09/2013 12:25

Source: C309705-02

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3H09017 - NO PREP

Duplicate (3H09017-DUP1) Continued Prepared: 08/09/2013 11:50 Analyzed: 08/09/2013 12:25

Source: C309705-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	10	U	100	ug/L		10 U				25	

Duplicate (3H09017-DUP2) Prepared: 08/09/2013 13:22 Analyzed: 08/09/2013 13:30

Source: C309196-16

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	2000	E	100	ug/L		3800			64	25	QM-11

Matrix Spike (3H09017-MS1) Prepared: 08/09/2013 11:50 Analyzed: 08/09/2013 12:25

Source: C309705-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	400		100	ug/L	401	10 U	101	80-120			

Matrix Spike Dup (3H09017-MSD1) Prepared: 08/09/2013 11:50 Analyzed: 08/09/2013 12:25

Source: C309705-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfide	410		100	ug/L	401	10 U	101	80-120	0.6	25	

Batch 3H09027 - NO PREP

Blank (3H09027-BLK1) Prepared: 08/09/2013 14:59 Analyzed: 08/09/2013 16:06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	17	U	100	ug/L							

LCS (3H09027-BS1) Prepared: 08/09/2013 14:59 Analyzed: 08/09/2013 16:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.99		0.10	mg/L	1.00		99	90-110			

Matrix Spike (3H09027-MS1) Prepared: 08/09/2013 14:59 Analyzed: 08/09/2013 16:08

Source: C310077-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1000		100	ug/L	1000	17 U	100	90-110			

Matrix Spike Dup (3H09027-MSD1) Prepared: 08/09/2013 14:59 Analyzed: 08/09/2013 16:10

Source: C310077-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1000		100	ug/L	1000	17 U	101	90-110	1	10	

Batch 3H09039 - NO PREP

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Blank (3H09039-BLK1) Prepared & Analyzed: 08/09/2013 19:06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Turbidity	0.50	U	1.0	NTU							

LCS (3H09039-BS1) Prepared & Analyzed: 08/09/2013 19:06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Turbidity	18		1.0	NTU	20.0		91	90-110			

Duplicate (3H09039-DUP1) Prepared & Analyzed: 08/09/2013 19:06

Source: C308976-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Turbidity	0.50	U	1.0	NTU		0.50 U				25	

Batch 3H12011 - Same

Blank (3H12011-BLK1) Prepared: 08/12/2013 10:59 Analyzed: 08/12/2013 13:54

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	10000	U	10000	ug/L							

LCS (3H12011-BS1) Prepared: 08/12/2013 10:59 Analyzed: 08/12/2013 13:54

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	490000		10000	ug/L	500000		98	90-110			

Matrix Spike (3H12011-MS1) Prepared: 08/12/2013 10:59 Analyzed: 08/12/2013 13:54

Source: C309619-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	510000		10000	ug/L	500000	13000	99	90-110			

Matrix Spike Dup (3H12011-MSD1) Prepared: 08/12/2013 10:59 Analyzed: 08/12/2013 13:54

Source: C309619-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	490000		10000	ug/L	500000	13000	96	90-110	3	10	

Batch 3H13010 - NO PREP

Blank (3H13010-BLK1) Prepared & Analyzed: 08/14/2013 02:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	**1500**	**J**	5000	ug/L							

LCS (3H13010-BS1) Prepared & Analyzed: 08/14/2013 03:18

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

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3H13010 - NO PREP

LCS (3H13010-BS1) Continued Prepared & Analyzed: 08/14/2013 03:18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	47000	B	5000	ug/L	50000		93	90-110			

Matrix Spike (3H13010-MS1) Prepared & Analyzed: 08/14/2013 11:38

Source: C310077-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	50000	B	5000	ug/L	20000	30000	102	90-110			

Matrix Spike Dup (3H13010-MSD1) Prepared & Analyzed: 08/14/2013 11:56

Source: C310077-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	51000	B	5000	ug/L	20000	30000	104	90-110	0.6	10	

Batch 3H14001 - NO PREP

Blank (3H14001-BLK1) Prepared: 08/14/2013 07:09 Analyzed: 08/14/2013 10:12

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	41	U	100	ug/L							

LCS (3H14001-BS1) Prepared: 08/14/2013 07:09 Analyzed: 08/14/2013 10:14

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.3		0.10	mg/L	1.25		103	90-110			

Matrix Spike (3H14001-MS1) Prepared: 08/14/2013 07:09 Analyzed: 08/14/2013 10:19

Source: C309010-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	900		100	ug/L	513	500	78	90-110			QM-05

Matrix Spike Dup (3H14001-MSD1) Prepared: 08/14/2013 07:09 Analyzed: 08/14/2013 10:21

Source: C309010-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	960		100	ug/L	513	500	89	90-110	6	10	QM-05

Batch 3H14027 - NO PREP

Blank (3H14027-BLK1) Prepared: 08/14/2013 12:01 Analyzed: 08/14/2013 14:21

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	14	U	15	mg/L							

LCS (3H14027-BS1) Prepared: 08/14/2013 12:01 Analyzed: 08/14/2013 14:22

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3H14027 - NO PREP

LCS (3H14027-BS1) Continued Prepared: 08/14/2013 12:01 Analyzed: 08/14/2013 14:22

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	100		15	mg/L	100		100	80-120			

Matrix Spike (3H14027-MS1) Prepared: 08/14/2013 12:01 Analyzed: 08/14/2013 14:23

Source: C309384-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	760		75	mg/L	200	530	114	80-120			

Matrix Spike Dup (3H14027-MSD1) Prepared: 08/14/2013 12:01 Analyzed: 08/14/2013 14:24

Source: C309384-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	750		75	mg/L	200	530	109	80-120	1	25	

Batch 3H14028 - NO PREP

Blank (3H14028-BLK1) Prepared: 08/14/2013 12:04 Analyzed: 08/14/2013 14:01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	1900	U	5000	ug/L							

LCS (3H14028-BS1) Prepared: 08/14/2013 12:04 Analyzed: 08/14/2013 14:01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	100		5.0	mg/L	100		102	80-120			

Duplicate (3H14028-DUP1) Prepared: 08/14/2013 12:04 Analyzed: 08/14/2013 14:04

Source: C309837-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	13000		5000	ug/L		13000			0.8	10	

Matrix Spike (3H14028-MS1) Prepared: 08/14/2013 12:04 Analyzed: 08/14/2013 14:02

Source: C309837-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	51000		5000	ug/L	37500	13000	101	80-120			

Matrix Spike Dup (3H14028-MSD1) Prepared: 08/14/2013 12:04 Analyzed: 08/14/2013 14:03

Source: C309837-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	52000		5000	ug/L	37500	13000	102	80-120	0.7	25	

QUALITY CONTROL

Dissolved Gases by GC - Quality Control

Batch 3H15014 - Same

Blank (3H15014-BLK1) Prepared: 08/15/2013 14:01 Analyzed: 08/15/2013 15:43

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon dioxide	0.690	U	2.50	mg/L							
Ethane	0.00130	U	0.00200	mg/L							
Ethene	0.00150	U	0.00300	mg/L							
Methane	0.000400	U	0.00100	mg/L							

LCS (3H15014-BS1) Prepared: 08/15/2013 14:01 Analyzed: 08/15/2013 15:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon dioxide	47100		2.50	mg/L	50400		93	71-120			
Ethane	511		0.00200	mg/L	500		102	75-123			
Ethene	501		0.00300	mg/L	500		100	72-131			
Methane	494		0.00100	mg/L	500		99	74-120			

LCS Dup (3H15014-BSD1) Prepared: 08/15/2013 14:01 Analyzed: 08/15/2013 16:15

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon dioxide	47100		2.50	mg/L	50400		93	71-120	0.03	10	
Ethane	514		0.00200	mg/L	500		103	75-123	0.7	14	
Ethene	507		0.00300	mg/L	500		101	72-131	1	12	
Methane	492		0.00100	mg/L	500		98	74-120	0.6	18	

Duplicate (3H15014-DUP1) Prepared: 08/15/2013 14:01 Analyzed: 08/15/2013 17:20

Source: B303739-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon dioxide	331		2.50	mg/L		371			12	30	
Ethane	0.00130	U	0.00200	mg/L		0.00130 U				30	
Ethene	0.00150	U	0.00300	mg/L		0.00150 U				30	
Methane	0.000400	U	0.00100	mg/L		0.000400 U				30	

Volatile Fatty Acids by HPLC - Quality Control

Batch 3H19012 - NO PREP

Blank (3H19012-BLK1) Prepared: 08/21/2013 10:45 Analyzed: 08/21/2013 12:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetic Acid	0.031	U	0.070	mg/L							
Butyric Acid	0.031	U	0.070	mg/L							
Hexanoic Acid	0.078	U	0.10	mg/L							
iso-Hexanoic Acid	0.080	U	0.10	mg/L							
iso-Pentanoic Acid	0.043	U	0.070	mg/L							
Lactic Acid/HIBA (2-Hydroxyisobutyric Acid)	0.095	U	0.14	mg/L							
Pentanoic Acid	0.052	U	0.070	mg/L							
Propionic Acid	0.063	U	0.070	mg/L							
Pyruvic Acid	0.010	U	0.070	mg/L							
Surrogate: Trimethylacetic acid	*22*			*mg/L*	*20.0*		*112*	*65-143*			

QUALITY CONTROL

Volatile Fatty Acids by HPLC - Quality Control

Batch 3H19012 - NO PREP

LCS (3H19012-BS1) Prepared: 08/21/2013 10:45 Analyzed: 08/21/2013 12:42

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetic Acid	21		0.070	mg/L	20.0		106	80-120			
Butyric Acid	20		0.070	mg/L	20.0		99	80-120			
Hexanoic Acid	27		0.10	mg/L	20.0		136	80-142			
iso-Hexanoic Acid	26		0.10	mg/L	20.0		132	80-154			
iso-Pentanoic Acid	23		0.070	mg/L	20.0		114	80-120			
Lactic Acid/HIBA (2-Hydroxyisobutyric Acid)	42		0.14	mg/L	40.0		104	80-120			
Pentanoic Acid	22		0.070	mg/L	20.0		112	80-120			
Propionic Acid	19		0.070	mg/L	20.0		94	80-120			
Pyruvic Acid	18		0.070	mg/L	20.0		92	76-120			
Surrogate: Trimethylacetic acid	*26*			*mg/L*	*20.0*		*130*	*65-143*			

Matrix Spike (3H19012-MS1) Prepared: 08/21/2013 10:45 Analyzed: 08/21/2013 14:12

Source: C309837-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetic Acid	21		0.070	mg/L	20.0	0.031 U	105	80-120			
Butyric Acid	20		0.070	mg/L	20.0	0.031 U	99	80-120			
Hexanoic Acid	27		0.10	mg/L	20.0	0.078 U	134	80-142			
iso-Hexanoic Acid	26		0.10	mg/L	20.0	0.080 U	129	80-154			
iso-Pentanoic Acid	23		0.070	mg/L	20.0	0.043 U	113	80-120			
Lactic Acid/HIBA (2-Hydroxyisobutyric Acid)	41		0.14	mg/L	40.0	0.095 U	102	80-120			
Pentanoic Acid	22		0.070	mg/L	20.0	0.052 U	112	80-120			
Propionic Acid	19		0.070	mg/L	20.0	0.063 U	94	80-120			
Pyruvic Acid	19		0.070	mg/L	20.0	0.010 U	93	76-120			
Surrogate: Trimethylacetic acid	*24*			*mg/L*	*20.0*		*121*	*65-143*			

Matrix Spike Dup (3H19012-MSD1) Prepared: 08/21/2013 10:45 Analyzed: 08/21/2013 15:05

Source: C309837-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetic Acid	22		0.070	mg/L	20.0	0.031 U	108	80-120	2	10	
Butyric Acid	20		0.070	mg/L	20.0	0.031 U	101	80-120	2	10	
Hexanoic Acid	27		0.10	mg/L	20.0	0.078 U	136	80-142	2	27	
iso-Hexanoic Acid	27		0.10	mg/L	20.0	0.080 U	135	80-154	4	10	
iso-Pentanoic Acid	23		0.070	mg/L	20.0	0.043 U	116	80-120	3	10	
Lactic Acid/HIBA (2-Hydroxyisobutyric Acid)	42		0.14	mg/L	40.0	0.095 U	104	80-120	2	14	
Pentanoic Acid	23		0.070	mg/L	20.0	0.052 U	115	80-120	3	18	
Propionic Acid	19		0.070	mg/L	20.0	0.063 U	97	80-120	3	10	
Pyruvic Acid	19		0.070	mg/L	20.0	0.010 U	95	76-120	2	10	
Surrogate: Trimethylacetic acid	*25*			*mg/L*	*20.0*		*124*	*65-143*			

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3H14004 - NO PREP

Blank (3H14004-BLK1) Prepared: 08/14/2013 13:23 Analyzed: 08/14/2013 21:18

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3H14004 - NO PREP

Blank (3H14004-BLK1) Continued Prepared: 08/14/2013 13:23 Analyzed: 08/14/2013 21:18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Organic Carbon	0.32	U	1.0	mg/L							

LCS (3H14004-BS1) Prepared: 08/14/2013 13:23 Analyzed: 08/14/2013 21:18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Organic Carbon	45		1.0	mg/L	40.0		112	85-115			

Matrix Spike (3H14004-MS1) Prepared: 08/14/2013 13:23 Analyzed: 08/14/2013 21:18

Source: A304480-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Organic Carbon	39		1.0	mg/L	40.0	0.32 U	97	85-115			

Matrix Spike Dup (3H14004-MSD1) Prepared: 08/14/2013 13:23 Analyzed: 08/14/2013 21:18

Source: A304480-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Organic Carbon	39		1.0	mg/L	40.0	0.32 U	97	85-115	0.3	21	

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.
J-01	Result is estimated due to positive results in the associated method blank.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, the impact on data quality is minimal.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page ____ of ____

Client Name: Shield Engineering, Inc. (SH007)	Project Number: 1110192
Address: 4301 Taggart Creek Road	Project Name/Desc: Albemarle LF MW-29
City/ST/Zip: Charlotte, NC 28208	PO # / Billing Info:
Tel: (704) 394-6913 Fax: (704) 394-6968	Reporting Contact: Danny Hefner
Sampler(s) Name, Affiliation (Print): DANNY HEFNER / SHIELD ENGR	Billing Contact: Accounts Payable
Sampler(s) Signature:	Site Location / Time Zone:

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

___ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C309837

Requested Analyses / Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1,8260B Extended	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Ni,Pb,Sb,Se,Sn,Tl,V,Zn	Alkalinity 310.2, Chloride SM4500-Cl, E,Nitrite as N 353.2, Turbidity SM2130B	COD SM5220D	Fatty Acids	Hydrogen,RSK 175 + CO2	Nitrate Calc 353.2	NOX 353.2	Sulfate 300	Sulfide SM4500-S D	Sample Comments
	8401-MW29	8-8-13	11:20	GRAB	GW	16	X	X	X	X	X	X	X	X	X	X	
	8401-Trip Blank				GW	2	X										

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
JK	8-6		8/8/13 17:00		8/8/13 1700
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
					8-9-13 10:50
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: C50 2.2°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

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

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Page ____ of ____

Client Name: Shield Engineering, Inc. (SH007)	Project Number: 1110192
Address: 4301 Taggart Creek Road	Project Name/Desc: Albemarle LF MW-29
City/ST/Zip: Charlotte, NC 28208	PO # / Billing Info: 1
Tel: (704) 394-6913 Fax: (704) 394-6968	Reporting Contact: Danny Hefner
Sampler(s) Name, Affiliation (Print): DANNY HEFNER / SHIELD ENGR	Billing Contact: Accounts Payable
Sampler(s) Signature: Dan Hefner	Site Location / Time Zone: NC

Requested Analyses: TOC SM5310B

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

___ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C309837

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	TOC SM5310B	Sample Comments
	8401-MW29	8-8-13	11:20	GRAB	GW	16	X	
	8401-Trip Blank				GW	2		

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
JK	8-6	Dan Hefner	8/8/13 17:00	[illegible]	8/8/13 1700
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
				[illegible]	8-9-13 10:50
		Relinquished By	Date/Time	Received By	Date/Time

Cooler #'s & Temps on Receipt: C-50 2.2°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

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

August 22, 2013

Chuck Smith
Environmental Conservation Labs, Inc.
102A Woodwinds Industrial Ct.
Cary, NC 27511

RE: **C309837**

Microseeps Workorder: 9808

Dear Chuck Smith:

Enclosed are the analytical results for sample(s) received by the laboratory on Saturday, August 10, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Robbin Robl C.t. 8/22/13

Robbin Robl 08/22/2013
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 6

CERTIFICATE OF ANALYSIS

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Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	NELAP: State of Florida, Department of Health, Bureau of Laboratories
Accreditation ID:	E87832
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: State of Louisiana, Department of Environmental Quality
Accreditation ID:	04104
Scope:	Solid and Chemical Materials; Non-Potable Water
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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SAMPLE SUMMARY

Workorder: 9808 C309837

Lab ID	Sample ID	Matrix	Date Collected	Date Received
98080001	8401-MW29	Bubble Strip	8/8/2013 11:20	8/10/2013 11:00

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ANALYTICAL RESULTS

Workorder: 9808 C309837

Lab ID: **98080001** Date Received: 8/10/2013 11:00 Matrix: Bubble Strip

Sample ID: **8401-MW29** Date Collected: 8/8/2013 11:20

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Hydrogen	**120**	nM	30	2.4	50			8/21/2013 15:00	GT	

CERTIFICATE OF ANALYSIS

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without the written consent of Microseeps, Inc.

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS QUALIFIERS

Workorder: 9808 C309837

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

CERTIFICATE OF ANALYSIS

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9808

SUBCONTRACT ORDER

ENCO Cary

C309837

SENDING LABORATORY:

ENCO Cary
102-A Woodwinds Industrial Court
Cary, NC 27511
Phone: 919.467.3090
Fax: 919.467.3515
Project Manager: Stephanie Franz

RECEIVING LABORATORY:

Microseeps, Inc
220 William Pitt Way
Pittsburg, PA 15238
Phone :(412) 826-5245
Fax: (999) 999-9999
Project State of Origin: North Carolina

Sub Lab ID	Originating Lab ID	Client Matrix	Date Sampled	Sample Comments
	8401-MW29	Ground Water	08-Aug-13 11:20	

Analysis	Due	Expires	Analysis Comments
Hydrogen	16-Aug-13 15:00	15-Aug-13 11:20	
Containers Supplied:			
Vial (P)			

Released By	Date	Received By	Date
[signature]	8-9-13	[signature]	8-10-13 1100

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

Wednesday, February 5, 2014

Shield Engineering, Inc. (SH007)

Attn: Danny Hefner

4301 Taggart Creek Road

Charlotte, NC 28208

RE: Laboratory Results for
Project Number: 1110192, Project Name/Desc: Albemarle Closed LF
ENCO Workorder(s): C400457

Dear Danny Hefner,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, January 22, 2014.

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,

Stephanie Franz

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 97.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 8401-MW1 | **Lab ID: C400457-01** | **Sampled: 01/21/14 08:45** | **Received: 01/22/14 10:40**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 11:11
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 11:28
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 08:48
SM 2130B-2001	01/23/14 08:45	01/22/14 18:14	1/22/2014 18:14

Client ID: 8401-MW2 | **Lab ID: C400457-02** | **Sampled: 01/21/14 09:30** | **Received: 01/22/14 10:40**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 11:25
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 11:08
SM 2130B-2001	01/23/14 09:30	01/22/14 18:14	1/22/2014 18:14

Client ID: 8401-MW2 | **Lab ID: C400457-02RE1** | **Sampled: 01/21/14 09:30** | **Received: 01/22/14 10:40**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	02/04/14	01/24/14 15:28	1/28/2014 05:51
EPA 8260B	02/04/14	01/27/14 11:55	1/28/2014 05:51

Client ID: 8401-MW3 | **Lab ID: C400457-03** | **Sampled: 01/21/14 11:31** | **Received: 01/22/14 10:40**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 11:28
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 11:32
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 09:47
SM 2130B-2001	01/23/14 11:31	01/22/14 18:14	1/22/2014 18:14

Client ID: 8401-MW4R | **Lab ID: C400457-04** | **Sampled: 01/21/14 10:25** | **Received: 01/22/14 10:40**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 11:31
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 11:36
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 10:17

Client ID: 8401-MW5R | **Lab ID: C400457-05** | **Sampled: 01/21/14 10:12** | **Received: 01/22/14 10:40**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:10
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 11:48
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 10:46

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Client ID: 8401-MW6	Lab ID: C400457-06	Sampled: 01/21/14 09:40	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:13
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 11:52
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 11:16
SM 2130B-2001	01/23/14 09:40	01/22/14 18:14	1/22/2014 18:14

Client ID: 8401-MW7	Lab ID: C400457-07	Sampled: 01/21/14 09:18	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:21
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 11:56
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 11:45
SM 2130B-2001	01/23/14 09:18	01/22/14 18:14	1/22/2014 18:14

Client ID: 8401-MW8D	Lab ID: C400457-08	Sampled: 01/21/14 09:05	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:18
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 12:00
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 12:15

Client ID: 8401-MW9	Lab ID: C400457-09	Sampled: 01/21/14 10:54	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:24
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 12:04
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 12:45
SM 2130B-2001	01/23/14 10:54	01/22/14 18:14	1/22/2014 18:14

Client ID: 8401-MW10	Lab ID: C400457-10	Sampled: 01/21/14 11:08	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:26
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 12:08
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 13:14
SM 2130B-2001	01/23/14 11:08	01/22/14 18:14	1/22/2014 18:14

Client ID: 8401-MW11	Lab ID: C400457-11	Sampled: 01/21/14 11:43	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:29
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 12:12
EPA 8260B	02/04/14	01/24/14 15:28	1/25/2014 13:44
SM 2130B-2001	01/23/14 11:43	01/22/14 18:14	1/22/2014 18:14

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Client ID: 8401-MW12	Lab ID: C400457-12	Sampled: 01/21/14 12:08	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/20/14		01/22/14	11:39	1/23/2014 12:32
EPA 6020A	07/20/14		01/22/14	11:36	1/24/2014 12:16
EPA 7470A	02/18/14		01/23/14	09:38	1/24/2014 11:39
EPA 8260B	02/04/14		01/24/14	15:28	1/25/2014 14:14
SM 2130B-2001	01/23/14	12:08	01/22/14	18:14	1/22/2014 18:14

Client ID: 8401-MW13	Lab ID: C400457-13	Sampled: 01/21/14 12:35	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/20/14		01/22/14	11:39	1/23/2014 12:34
EPA 6020A	07/20/14		01/22/14	11:36	1/24/2014 12:20
EPA 7470A	02/18/14		01/23/14	09:38	1/24/2014 11:45
EPA 8260B	02/04/14		01/24/14	15:31	1/27/2014 21:43
SM 2130B-2001	01/23/14	12:35	01/22/14	18:14	1/22/2014 18:14

Client ID: 8401-MW13	Lab ID: C400457-13RE1	Sampled: 01/21/14 12:35	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/20/14		01/22/14	11:39	1/23/2014 14:12

Client ID: 8401-MW23	Lab ID: C400457-14	Sampled: 01/21/14 12:25	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/20/14		01/22/14	11:39	1/23/2014 12:37
EPA 6020A	07/20/14		01/22/14	11:36	1/24/2014 12:24
EPA 7470A	02/18/14		01/23/14	09:38	1/24/2014 11:47
EPA 8260B	02/04/14		01/24/14	15:31	1/27/2014 22:13
EPA 8270D	01/28/14	03/04/14	01/23/14	12:00	1/28/2014 17:10
SM 2130B-2001	01/23/14	12:25	01/22/14	18:14	1/22/2014 18:14

Client ID: 8401-MW29	Lab ID: C400457-15	Sampled: 01/21/14 09:55	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/20/14		01/22/14	11:39	1/23/2014 12:54
EPA 6020A	07/20/14		01/22/14	11:36	1/24/2014 12:40
EPA 8260B	02/04/14		01/24/14	15:31	1/27/2014 22:42

Client ID: 8401-Trip Blank	Lab ID: C400457-16	Sampled: 01/21/14 08:45	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 8260B	02/04/14		01/24/14	15:31	1/27/2014 23:12

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Client ID: 8401-Bailer Blank	Lab ID: C400457-17	Sampled: 01/21/14 11:23	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:57
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 12:44
EPA 7470A	02/18/14	01/23/14 09:38	1/24/2014 11:49
EPA 8260B	02/04/14	01/24/14 15:31	1/27/2014 23:42

Client ID: 8401-Field Blank	Lab ID: C400457-18	Sampled: 01/21/14 12:18	Received: 01/22/14 10:40

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/20/14	01/22/14 11:39	1/23/2014 12:59
EPA 6020A	07/20/14	01/22/14 11:36	1/24/2014 12:48
EPA 8260B	02/04/14	01/24/14 15:31	1/28/2014 00:11

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 8401-MW1 **Lab ID: C400457-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.299	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Arsenic - Total	7.12	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	38.0	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	1.80	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	5.59	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	9.65	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	4.50	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Turbidity	22		1	0.50	1.0	NE	NTU	SM 2130B-2001	
Vanadium - Total	2.12	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	50.0		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW2 **Lab ID: C400457-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	1.25	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Arsenic - Total	6.30	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	27.5	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Cobalt - Total	37.2		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	10.4		1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	25.6	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Turbidity	9.8		1	0.50	1.0	NE	NTU	SM 2130B-2001	
Zinc - Total	21.3		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW3 **Lab ID: C400457-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	2.8	J	1	0.13	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	2.2		1	0.19	1.0	1	ug/L	EPA 8260B	
Arsenic - Total	16.3		1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	16.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chlorobenzene	8.8		1	0.17	1.0	3	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	0.86	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	32.1		1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	3.62	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Tetrachloroethene	0.76	J	1	0.17	1.0	1	ug/L	EPA 8260B	
Trichloroethene	0.52	J	1	0.15	1.0	1	ug/L	EPA 8260B	

Client ID: 8401-MW4R **Lab ID: C400457-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	6.36	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	3.89	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Zinc - Total	4.61	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW5R **Lab ID: C400457-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	6.95	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	9.88	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Cobalt - Total	1.87	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Zinc - Total	5.19	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW6 **Lab ID: C400457-06**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	4.59	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Cobalt - Total	1.55	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	3.27	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	4.55	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Turbidity	0.63	J	1	0.50	1.0	NE	NTU	SM 2130B-2001	
Zinc - Total	5.45	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW7 **Lab ID: C400457-07**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	1.6	J	1	0.13	1.0	5	ug/L	EPA 8260B	
1,2-Dichlorobenzene	0.41	J	1	0.19	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	3.0		1	0.19	1.0	1	ug/L	EPA 8260B	
Arsenic - Total	9.49	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	27.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	2.6		1	0.15	1.0	1	ug/L	EPA 8260B	
Cadmium - Total	1.09		1	0.360	1.00	1	ug/L	EPA 6010C	
Chlorobenzene	8.3		1	0.17	1.0	3	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	1.3	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	5.78	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	9.14	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Tetrachloroethene	0.44	J	1	0.17	1.0	1	ug/L	EPA 8260B	
Turbidity	3.3		1	0.50	1.0	NE	NTU	SM 2130B-2001	
Zinc - Total	4.87	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW8D **Lab ID: C400457-08**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	8.92	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	8.93	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Cobalt - Total	6.45	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.68	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Tetrachloroethene	1.4		1	0.17	1.0	1	ug/L	EPA 8260B	
Vanadium - Total	1.40	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	12.5		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW9 **Lab ID: C400457-09**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	11.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Turbidity	1.2		1	0.50	1.0	NE	NTU	SM 2130B-2001	

Client ID: 8401-MW10 **Lab ID: C400457-10**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	75.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Cobalt - Total	5.45	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	1.61	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	26.6	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Turbidity	1.3		1	0.50	1.0	NE	NTU	SM 2130B-2001	
Zinc - Total	5.67	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW11 **Lab ID: C400457-11**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	6.59	J	1	5.40	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW11 **Lab ID: C400457-11**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	79.0	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	44.3		1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	5.00	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	12.5		1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	29.5	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Turbidity	280	D	10	5.0	10	NE	NTU	SM 2130B-2001	
Vanadium - Total	25.4		1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	22.6		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW12 **Lab ID: C400457-12**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	27.3		1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	54.5	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	6.08	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	142		1	1.10	10.0	10	ug/L	EPA 6010C	
Lead - Total	2.14	J	1	2.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	86.9		1	1.80	10.0	50	ug/L	EPA 6010C	
Silver - Total	3.45	J	1	1.90	10.0	10	ug/L	EPA 6010C	
Turbidity	72	D	10	5.0	10	NE	NTU	SM 2130B-2001	

Client ID: 8401-MW13 **Lab ID: C400457-13**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	0.71	J	1	0.13	1.0	5	ug/L	EPA 8260B	
Arsenic - Total	24.6		1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	195		1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	2.4		1	0.15	1.0	1	ug/L	EPA 8260B	
Chloroethane	1.2	J	1	0.23	1.0	10	ug/L	EPA 8260B	
Chromium - Total	6.68	J	1	1.40	10.0	10	ug/L	EPA 6010C	
cis-1,2-Dichloroethene	5.1		1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	113		1	1.10	10.0	10	ug/L	EPA 6010C	
Lead - Total	6.04	J	1	2.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	5.99	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Silver - Total	4.74	J	1	1.90	10.0	10	ug/L	EPA 6010C	
Turbidity	210	D	10	5.0	10	NE	NTU	SM 2130B-2001	
Vinyl chloride	1.1		1	0.32	1.0	1	ug/L	EPA 8260B	
Zinc - Total	5.55	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW23 **Lab ID: C400457-14**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	0.95	J	1	0.13	1.0	5	ug/L	EPA 8260B	
Arsenic - Total	7.45	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	49.8	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	0.89	J	1	0.15	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	7.0		1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	26.0		1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	11.2	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Turbidity	50	D	2	1.0	2.0	NE	NTU	SM 2130B-2001	
Vinyl chloride	1.1		1	0.32	1.0	1	ug/L	EPA 8260B	
Zinc - Total	5.29	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-MW29 **Lab ID: C400457-15**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	1.1	J	1	0.13	1.0	5	ug/L	EPA 8260B	
Barium - Total	43.1	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Cobalt - Total	2.80	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Methylene chloride	1.0		1	0.23	1.0	1	ug/L	EPA 8260B	
Trichlorofluoromethane	0.86	J	1	0.24	1.0	1	ug/L	EPA 8260B	
Vanadium - Total	1.95	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	4.04	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 8401-Bailer Blank **Lab ID: C400457-17**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	1.05	J	1	1.00	10.0	100	ug/L	EPA 6010C	

Client ID: 8401-Field Blank **Lab ID: C400457-18**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	1.06	J	1	1.00	10.0	100	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 8401-MW1 **Lab Sample ID:** C400457-01 **Received:** 01/22/14 10:40

Matrix: Ground Water **Sampled:** 01/21/14 08:45 **Work Order:** C400457

Project: Albemarle Closed LF **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 08:48	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 08:48	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 08:48	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 08:48	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 08:48	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 08:48	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 08:48	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 08:48	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 08:48	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 08:48	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 08:48	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 08:48	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 08:48	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 08:48	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 08:48	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 08:48	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 08:48	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 08:48	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 08:48	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 08:48	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 08:48	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 08:48	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 08:48	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 08:48	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 08:48	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 08:48	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 08:48	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 08:48	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 08:48	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 08:48	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 08:48	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 08:48	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 08:48	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 08:48	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 08:48	REF	

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Description: 8401-MW1
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-01
Sampled: 01/21/14 08:45
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 08:48	REF	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 08:48	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 08:48	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 08:48*	*REF*	
Dibromofluoromethane	*36*	*1*	*50.0*	*72 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 08:48*	*REF*	
Toluene-d8	*39*	*1*	*50.0*	*79 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 08:48*	*REF*	

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Description: 8401-MW1 | **Lab Sample ID:** C400457-01 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 08:45 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**0.299**	J	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 11:28	VLO	
Arsenic [7440-38-2] ^	**7.12**	J	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 11:11	JDH	
Barium [7440-39-3] ^	**38.0**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 11:11	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 11:11	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 11:11	JDH	
Chromium [7440-47-3] ^	**1.80**	J	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 11:11	JDH	
Cobalt [7440-48-4] ^	**5.59**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 11:11	JDH	
Copper [7440-50-8] ^	**9.65**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 11:11	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 11:11	JDH	
Nickel [7440-02-0] ^	**4.50**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 11:11	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 11:11	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 11:11	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 11:28	VLO	
Vanadium [7440-62-2] ^	**2.12**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 11:11	JDH	
Zinc [7440-66-6] ^	**50.0**		ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 11:11	JDH	

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Description:	8401-MW1	**Lab Sample ID:**	C400457-01	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 08:45	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**22**		NTU	1	0.50	1.0	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW2 | **Lab Sample ID:** C400457-02 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:30 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/28/14 05:51	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/28/14 05:51	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/28/14 05:51	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/28/14 05:51	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/28/14 05:51	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/28/14 05:51	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/28/14 05:51	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/28/14 05:51	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/28/14 05:51	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/28/14 05:51	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/28/14 05:51	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/28/14 05:51	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/28/14 05:51	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/28/14 05:51	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/28/14 05:51	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/28/14 05:51	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/28/14 05:51	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/28/14 05:51	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/28/14 05:51	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/28/14 05:51	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/28/14 05:51	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/28/14 05:51	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/28/14 05:51	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/28/14 05:51	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/28/14 05:51	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/28/14 05:51	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/28/14 05:51	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/28/14 05:51	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/28/14 05:51	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/28/14 05:51	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/28/14 05:51	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/28/14 05:51	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/28/14 05:51	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/28/14 05:51	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/28/14 05:51	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/28/14 05:51	REF	

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Description: 8401-MW2 | **Lab Sample ID:** C400457-02 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:30 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/28/14 05:51	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/28/14 05:51	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*77 %*	*51-122*	*4A27023*	*EPA 8260B*	*01/28/14 05:51*	*REF*	
Dibromofluoromethane	*36*	*1*	*50.0*	*72 %*	*68-117*	*4A27023*	*EPA 8260B*	*01/28/14 05:51*	*REF*	
Toluene-d8	*39*	*1*	*50.0*	*78 %*	*67-127*	*4A27023*	*EPA 8260B*	*01/28/14 05:51*	*REF*	

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Description: 8401-MW2 | **Lab Sample ID:** C400457-02 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:30 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**1.25**	J	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 11:08	VLO	
Arsenic [7440-38-2] ^	**6.30**	J	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 11:25	JDH	
Barium [7440-39-3] ^	**27.5**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 11:25	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 11:25	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 11:25	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 11:25	JDH	
Cobalt [7440-48-4] ^	**37.2**		ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 11:25	JDH	
Copper [7440-50-8] ^	**10.4**		ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 11:25	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 11:25	JDH	
Nickel [7440-02-0] ^	**25.6**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 11:25	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 11:25	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 11:25	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 11:08	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 11:25	JDH	
Zinc [7440-66-6] ^	**21.3**		ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 11:25	JDH	

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Description:	8401-MW2	**Lab Sample ID:**	C400457-02	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 09:30	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**9.8**		NTU	1	0.50	1.0	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW3 | **Lab Sample ID:** C400457-03 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 11:31 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 09:47	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 09:47	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 09:47	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 09:47	REF	
1,1-Dichloroethane [75-34-3] ^	**2.8**	J	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 09:47	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 09:47	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 09:47	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 09:47	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 09:47	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 09:47	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 09:47	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 09:47	REF	
1,4-Dichlorobenzene [106-46-7] ^	**2.2**		ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 09:47	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 09:47	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 09:47	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 09:47	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 09:47	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 09:47	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 09:47	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 09:47	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 09:47	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 09:47	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Chlorobenzene [108-90-7] ^	**8.8**		ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 09:47	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 09:47	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 09:47	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 09:47	REF	
cis-1,2-Dichloroethene [156-59-2] ^	**0.86**	J	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 09:47	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 09:47	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 09:47	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 09:47	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Tetrachloroethene [127-18-4] ^	**0.76**	J	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Tetrahydrofuran [109-99-9] ^	**4.5**		ug/L	1	0.80	1.0		EPA 8260B	01/25/14 09:47	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 09:47	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 09:47	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 09:47	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 09:47	REF	
Trichloroethene [79-01-6] ^	**0.52**	J	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 09:47	REF	

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Description: 8401-MW3 | **Lab Sample ID:** C400457-03 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 11:31 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 09:47	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 09:47	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 09:47*	*REF*	
Dibromofluoromethane	*36*	*1*	*50.0*	*72 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 09:47*	*REF*	
Toluene-d8	*40*	*1*	*50.0*	*80 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 09:47*	*REF*	

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Description: 8401-MW3 | **Lab Sample ID:** C400457-03 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 11:31 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 11:32	VLO	
Arsenic [7440-38-2] ^	**16.3**		ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 11:28	JDH	
Barium [7440-39-3] ^	**16.6**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 11:28	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 11:28	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 11:28	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 11:28	JDH	
Cobalt [7440-48-4] ^	**32.1**		ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 11:28	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 11:28	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 11:28	JDH	
Nickel [7440-02-0] ^	**3.62**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 11:28	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 11:28	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 11:28	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 11:32	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 11:28	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 11:28	JDH	

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Description:	8401-MW3	**Lab Sample ID:**	C400457-03	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 11:31	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	0.50	U	NTU	1	0.50	1.0	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW4R
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-04
Sampled: 01/21/14 10:25
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 10:17	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 10:17	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 10:17	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 10:17	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 10:17	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 10:17	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 10:17	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 10:17	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 10:17	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 10:17	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 10:17	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 10:17	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 10:17	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 10:17	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 10:17	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 10:17	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 10:17	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 10:17	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 10:17	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 10:17	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 10:17	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 10:17	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 10:17	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 10:17	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 10:17	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 10:17	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 10:17	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 10:17	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 10:17	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 10:17	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 10:17	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 10:17	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 10:17	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 10:17	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 10:17	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 10:17	REF	

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Description: 8401-MW4R
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-04
Sampled: 01/21/14 10:25
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 10:17	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 10:17	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*76 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 10:17*	*REF*	
Dibromofluoromethane	*36*	*1*	*50.0*	*73 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 10:17*	*REF*	
Toluene-d8	*39*	*1*	*50.0*	*79 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 10:17*	*REF*	

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Description: 8401-MW4R
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-04
Sampled: 01/21/14 10:25
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 11:36	VLO	
Arsenic [7440-38-2] ^	**6.36**	J	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 11:31	JDH	
Barium [7440-39-3] ^	**3.89**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 11:31	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 11:31	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 11:31	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 11:31	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 11:31	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 11:31	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 11:31	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 11:31	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 11:31	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 11:31	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 11:36	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 11:31	JDH	
Zinc [7440-66-6] ^	**4.61**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 11:31	JDH	

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

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Description: 8401-MW5R
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-05
Sampled: 01/21/14 10:12
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 10:46	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 10:46	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 10:46	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 10:46	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 10:46	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 10:46	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 10:46	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 10:46	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 10:46	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 10:46	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 10:46	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 10:46	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 10:46	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 10:46	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 10:46	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 10:46	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 10:46	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 10:46	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 10:46	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 10:46	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 10:46	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 10:46	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 10:46	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 10:46	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 10:46	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 10:46	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 10:46	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 10:46	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 10:46	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 10:46	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 10:46	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 10:46	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 10:46	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 10:46	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 10:46	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 10:46	REF	

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Description: 8401-MW5R
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-05
Sampled: 01/21/14 10:12
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 10:46	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 10:46	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 10:46*	*REF*	
Dibromofluoromethane	*36*	*1*	*50.0*	*73 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 10:46*	*REF*	
Toluene-d8	*41*	*1*	*50.0*	*82 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 10:46*	*REF*	

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Description: 8401-MW5R
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-05
Sampled: 01/21/14 10:12
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 11:48	VLO	
Arsenic [7440-38-2] ^	**6.95**	J	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:10	JDH	
Barium [7440-39-3] ^	**9.88**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:10	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:10	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:10	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:10	JDH	
Cobalt [7440-48-4] ^	**1.87**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:10	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:10	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:10	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:10	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:10	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:10	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 11:48	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:10	JDH	
Zinc [7440-66-6] ^	**5.19**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:10	JDH	

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

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Description: 8401-MW6 | **Lab Sample ID:** C400457-06 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:40 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 11:16	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 11:16	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 11:16	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 11:16	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 11:16	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 11:16	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 11:16	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 11:16	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 11:16	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 11:16	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 11:16	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 11:16	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 11:16	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 11:16	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 11:16	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 11:16	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 11:16	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 11:16	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 11:16	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 11:16	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 11:16	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 11:16	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 11:16	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 11:16	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 11:16	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 11:16	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 11:16	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 11:16	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 11:16	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 11:16	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 11:16	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 11:16	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 11:16	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 11:16	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 11:16	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 11:16	REF	

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Description: 8401-MW6 | **Lab Sample ID:** C400457-06 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:40 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 11:16	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 11:16	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*77 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 11:16*	*REF*	
Dibromofluoromethane	*35*	*1*	*50.0*	*71 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 11:16*	*REF*	
Toluene-d8	*38*	*1*	*50.0*	*76 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 11:16*	*REF*	

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Description: 8401-MW6 | **Lab Sample ID:** C400457-06 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:40 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 11:52	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:13	JDH	
Barium [7440-39-3] ^	**4.59**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:13	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:13	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:13	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:13	JDH	
Cobalt [7440-48-4] ^	**1.55**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:13	JDH	
Copper [7440-50-8] ^	**3.27**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:13	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:13	JDH	
Nickel [7440-02-0] ^	**4.55**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:13	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:13	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:13	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 11:52	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:13	JDH	
Zinc [7440-66-6] ^	**5.45**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:13	JDH	

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Description:	8401-MW6	**Lab Sample ID:**	C400457-06	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 09:40	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**0.63**	J	NTU	1	0.50	1.0	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW7 | **Lab Sample ID:** C400457-07 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:18 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 11:45	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 11:45	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 11:45	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 11:45	REF	
1,1-Dichloroethane [75-34-3] ^	**1.6**	J	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 11:45	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 11:45	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 11:45	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 11:45	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 11:45	REF	
1,2-Dichlorobenzene [95-50-1] ^	**0.41**	J	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 11:45	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 11:45	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 11:45	REF	
1,4-Dichlorobenzene [106-46-7] ^	**3.0**		ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 11:45	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 11:45	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 11:45	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 11:45	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 11:45	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 11:45	REF	
Benzene [71-43-2] ^	**2.6**		ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 11:45	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 11:45	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 11:45	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 11:45	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Chlorobenzene [108-90-7] ^	**8.3**		ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 11:45	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 11:45	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 11:45	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 11:45	REF	
cis-1,2-Dichloroethene [156-59-2] ^	**1.3**	J	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 11:45	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 11:45	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 11:45	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 11:45	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Tetrachloroethene [127-18-4] ^	**0.44**	J	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 11:45	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 11:45	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 11:45	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 11:45	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 11:45	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 11:45	REF	

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Description: 8401-MW7
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-07
Sampled: 01/21/14 09:18
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 11:45	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 11:45	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*75 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 11:45*	*REF*	
Dibromofluoromethane	*35*	*1*	*50.0*	*70 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 11:45*	*REF*	
Toluene-d8	*39*	*1*	*50.0*	*78 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 11:45*	*REF*	

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Description: 8401-MW7 | **Lab Sample ID:** C400457-07 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:18 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 11:56	VLO	
Arsenic [7440-38-2] ^	**9.49**	J	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:21	JDH	
Barium [7440-39-3] ^	**27.9**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:21	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:21	JDH	
Cadmium [7440-43-9] ^	**1.09**		ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:21	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:21	JDH	
Cobalt [7440-48-4] ^	**5.78**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:21	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:21	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:21	JDH	
Nickel [7440-02-0] ^	**9.14**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:21	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:21	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:21	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 11:56	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:21	JDH	
Zinc [7440-66-6] ^	**4.87**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:21	JDH	

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Description:	8401-MW7	**Lab Sample ID:**	C400457-07	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 09:18	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**3.3**		NTU	1	0.50	1.0	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW8D
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-08
Sampled: 01/21/14 09:05
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 12:15	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 12:15	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 12:15	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 12:15	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 12:15	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 12:15	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 12:15	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 12:15	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 12:15	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 12:15	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 12:15	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 12:15	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 12:15	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 12:15	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 12:15	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 12:15	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 12:15	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 12:15	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 12:15	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 12:15	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 12:15	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 12:15	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 12:15	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 12:15	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 12:15	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 12:15	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 12:15	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 12:15	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 12:15	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 12:15	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Tetrachloroethene [127-18-4] ^	**1.4**		ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 12:15	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 12:15	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 12:15	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 12:15	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 12:15	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 12:15	REF	

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Description: 8401-MW8D
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-08
Sampled: 01/21/14 09:05
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 12:15	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 12:15	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 12:15*	*REF*	
Dibromofluoromethane	*37*	*1*	*50.0*	*73 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 12:15*	*REF*	
Toluene-d8	*40*	*1*	*50.0*	*80 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 12:15*	*REF*	

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Description: 8401-MW8D
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-08
Sampled: 01/21/14 09:05
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:00	VLO	
Arsenic [7440-38-2] ^	**8.92**	J	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:18	JDH	
Barium [7440-39-3] ^	**8.93**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:18	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:18	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:18	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:18	JDH	
Cobalt [7440-48-4] ^	**6.45**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:18	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:18	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:18	JDH	
Nickel [7440-02-0] ^	**2.68**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:18	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:18	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:18	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:00	VLO	
Vanadium [7440-62-2] ^	**1.40**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:18	JDH	
Zinc [7440-66-6] ^	**12.5**		ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:18	JDH	

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

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Description: 8401-MW9 | **Lab Sample ID:** C400457-09 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 10:54 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 12:45	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 12:45	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 12:45	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 12:45	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 12:45	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 12:45	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 12:45	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 12:45	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 12:45	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 12:45	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 12:45	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 12:45	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 12:45	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 12:45	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 12:45	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 12:45	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 12:45	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 12:45	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 12:45	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 12:45	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 12:45	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 12:45	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 12:45	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 12:45	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 12:45	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 12:45	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 12:45	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 12:45	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 12:45	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 12:45	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 12:45	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 12:45	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 12:45	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 12:45	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 12:45	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 12:45	REF	

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Description: 8401-MW9 | **Lab Sample ID:** C400457-09 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 10:54 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 12:45	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 12:45	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*79 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 12:45*	*REF*	
Dibromofluoromethane	*35*	*1*	*50.0*	*71 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 12:45*	*REF*	
Toluene-d8	*39*	*1*	*50.0*	*78 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 12:45*	*REF*	

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Description: 8401-MW9 | **Lab Sample ID:** C400457-09 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 10:54 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:04	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:24	JDH	
Barium [7440-39-3] ^	**11.9**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:24	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:24	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:24	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:24	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:24	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:24	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:24	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:24	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:24	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:24	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:04	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:24	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:24	JDH	

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Description:	8401-MW9	**Lab Sample ID:**	C400457-09	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 10:54	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**1.2**		NTU	1	0.50	1.0	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW10 | **Lab Sample ID:** C400457-10 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 11:08 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 13:14	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 13:14	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 13:14	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 13:14	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 13:14	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 13:14	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 13:14	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 13:14	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 13:14	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 13:14	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 13:14	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 13:14	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 13:14	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 13:14	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 13:14	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 13:14	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 13:14	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 13:14	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 13:14	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 13:14	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 13:14	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 13:14	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 13:14	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 13:14	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 13:14	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 13:14	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 13:14	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 13:14	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 13:14	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 13:14	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 13:14	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 13:14	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 13:14	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 13:14	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 13:14	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 13:14	REF	

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Description: 8401-MW10
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-10
Sampled: 01/21/14 11:08
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 13:14	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 13:14	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 13:14*	*REF*	
Dibromofluoromethane	*36*	*1*	*50.0*	*71 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 13:14*	*REF*	
Toluene-d8	*40*	*1*	*50.0*	*80 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 13:14*	*REF*	

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Description: 8401-MW10 | **Lab Sample ID:** C400457-10 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 11:08 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:08	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:26	JDH	
Barium [7440-39-3] ^	**75.6**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:26	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:26	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:26	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:26	JDH	
Cobalt [7440-48-4] ^	**5.45**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:26	JDH	
Copper [7440-50-8] ^	**1.61**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:26	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:26	JDH	
Nickel [7440-02-0] ^	**26.6**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:26	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:26	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:26	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:08	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:26	JDH	
Zinc [7440-66-6] ^	**5.67**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:26	JDH	

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Description:	8401-MW10	**Lab Sample ID:**	C400457-10	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 11:08	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**1.3**		NTU	1	0.50	1.0	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW11 | **Lab Sample ID:** C400457-11 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 11:43 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 13:44	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 13:44	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 13:44	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 13:44	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 13:44	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 13:44	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 13:44	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 13:44	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 13:44	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 13:44	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 13:44	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 13:44	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 13:44	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 13:44	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 13:44	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 13:44	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 13:44	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 13:44	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 13:44	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 13:44	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 13:44	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 13:44	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 13:44	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 13:44	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 13:44	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 13:44	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 13:44	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 13:44	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 13:44	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 13:44	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 13:44	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 13:44	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 13:44	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 13:44	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 13:44	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 13:44	REF	

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Description: 8401-MW11 | **Lab Sample ID:** C400457-11 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 11:43 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 13:44	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 13:44	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*75 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 13:44*	*REF*	
Dibromofluoromethane	*36*	*1*	*50.0*	*72 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 13:44*	*REF*	
Toluene-d8	*40*	*1*	*50.0*	*80 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 13:44*	*REF*	

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Description: 8401-MW11 | **Lab Sample ID:** C400457-11 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 11:43 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:12	VLO	
Arsenic [7440-38-2] ^	**6.59**	J	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:29	JDH	
Barium [7440-39-3] ^	**79.0**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:29	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:29	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:29	JDH	
Chromium [7440-47-3] ^	**44.3**		ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:29	JDH	
Cobalt [7440-48-4] ^	**5.00**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:29	JDH	
Copper [7440-50-8] ^	**12.5**		ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:29	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:29	JDH	
Nickel [7440-02-0] ^	**29.5**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:29	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:29	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:29	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:12	VLO	
Vanadium [7440-62-2] ^	**25.4**		ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:29	JDH	
Zinc [7440-66-6] ^	**22.6**		ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:29	JDH	

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Description:	8401-MW11	**Lab Sample ID:**	C400457-11	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 11:43	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**280**	D	NTU	10	5.0	10	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW12 | **Lab Sample ID:** C400457-12 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:08 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/25/14 14:14	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/25/14 14:14	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/25/14 14:14	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 14:14	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/25/14 14:14	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 14:14	REF	
1,1-Dichloropropene [563-58-6] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 14:14	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 14:14	REF	
1,2,4-Trichlorobenzene [120-82-1] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 14:14	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/25/14 14:14	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/25/14 14:14	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/25/14 14:14	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/25/14 14:14	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/25/14 14:14	REF	
1,3-Dichlorobenzene [541-73-1] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 14:14	REF	
1,3-Dichloropropane [142-28-9] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	01/25/14 14:14	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/25/14 14:14	REF	
2,2-Dichloropropane [594-20-7] ^	0.28	U	ug/L	1	0.28	1.0	15	EPA 8260B	01/25/14 14:14	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/25/14 14:14	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/25/14 14:14	REF	
3-Chloropropene [107-05-1] ^	0.11	U	ug/L	1	0.11	1.0	10	EPA 8260B	01/25/14 14:14	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/25/14 14:14	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/25/14 14:14	REF	
Acetonitrile [75-05-8] ^	5.0	U	ug/L	1	5.0	10	55	EPA 8260B	01/25/14 14:14	REF	
Acrolein [107-02-8] ^	4.0	U	ug/L	1	4.0	10	53	EPA 8260B	01/25/14 14:14	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/25/14 14:14	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/25/14 14:14	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/25/14 14:14	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/25/14 14:14	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/25/14 14:14	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 14:14	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/25/14 14:14	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/25/14 14:14	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Chloroprene [126-99-8] ^	0.64	U	ug/L	1	0.64	1.0	20	EPA 8260B	01/25/14 14:14	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/25/14 14:14	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/25/14 14:14	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/25/14 14:14	REF	
Dichlorodifluoromethane [75-71-8] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/25/14 14:14	REF	
Ethyl Methacrylate [97-63-2] ^	0.38	U	ug/L	1	0.38	1.0	10	EPA 8260B	01/25/14 14:14	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/25/14 14:14	REF	

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Description: 8401-MW12 | **Lab Sample ID:** C400457-12 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:08 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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
Isobutyl alcohol [78-83-1] ^	11	U	ug/L	1	11	50	100	EPA 8260B	01/25/14 14:14	REF	
Methacrylonitrile [126-98-7] ^	4.9	U	ug/L	1	4.9	10	100	EPA 8260B	01/25/14 14:14	REF	
Methyl Methacrylate [80-62-6] ^	0.51	U	ug/L	1	0.51	1.0	30	EPA 8260B	01/25/14 14:14	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Naphthalene [91-20-3] ^	0.11	U	ug/L	1	0.11	1.0	10	EPA 8260B	01/25/14 14:14	REF	
Propionitrile [107-12-0] ^	5.0	U	ug/L	1	5.0	10	150	EPA 8260B	01/25/14 14:14	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/25/14 14:14	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/25/14 14:14	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/25/14 14:14	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 14:14	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/25/14 14:14	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/25/14 14:14	REF	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/25/14 14:14	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/25/14 14:14	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*4A24034*	*EPA 8260B*	*01/25/14 14:14*	*REF*	
Dibromofluoromethane	*37*	*1*	*50.0*	*74 %*	*68-117*	*4A24034*	*EPA 8260B*	*01/25/14 14:14*	*REF*	
Toluene-d8	*40*	*1*	*50.0*	*80 %*	*67-127*	*4A24034*	*EPA 8260B*	*01/25/14 14:14*	*REF*	

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Description:	8401-MW12	**Lab Sample ID:**	C400457-12	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 12:08	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	01/24/14 11:39	T1D	

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Description: 8401-MW12 | **Lab Sample ID:** C400457-12 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:08 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:16	VLO	
Arsenic [7440-38-2] ^	**27.3**		ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:32	JDH	
Barium [7440-39-3] ^	**54.5**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:32	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:32	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:32	JDH	
Chromium [7440-47-3] ^	**6.08**	J	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:32	JDH	
Cobalt [7440-48-4] ^	**142**		ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:32	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:32	JDH	
Lead [7439-92-1] ^	**2.14**	J	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:32	JDH	
Nickel [7440-02-0] ^	**86.9**		ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:32	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:32	JDH	
Silver [7440-22-4] ^	**3.45**	J	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:32	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:16	VLO	
Tin [7440-31-5] ^	2.10	U	ug/L	1	2.10	10.0	100	EPA 6010C	01/23/14 12:32	JDH	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:32	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:32	JDH	

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Description:	8401-MW12	**Lab Sample ID:**	C400457-12	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 12:08	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**72**	D	NTU	10	5.0	10	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW13 | **Lab Sample ID:** C400457-13 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:35 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/27/14 21:43	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/27/14 21:43	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/27/14 21:43	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 21:43	REF	
1,1-Dichloroethane [75-34-3] ^	**0.71**	J	ug/L	1	0.13	1.0	5	EPA 8260B	01/27/14 21:43	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 21:43	REF	
1,1-Dichloropropene [563-58-6] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 21:43	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 21:43	REF	
1,2,4-Trichlorobenzene [120-82-1] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/27/14 21:43	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/27/14 21:43	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/27/14 21:43	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/27/14 21:43	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/27/14 21:43	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/27/14 21:43	REF	
1,3-Dichlorobenzene [541-73-1] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 21:43	REF	
1,3-Dichloropropane [142-28-9] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	01/27/14 21:43	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/27/14 21:43	REF	
2,2-Dichloropropane [594-20-7] ^	0.28	U	ug/L	1	0.28	1.0	15	EPA 8260B	01/27/14 21:43	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/27/14 21:43	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/27/14 21:43	REF	
3-Chloropropene [107-05-1] ^	0.11	U	ug/L	1	0.11	1.0	10	EPA 8260B	01/27/14 21:43	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/27/14 21:43	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/27/14 21:43	REF	
Acetonitrile [75-05-8] ^	5.0	U	ug/L	1	5.0	10	55	EPA 8260B	01/27/14 21:43	REF	
Acrolein [107-02-8] ^	4.0	U	ug/L	1	4.0	10	53	EPA 8260B	01/27/14 21:43	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/27/14 21:43	REF	
Benzene [71-43-2] ^	**2.4**		ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/27/14 21:43	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/27/14 21:43	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/27/14 21:43	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/27/14 21:43	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 21:43	REF	
Chloroethane [75-00-3] ^	**1.2**	J	ug/L	1	0.23	1.0	10	EPA 8260B	01/27/14 21:43	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/27/14 21:43	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Chloroprene [126-99-8] ^	0.64	U	ug/L	1	0.64	1.0	20	EPA 8260B	01/27/14 21:43	REF	
cis-1,2-Dichloroethene [156-59-2] ^	**5.1**		ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 21:43	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 21:43	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/27/14 21:43	REF	
Dichlorodifluoromethane [75-71-8] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/27/14 21:43	REF	
Ethyl Methacrylate [97-63-2] ^	0.38	U	ug/L	1	0.38	1.0	10	EPA 8260B	01/27/14 21:43	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/27/14 21:43	REF	

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Description: 8401-MW13 | **Lab Sample ID:** C400457-13 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:35 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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
Isobutyl alcohol [78-83-1] ^	11	U	ug/L	1	11	50	100	EPA 8260B	01/27/14 21:43	REF	
Methacrylonitrile [126-98-7] ^	4.9	U	ug/L	1	4.9	10	100	EPA 8260B	01/27/14 21:43	REF	
Methyl Methacrylate [80-62-6] ^	0.51	U	ug/L	1	0.51	1.0	30	EPA 8260B	01/27/14 21:43	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Naphthalene [91-20-3] ^	0.11	U	ug/L	1	0.11	1.0	10	EPA 8260B	01/27/14 21:43	REF	
Propionitrile [107-12-0] ^	5.0	U	ug/L	1	5.0	10	150	EPA 8260B	01/27/14 21:43	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/27/14 21:43	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 21:43	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 21:43	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 21:43	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/27/14 21:43	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/27/14 21:43	REF	
Vinyl chloride [75-01-4] ^	**1.1**		ug/L	1	0.32	1.0	1	EPA 8260B	01/27/14 21:43	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/27/14 21:43	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*51-122*	*4A24035*	*EPA 8260B*	*01/27/14 21:43*	*REF*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*4A24035*	*EPA 8260B*	*01/27/14 21:43*	*REF*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*67-127*	*4A24035*	*EPA 8260B*	*01/27/14 21:43*	*REF*	

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Description:	8401-MW13	**Lab Sample ID:**	C400457-13	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 12:35	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	01/24/14 11:45	T1D	

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Description: 8401-MW13 | **Lab Sample ID:** C400457-13 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:35 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:20	VLO	
Arsenic [7440-38-2] ^	**24.6**		ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:34	JDH	
Barium [7440-39-3] ^	**195**		ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:34	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:34	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:34	JDH	
Chromium [7440-47-3] ^	**6.68**	J	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:34	JDH	
Cobalt [7440-48-4] ^	**113**		ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:34	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:34	JDH	
Lead [7439-92-1] ^	**6.04**	J	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:34	JDH	
Nickel [7440-02-0] ^	**5.99**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:34	JDH	
Selenium [7782-49-2] ^	10.0	UD	ug/L	2	10.0	20.0	10	EPA 6010C	01/23/14 14:12	JDH	R-05
Silver [7440-22-4] ^	**4.74**	J	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:34	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:20	VLO	
Tin [7440-31-5] ^	2.10	U	ug/L	1	2.10	10.0	100	EPA 6010C	01/23/14 12:34	JDH	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:34	JDH	
Zinc [7440-66-6] ^	**5.55**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:34	JDH	

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Description:	8401-MW13	**Lab Sample ID:**	C400457-13	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 12:35	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**210**	D	NTU	10	5.0	10	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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Description: 8401-MW23 | **Lab Sample ID:** C400457-14 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:25 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/27/14 22:13	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/27/14 22:13	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/27/14 22:13	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 22:13	REF	
1,1-Dichloroethane [75-34-3] ^	**0.95**	J	ug/L	1	0.13	1.0	5	EPA 8260B	01/27/14 22:13	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 22:13	REF	
1,1-Dichloropropene [563-58-6] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 22:13	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 22:13	REF	
1,2,4-Trichlorobenzene [120-82-1] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/27/14 22:13	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/27/14 22:13	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/27/14 22:13	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/27/14 22:13	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/27/14 22:13	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/27/14 22:13	REF	
1,3-Dichlorobenzene [541-73-1] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 22:13	REF	
1,3-Dichloropropane [142-28-9] ^	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	01/27/14 22:13	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/27/14 22:13	REF	
2,2-Dichloropropane [594-20-7] ^	0.28	U	ug/L	1	0.28	1.0	15	EPA 8260B	01/27/14 22:13	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/27/14 22:13	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/27/14 22:13	REF	
3-Chloropropene [107-05-1] ^	0.11	U	ug/L	1	0.11	1.0	10	EPA 8260B	01/27/14 22:13	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/27/14 22:13	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/27/14 22:13	REF	
Acetonitrile [75-05-8] ^	5.0	U	ug/L	1	5.0	10	55	EPA 8260B	01/27/14 22:13	REF	
Acrolein [107-02-8] ^	4.0	U	ug/L	1	4.0	10	53	EPA 8260B	01/27/14 22:13	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/27/14 22:13	REF	
Benzene [71-43-2] ^	**0.89**	J	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/27/14 22:13	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/27/14 22:13	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/27/14 22:13	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/27/14 22:13	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 22:13	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/27/14 22:13	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/27/14 22:13	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Chloroprene [126-99-8] ^	0.64	U	ug/L	1	0.64	1.0	20	EPA 8260B	01/27/14 22:13	REF	
cis-1,2-Dichloroethene [156-59-2] ^	**7.0**		ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 22:13	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 22:13	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/27/14 22:13	REF	
Dichlorodifluoromethane [75-71-8] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/27/14 22:13	REF	
Ethyl Methacrylate [97-63-2] ^	0.38	U	ug/L	1	0.38	1.0	10	EPA 8260B	01/27/14 22:13	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/27/14 22:13	REF	

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Description: 8401-MW23 | **Lab Sample ID:** C400457-14 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:25 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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
Isobutyl alcohol [78-83-1] ^	11	U	ug/L	1	11	50	100	EPA 8260B	01/27/14 22:13	REF	
Methacrylonitrile [126-98-7] ^	4.9	U	ug/L	1	4.9	10	100	EPA 8260B	01/27/14 22:13	REF	
Methyl Methacrylate [80-62-6] ^	0.51	U	ug/L	1	0.51	1.0	30	EPA 8260B	01/27/14 22:13	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Naphthalene [91-20-3] ^	0.11	U	ug/L	1	0.11	1.0	10	EPA 8260B	01/27/14 22:13	REF	
Propionitrile [107-12-0] ^	5.0	U	ug/L	1	5.0	10	150	EPA 8260B	01/27/14 22:13	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/27/14 22:13	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 22:13	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 22:13	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 22:13	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/27/14 22:13	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/27/14 22:13	REF	
Vinyl chloride [75-01-4] ^	**1.1**		ug/L	1	0.32	1.0	1	EPA 8260B	01/27/14 22:13	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/27/14 22:13	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*51-122*	*4A24035*	*EPA 8260B*	*01/27/14 22:13*	*REF*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*4A24035*	*EPA 8260B*	*01/27/14 22:13*	*REF*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*67-127*	*4A24035*	*EPA 8260B*	*01/27/14 22:13*	*REF*	

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Description: 8401-MW23 | **Lab Sample ID:** C400457-14 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:25 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Semivolatile 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
1,2,4,5-Tetrachlorobenzene [95-94-3] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
1,3,5-Trinitrobenzene [99-35-4] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
1,3-Dinitrobenzene [99-65-0] ^	1.9	U	ug/L	1	1.9	10	20	EPA 8270D	01/28/14 17:10	DFM	
1,4-Naphthoquinone [130-15-4] ^	2.5	U	ug/L	1	2.5	10	10	EPA 8270D	01/28/14 17:10	DFM	
1,4-Phenylenediamine [106-50-3] ^	4.0	U	ug/L	1	4.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
1-Naphthylamine [134-32-7] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270D	01/28/14 17:10	DFM	
2,3,4,6-Tetrachlorophenol [58-90-2] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
2,4,5-Trichlorophenol [95-95-4] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
2,4,6-Trichlorophenol [88-06-2] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
2,4-Dichlorophenol [120-83-2] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
2,4-Dimethylphenol [105-67-9] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
2,4-Dinitrophenol [51-28-5] ^	2.6	U	ug/L	1	2.6	10	50	EPA 8270D	01/28/14 17:10	DFM	
2,4-Dinitrotoluene [121-14-2] ^	2.4	U	ug/L	1	2.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
2,6-Dichlorophenol [87-65-0] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
2,6-Dinitrotoluene [606-20-2] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270D	01/28/14 17:10	DFM	
2-Acetylaminofluorene [53-96-3] ^	2.5	U	ug/L	1	2.5	10	20	EPA 8270D	01/28/14 17:10	DFM	
2-Chloronaphthalene [91-58-7] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
2-Chlorophenol [95-57-8] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
2-Methyl-4,6-dinitrophenol [534-52-1] ^	2.9	U	ug/L	1	2.9	10	50	EPA 8270D	01/28/14 17:10	DFM	
2-Methylnaphthalene [91-57-6] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270D	01/28/14 17:10	DFM	
2-Methylphenol [95-48-7] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
2-Naphthylamine [91-59-8] ^	3.0	U	ug/L	1	3.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
2-Nitroaniline [88-74-4] ^	1.5	U	ug/L	1	1.5	10	50	EPA 8270D	01/28/14 17:10	DFM	
2-Nitrophenol [88-75-5] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
3 & 4-Methylphenol [108-39-4/106-44-5] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270D	01/28/14 17:10	DFM	
3,3'-Dichlorobenzidine [91-94-1] ^	3.3	U	ug/L	1	3.3	10	20	EPA 8270D	01/28/14 17:10	DFM	
3,3'-Dimethylbenzidine [119-93-7] ^	2.2	U	ug/L	1	2.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
3-Methylcholanthrene [56-49-5] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
3-Nitroaniline [99-09-2] ^	2.1	U	ug/L	1	2.1	10	50	EPA 8270D	01/28/14 17:10	DFM	
4-Aminobiphenyl [92-67-1] ^	2.1	U	ug/L	1	2.1	10	20	EPA 8270D	01/28/14 17:10	DFM	
4-Bromophenyl-phenylether [101-55-3] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
4-Chloro-3-methylphenol [59-50-7] ^	1.5	U	ug/L	1	1.5	10	20	EPA 8270D	01/28/14 17:10	DFM	
4-Chloroaniline [106-47-8] ^	1.2	U	ug/L	1	1.2	10	20	EPA 8270D	01/28/14 17:10	DFM	
4-Chlorophenyl-phenylether [7005-72-3] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270D	01/28/14 17:10	DFM	
4-Nitroaniline [100-01-6] ^	3.2	U	ug/L	1	3.2	10	20	EPA 8270D	01/28/14 17:10	DFM	
4-Nitrophenol [100-02-7] ^	2.0	U	ug/L	1	2.0	10	50	EPA 8270D	01/28/14 17:10	DFM	
5-Nitro-o-toluidine [99-55-8] ^	3.2	U	ug/L	1	3.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
7,12-Dimethylbenz(a)anthracene [57-97-6] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
Acenaphthene [83-32-9] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Acenaphthylene [208-96-8] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
Acetophenone [98-86-2] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Anthracene [120-12-7] ^	1.6	U	ug/L	1	1.6	10	10	EPA 8270D	01/28/14 17:10	DFM	
Benzo(a)anthracene [56-55-3] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Benzo(a)pyrene [50-32-8] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Benzo(b)fluoranthene [205-99-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	

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Description: 8401-MW23 | **Lab Sample ID:** C400457-14 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:25 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Semivolatile 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
Benzo(g,h,i)perylene [191-24-2] ^	2.4	U	ug/L	1	2.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Benzo(k)fluoranthene [207-08-9] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Benzyl alcohol [100-51-6] ^	1.4	U	ug/L	1	1.4	10	20	EPA 8270D	01/28/14 17:10	DFM	
Bis(2-chloroethoxy)methane [111-91-1] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Bis(2-chloroethyl)ether [111-44-4] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
Bis(2-chloroisopropyl)ether [108-60-1] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Bis(2-ethylhexyl)phthalate [117-81-7] ^	1.7	U	ug/L	1	1.7	5.0	15	EPA 8270D	01/28/14 17:10	DFM	
Butylbenzylphthalate [85-68-7] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
Chlorobenzilate [510-15-6] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
Chrysene [218-01-9] ^	2.0	U	ug/L	1	2.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
Diallate [2303-16-4] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
Dibenzo(a,h)anthracene [53-70-3] ^	2.3	U	ug/L	1	2.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Dibenzofuran [132-64-9] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Diethylphthalate [84-66-2] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
Dimethoate [60-51-5] ^	2.3	U	ug/L	1	2.3	10	20	EPA 8270D	01/28/14 17:10	DFM	QV-01
Dimethylphthalate [131-11-3] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Di-n-butylphthalate [84-74-2] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270D	01/28/14 17:10	DFM	
Di-n-octylphthalate [117-84-0] ^	3.1	U	ug/L	1	3.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
Disulfoton [298-04-4] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
Ethyl methanesulfonate [62-50-0] ^	1.2	U	ug/L	1	1.2	10	20	EPA 8270D	01/28/14 17:10	DFM	
Famphur [52-85-7] ^	2.7	U	ug/L	1	2.7	10	20	EPA 8270D	01/28/14 17:10	DFM	
Fluoranthene [206-44-0] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
Fluorene [86-73-7] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270D	01/28/14 17:10	DFM	
Hexachlorobenzene [118-74-1] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
Hexachlorobutadiene [87-68-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
Hexachlorocyclopentadiene [77-47-4] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Hexachloroethane [67-72-1] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
Hexachloropropene [1888-71-7] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270D	01/28/14 17:10	DFM	
Indeno(1,2,3-cd)pyrene [193-39-5] ^	2.2	U	ug/L	1	2.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
Isodrin [465-73-6] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270D	01/28/14 17:10	DFM	
Isophorone [78-59-1] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Isosafrole [120-58-1] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Kepone [143-50-0] ^	7.2	U	ug/L	1	7.2	20	20	EPA 8270D	01/28/14 17:10	DFM	QV-01
Methapyrilene [91-80-5] ^	3.5	U	ug/L	1	3.5	10	100	EPA 8270D	01/28/14 17:10	DFM	
Methyl Methanesulfonate [66-27-3] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
Methyl parathion [298-00-0] ^	2.5	U	ug/L	1	2.5	10	10	EPA 8270D	01/28/14 17:10	DFM	
Nitrobenzene [98-95-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
N-Nitrosodiethylamine [55-18-5] ^	1.3	U	ug/L	1	1.3	10	20	EPA 8270D	01/28/14 17:10	DFM	
N-Nitrosodimethylamine [62-75-9] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
N-Nitrosodi-n-butylamine [924-16-3] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
N-Nitroso-di-n-propylamine [621-64-7] ^	1.5	U	ug/L	1	1.5	10	10	EPA 8270D	01/28/14 17:10	DFM	
N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
N-Nitrosomethylethylamine [10595-95-6] ^	1.9	U	ug/L	1	1.9	10	10	EPA 8270D	01/28/14 17:10	DFM	
N-Nitrosopiperidine [100-75-4] ^	1.1	U	ug/L	1	1.1	10	20	EPA 8270D	01/28/14 17:10	DFM	
N-Nitrosopyrrolidine [930-55-2] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	

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Description: 8401-MW23 | **Lab Sample ID:** C400457-14 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:25 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Semivolatile 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
O,O,O-Triethyl phosphorothioate [126-68-1] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
o-Toluidine [95-53-4] ^	1.1	U	ug/L	1	1.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
Parathion [56-38-2] ^	1.7	U	ug/L	1	1.7	10	10	EPA 8270D	01/28/14 17:10	DFM	
p-Dimethylaminoazobenzene [60-11-7] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Pentachlorobenzene [608-93-5] ^	1.3	U	ug/L	1	1.3	10	10	EPA 8270D	01/28/14 17:10	DFM	
Pentachloronitrobenzene [82-68-8] ^	1.0	U	ug/L	1	1.0	10	20	EPA 8270D	01/28/14 17:10	DFM	
Phenacetin [62-44-2] ^	2.7	U	ug/L	1	2.7	10	20	EPA 8270D	01/28/14 17:10	DFM	
Phenanthrene [85-01-8] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Phenol [108-95-2] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Phorate [298-02-2] ^	1.0	U	ug/L	1	1.0	10	10	EPA 8270D	01/28/14 17:10	DFM	
Pronamide [23950-58-5] ^	1.4	U	ug/L	1	1.4	10	10	EPA 8270D	01/28/14 17:10	DFM	
Pyrene [129-00-0] ^	2.1	U	ug/L	1	2.1	10	10	EPA 8270D	01/28/14 17:10	DFM	
Safrole [94-59-7] ^	1.2	U	ug/L	1	1.2	10	10	EPA 8270D	01/28/14 17:10	DFM	
Thionazin [297-97-2] ^	2.3	U	ug/L	1	2.3	10	20	EPA 8270D	01/28/14 17:10	DFM	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,6-Tribromophenol	*82*	*1*	*100*	*82 %*	*10-179*	*4A23034*	*EPA 8270D*	*01/28/14 17:10*	*DFM*	
2-Fluorobiphenyl	*37*	*1*	*50.0*	*75 %*	*10-149*	*4A23034*	*EPA 8270D*	*01/28/14 17:10*	*DFM*	
2-Fluorophenol	*57*	*1*	*100*	*57 %*	*10-110*	*4A23034*	*EPA 8270D*	*01/28/14 17:10*	*DFM*	
Nitrobenzene-d5	*37*	*1*	*50.0*	*73 %*	*10-149*	*4A23034*	*EPA 8270D*	*01/28/14 17:10*	*DFM*	
Phenol-d5	*50*	*1*	*100*	*50 %*	*10-88*	*4A23034*	*EPA 8270D*	*01/28/14 17:10*	*DFM*	
Terphenyl-d14	*42*	*1*	*50.0*	*85 %*	*10-188*	*4A23034*	*EPA 8270D*	*01/28/14 17:10*	*DFM*	

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Description:	8401-MW23	**Lab Sample ID:**	C400457-14	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 12:25	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	01/24/14 11:47	T1D	

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Description: 8401-MW23 | **Lab Sample ID:** C400457-14 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:25 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:24	VLO	
Arsenic [7440-38-2] ^	**7.45**	J	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:37	JDH	
Barium [7440-39-3] ^	**49.8**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:37	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:37	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:37	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:37	JDH	
Cobalt [7440-48-4] ^	**26.0**		ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:37	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:37	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:37	JDH	
Nickel [7440-02-0] ^	**11.2**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:37	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:37	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:37	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:24	VLO	
Tin [7440-31-5] ^	2.10	U	ug/L	1	2.10	10.0	100	EPA 6010C	01/23/14 12:37	JDH	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:37	JDH	
Zinc [7440-66-6] ^	**5.29**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:37	JDH	

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Description:	8401-MW23	**Lab Sample ID:**	C400457-14	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 12:25	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Turbidity [ECL-0177] ^	**50**	D	NTU	2	1.0	2.0	NE	SM 2130B-2001	01/22/14 18:14	JOC	

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

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Description: 8401-MW29 | **Lab Sample ID:** C400457-15 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:55 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/27/14 22:42	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/27/14 22:42	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/27/14 22:42	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 22:42	REF	
1,1-Dichloroethane [75-34-3] ^	**1.1**	J	ug/L	1	0.13	1.0	5	EPA 8260B	01/27/14 22:42	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 22:42	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 22:42	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/27/14 22:42	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/27/14 22:42	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/27/14 22:42	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/27/14 22:42	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/27/14 22:42	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/27/14 22:42	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/27/14 22:42	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/27/14 22:42	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/27/14 22:42	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/27/14 22:42	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/27/14 22:42	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/27/14 22:42	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/27/14 22:42	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/27/14 22:42	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/27/14 22:42	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 22:42	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/27/14 22:42	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/27/14 22:42	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 22:42	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 22:42	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 22:42	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/27/14 22:42	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/27/14 22:42	REF	
Methylene chloride [75-09-2] ^	**1.0**		ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 22:42	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 22:42	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 22:42	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/27/14 22:42	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Trichlorofluoromethane [75-69-4] ^	**0.86**	J	ug/L	1	0.24	1.0	1	EPA 8260B	01/27/14 22:42	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/27/14 22:42	REF	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/27/14 22:42	REF	

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Description:	8401-MW29	**Lab Sample ID:**	C400457-15	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 09:55	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

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] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/27/14 22:42	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*90 %*	*51-122*	*4A24035*	*EPA 8260B*	*01/27/14 22:42*	*REF*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*4A24035*	*EPA 8260B*	*01/27/14 22:42*	*REF*	
Toluene-d8	*47*	*1*	*50.0*	*95 %*	*67-127*	*4A24035*	*EPA 8260B*	*01/27/14 22:42*	*REF*	

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Description: 8401-MW29 | **Lab Sample ID:** C400457-15 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 09:55 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:40	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:54	JDH	
Barium [7440-39-3] ^	**43.1**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:54	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:54	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:54	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:54	JDH	
Cobalt [7440-48-4] ^	**2.80**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:54	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:54	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:54	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:54	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:54	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:54	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:40	VLO	
Vanadium [7440-62-2] ^	**1.95**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:54	JDH	
Zinc [7440-66-6] ^	**4.04**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:54	JDH	

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

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Description: 8401-Trip Blank
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-16
Sampled: 01/21/14 08:45
Sampled By: ENCO

Received: 01/22/14 10:40
Work Order: C400457

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/27/14 23:12	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/27/14 23:12	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/27/14 23:12	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 23:12	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/27/14 23:12	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 23:12	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 23:12	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/27/14 23:12	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/27/14 23:12	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/27/14 23:12	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/27/14 23:12	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/27/14 23:12	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/27/14 23:12	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/27/14 23:12	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/27/14 23:12	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/27/14 23:12	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/27/14 23:12	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/27/14 23:12	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/27/14 23:12	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/27/14 23:12	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/27/14 23:12	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/27/14 23:12	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 23:12	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/27/14 23:12	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/27/14 23:12	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 23:12	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 23:12	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 23:12	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/27/14 23:12	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/27/14 23:12	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/27/14 23:12	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 23:12	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 23:12	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 23:12	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/27/14 23:12	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/27/14 23:12	REF	

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Description: 8401-Trip Blank
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-16
Sampled: 01/21/14 08:45
Sampled By: ENCO

Received: 01/22/14 10:40
Work Order: C400457

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/27/14 23:12	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/27/14 23:12	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*51-122*	*4A24035*	*EPA 8260B*	*01/27/14 23:12*	*REF*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*68-117*	*4A24035*	*EPA 8260B*	*01/27/14 23:12*	*REF*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*67-127*	*4A24035*	*EPA 8260B*	*01/27/14 23:12*	*REF*	

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Description: 8401-Bailer Blank
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-17
Sampled: 01/21/14 11:23
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/27/14 23:42	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/27/14 23:42	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/27/14 23:42	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 23:42	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/27/14 23:42	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 23:42	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 23:42	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/27/14 23:42	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/27/14 23:42	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/27/14 23:42	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/27/14 23:42	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/27/14 23:42	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/27/14 23:42	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/27/14 23:42	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/27/14 23:42	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/27/14 23:42	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/27/14 23:42	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/27/14 23:42	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/27/14 23:42	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/27/14 23:42	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/27/14 23:42	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/27/14 23:42	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 23:42	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/27/14 23:42	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/27/14 23:42	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 23:42	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/27/14 23:42	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/27/14 23:42	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/27/14 23:42	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/27/14 23:42	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/27/14 23:42	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/27/14 23:42	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/27/14 23:42	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 23:42	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/27/14 23:42	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/27/14 23:42	REF	

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Description:	8401-Bailer Blank	**Lab Sample ID:**	C400457-17	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 11:23	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/27/14 23:42	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/27/14 23:42	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*88 %*	*51-122*	*4A24035*	*EPA 8260B*	*01/27/14 23:42*	*REF*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*68-117*	*4A24035*	*EPA 8260B*	*01/27/14 23:42*	*REF*	
Toluene-d8	*47*	*1*	*50.0*	*94 %*	*67-127*	*4A24035*	*EPA 8260B*	*01/27/14 23:42*	*REF*	

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Description:	8401-Bailer Blank	**Lab Sample ID:**	C400457-17	**Received:**	01/22/14 10:40
Matrix:	Ground Water	**Sampled:**	01/21/14 11:23	**Work Order:**	C400457
Project:	Albemarle Closed LF	**Sampled By:**	Danny Hefner /John Hopsp		

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	01/24/14 11:49	T1D	

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Description: 8401-Bailer Blank
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-17
Sampled: 01/21/14 11:23
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:44	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:57	JDH	
Barium [7440-39-3] ^	**1.05**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:57	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:57	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:57	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:57	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:57	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:57	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:57	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:57	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:57	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:57	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:44	VLO	
Tin [7440-31-5] ^	2.10	U	ug/L	1	2.10	10.0	100	EPA 6010C	01/23/14 12:57	JDH	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:57	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:57	JDH	

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Description: 8401-Field Blank | **Lab Sample ID:** C400457-18 | **Received:** 01/22/14 10:40

Matrix: Ground Water | **Sampled:** 01/21/14 12:18 | **Work Order:** C400457

Project: Albemarle Closed LF | **Sampled By:** Danny Hefner /John Hopsp

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	01/28/14 00:11	REF	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	01/28/14 00:11	REF	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	01/28/14 00:11	REF	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/28/14 00:11	REF	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	01/28/14 00:11	REF	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/28/14 00:11	REF	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/28/14 00:11	REF	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/28/14 00:11	REF	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	01/28/14 00:11	REF	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	01/28/14 00:11	REF	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	01/28/14 00:11	REF	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	01/28/14 00:11	REF	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	01/28/14 00:11	REF	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	01/28/14 00:11	REF	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	01/28/14 00:11	REF	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/28/14 00:11	REF	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	01/28/14 00:11	REF	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	01/28/14 00:11	REF	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	01/28/14 00:11	REF	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	01/28/14 00:11	REF	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	01/28/14 00:11	REF	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/28/14 00:11	REF	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/28/14 00:11	REF	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	01/28/14 00:11	REF	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	01/28/14 00:11	REF	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/28/14 00:11	REF	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	01/28/14 00:11	REF	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	01/28/14 00:11	REF	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	01/28/14 00:11	REF	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	01/28/14 00:11	REF	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0		EPA 8260B	01/28/14 00:11	REF	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	01/28/14 00:11	REF	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	01/28/14 00:11	REF	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/28/14 00:11	REF	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	01/28/14 00:11	REF	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	01/28/14 00:11	REF	

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Description: 8401-Field Blank
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-18
Sampled: 01/21/14 12:18
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

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
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	01/28/14 00:11	REF	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	01/28/14 00:11	REF	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*51-122*	*4A24035*	*EPA 8260B*	*01/28/14 00:11*	*REF*	
Dibromofluoromethane	*44*	*1*	*50.0*	*87 %*	*68-117*	*4A24035*	*EPA 8260B*	*01/28/14 00:11*	*REF*	
Toluene-d8	*46*	*1*	*50.0*	*91 %*	*67-127*	*4A24035*	*EPA 8260B*	*01/28/14 00:11*	*REF*	

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Description: 8401-Field Blank
Matrix: Ground Water
Project: Albemarle Closed LF

Lab Sample ID: C400457-18
Sampled: 01/21/14 12:18
Sampled By: Danny Hefner /John Hopsp

Received: 01/22/14 10:40
Work Order: C400457

Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/24/14 12:48	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	01/23/14 12:59	JDH	
Barium [7440-39-3] ^	**1.06**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/23/14 12:59	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/23/14 12:59	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/23/14 12:59	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	01/23/14 12:59	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	01/23/14 12:59	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/23/14 12:59	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	01/23/14 12:59	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/23/14 12:59	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	01/23/14 12:59	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/23/14 12:59	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/24/14 12:48	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/23/14 12:59	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/23/14 12:59	JDH	

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 4A24034 - EPA 5030B_MS

Blank (4A24034-BLK1) Prepared: 01/24/2014 15:28 Analyzed: 01/25/2014 03:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,1-Dichloropropene	0.15	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,3-Dichloropropane	0.16	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2,2-Dichloropropane	0.28	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
3-Chloropropene	0.11	U	1.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acetonitrile	5.0	U	10	ug/L							
Acrolein	4.0	U	10	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
Chloroprene	0.64	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Dichlorodifluoromethane	0.20	U	1.0	ug/L							
Ethyl Methacrylate	0.38	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Isobutyl alcohol	11	U	50	ug/L							
Methacrylonitrile	4.9	U	10	ug/L							
Methyl Methacrylate	0.51	U	1.0	ug/L							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4A24034 - EPA 5030B_MS

Blank (4A24034-BLK1) Continued Prepared: 01/24/2014 15:28 Analyzed: 01/25/2014 03:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene chloride	0.23	U	1.0	ug/L							
Naphthalene	0.11	U	1.0	ug/L							
Propionitrile	5.0	U	10	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Tetrahydrofuran	0.80	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*37*			*ug/L*	*50.0*		*75*	*51-122*			
Surrogate: Dibromofluoromethane	*35*			*ug/L*	*50.0*		*69*	*68-117*			
Surrogate: Toluene-d8	*39*			*ug/L*	*50.0*		*77*	*67-127*			

LCS (4A24034-BS1) Prepared: 01/24/2014 15:28 Analyzed: 01/25/2014 04:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	17		1.0	ug/L	20.0		85	75-133			
Benzene	19		1.0	ug/L	20.0		96	81-134			
Chlorobenzene	21		1.0	ug/L	20.0		106	83-117			
Toluene	18		1.0	ug/L	20.0		91	71-118			
Trichloroethene	20		1.0	ug/L	20.0		102	74-119			
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*80*	*51-122*			
Surrogate: Dibromofluoromethane	*36*			*ug/L*	*50.0*		*72*	*68-117*			
Surrogate: Toluene-d8	*40*			*ug/L*	*50.0*		*80*	*67-127*			

Matrix Spike (4A24034-MS1) Prepared: 01/24/2014 15:28 Analyzed: 01/25/2014 04:50

Source: C400970-06

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	0.21 U	90	75-133			
Benzene	20		1.0	ug/L	20.0	0.15 U	100	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	105	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	104	74-119			
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*51-122*			
Surrogate: Dibromofluoromethane	*36*			*ug/L*	*50.0*		*71*	*68-117*			
Surrogate: Toluene-d8	*41*			*ug/L*	*50.0*		*81*	*67-127*			

Matrix Spike Dup (4A24034-MSD1) Prepared: 01/24/2014 15:28 Analyzed: 01/25/2014 05:20

Source: C400970-06

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4A24034 - EPA 5030B_MS

Matrix Spike Dup (4A24034-MSD1) Continued Prepared: 01/24/2014 15:28 Analyzed: 01/25/2014 05:20

Source: C400970-06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	17		1.0	ug/L	20.0	0.21 U	87	75-133	4	20	
Benzene	19		1.0	ug/L	20.0	0.15 U	97	81-134	3	17	
Chlorobenzene	22		1.0	ug/L	20.0	0.17 U	111	83-117	5	16	
Toluene	19		1.0	ug/L	20.0	0.14 U	94	71-118	0.4	17	
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	107	74-119	3	22	
Surrogate: 4-Bromofluorobenzene	*41*			*ug/L*	*50.0*		*81*	*51-122*			
Surrogate: Dibromofluoromethane	*35*			*ug/L*	*50.0*		*70*	*68-117*			
Surrogate: Toluene-d8	*41*			*ug/L*	*50.0*		*82*	*67-127*			

Batch 4A24035 - EPA 5030B_MS

Blank (4A24035-BLK1) Prepared: 01/24/2014 15:31 Analyzed: 01/27/2014 15:13

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,1-Dichloropropene	0.15	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,3-Dichloropropane	0.16	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2,2-Dichloropropane	0.28	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
3-Chloropropene	0.11	U	1.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acetonitrile	5.0	U	10	ug/L							
Acrolein	4.0	U	10	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4A24035 - EPA 5030B_MS

Blank (4A24035-BLK1) Continued Prepared: 01/24/2014 15:31 Analyzed: 01/27/2014 15:13

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
Chloroprene	0.64	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Dichlorodifluoromethane	0.20	U	1.0	ug/L							
Ethyl Methacrylate	0.38	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Isobutyl alcohol	11	U	50	ug/L							
Methacrylonitrile	4.9	U	10	ug/L							
Methyl Methacrylate	0.51	U	1.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Naphthalene	0.11	U	1.0	ug/L							
Propionitrile	5.0	U	10	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Tetrahydrofuran	0.80	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*46*			*ug/L*	*50.0*		*92*	*51-122*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*89*	*68-117*			
Surrogate: Toluene-d8	*46*			*ug/L*	*50.0*		*92*	*67-127*			

LCS (4A24035-BS1) Prepared: 01/24/2014 15:31 Analyzed: 01/27/2014 15:43

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		106	75-133			
Benzene	18		1.0	ug/L	20.0		88	81-134			
Chlorobenzene	21		1.0	ug/L	20.0		103	83-117			
Toluene	18		1.0	ug/L	20.0		91	71-118			
Trichloroethene	22		1.0	ug/L	20.0		110	74-119			
Surrogate: 4-Bromofluorobenzene	*49*			*ug/L*	*50.0*		*98*	*51-122*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*46*			*ug/L*	*50.0*		*92*	*67-127*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4A24035 - EPA 5030B_MS

Matrix Spike (4A24035-MS1) Prepared: 01/24/2014 15:31 Analyzed: 01/27/2014 16:12

Source: C400970-07

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	0.21 U	104	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	88	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	103	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	91	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	107	74-119			
Surrogate: 4-Bromofluorobenzene	*48*			*ug/L*	*50.0*		*96*	*51-122*			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*68-117*			
Surrogate: Toluene-d8	*46*			*ug/L*	*50.0*		*93*	*67-127*			

Matrix Spike Dup (4A24035-MSD1) Prepared: 01/24/2014 15:31 Analyzed: 01/27/2014 16:42

Source: C400970-07

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	0.21 U	96	75-133	8	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	88	81-134	0.5	17	
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	102	83-117	0.7	16	
Toluene	17		1.0	ug/L	20.0	0.14 U	87	71-118	4	17	
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	103	74-119	4	22	
Surrogate: 4-Bromofluorobenzene	*49*			*ug/L*	*50.0*		*99*	*51-122*			
Surrogate: Dibromofluoromethane	*45*			*ug/L*	*50.0*		*90*	*68-117*			
Surrogate: Toluene-d8	*46*			*ug/L*	*50.0*		*93*	*67-127*			

Batch 4A27023 - EPA 5030B_MS

Blank (4A27023-BLK1) Prepared: 01/27/2014 12:38 Analyzed: 01/27/2014 21:26

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4A27023 - EPA 5030B_MS

Blank (4A27023-BLK1) Continued Prepared: 01/27/2014 12:38 Analyzed: 01/27/2014 21:26

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Tetrahydrofuran	0.80	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*41*			*ug/L*	*50.0*		*81*	*51-122*			
Surrogate: Dibromofluoromethane	*36*			*ug/L*	*50.0*		*72*	*68-117*			
Surrogate: Toluene-d8	*41*			*ug/L*	*50.0*		*82*	*67-127*			

LCS (4A27023-BS1) Prepared: 01/27/2014 12:38 Analyzed: 01/27/2014 21:56

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		93	75-133			
Benzene	19		1.0	ug/L	20.0		94	81-134			
Chlorobenzene	23		1.0	ug/L	20.0		114	83-117			
Toluene	19		1.0	ug/L	20.0		95	71-118			
Trichloroethene	21		1.0	ug/L	20.0		104	74-119			
Surrogate: 4-Bromofluorobenzene	*43*			*ug/L*	*50.0*		*86*	*51-122*			
Surrogate: Dibromofluoromethane	*37*			*ug/L*	*50.0*		*74*	*68-117*			
Surrogate: Toluene-d8	*41*			*ug/L*	*50.0*		*82*	*67-127*			

Matrix Spike (4A27023-MS1) Prepared: 01/27/2014 12:38 Analyzed: 01/27/2014 22:26

Source: C401068-03

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4A27023 - EPA 5030B_MS

Matrix Spike (4A27023-MS1) Continued Prepared: 01/27/2014 12:38 Analyzed: 01/27/2014 22:26

Source: C401068-03

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	0.21 U	101	75-133			
Benzene	21		1.0	ug/L	20.0	0.15 U	103	81-134			
Chlorobenzene	22		1.0	ug/L	20.0	0.17 U	110	83-117			
Toluene	20		1.0	ug/L	20.0	0.14 U	98	71-118			
Trichloroethene	22		1.0	ug/L	20.0	0.15 U	109	74-119			
Surrogate: 4-Bromofluorobenzene	*41*			*ug/L*	*50.0*		*82*	*51-122*			
Surrogate: Dibromofluoromethane	*36*			*ug/L*	*50.0*		*72*	*68-117*			
Surrogate: Toluene-d8	*40*			*ug/L*	*50.0*		*80*	*67-127*			

Matrix Spike Dup (4A27023-MSD1) Prepared: 01/27/2014 12:38 Analyzed: 01/27/2014 22:56

Source: C401068-03

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	0.21 U	93	75-133	8	20	
Benzene	19		1.0	ug/L	20.0	0.15 U	97	81-134	6	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	104	83-117	6	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	92	71-118	7	17	
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	103	74-119	6	22	
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*51-122*			
Surrogate: Dibromofluoromethane	*36*			*ug/L*	*50.0*		*72*	*68-117*			
Surrogate: Toluene-d8	*40*			*ug/L*	*50.0*		*80*	*67-127*			

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 4A23034 - EPA 3510C_MS

Blank (4A23034-BLK1) Prepared: 01/23/2014 12:00 Analyzed: 01/28/2014 15:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2,4,5-Tetrachlorobenzene	2.0	U	10	ug/L							
1,3,5-Trinitrobenzene	3.0	U	10	ug/L							
1,3-Dinitrobenzene	1.9	U	10	ug/L							
1,4-Naphthoquinone	2.5	U	10	ug/L							
1,4-Phenylenediamine	4.0	U	10	ug/L							
1-Naphthylamine	1.9	U	10	ug/L							
2,3,4,6-Tetrachlorophenol	2.0	U	10	ug/L							
2,4,5-Trichlorophenol	1.0	U	10	ug/L							
2,4,6-Trichlorophenol	1.1	U	10	ug/L							
2,4-Dichlorophenol	1.4	U	10	ug/L							
2,4-Dimethylphenol	1.3	U	10	ug/L							
2,4-Dinitrophenol	2.6	U	10	ug/L							
2,4-Dinitrotoluene	2.4	U	10	ug/L							
2,6-Dichlorophenol	1.1	U	10	ug/L							
2,6-Dinitrotoluene	1.5	U	10	ug/L							
2-Acetylaminofluorene	2.5	U	10	ug/L							
2-Chloronaphthalene	1.0	U	10	ug/L							
2-Chlorophenol	1.2	U	10	ug/L							

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 4A23034 - EPA 3510C_MS

Blank (4A23034-BLK1) Continued Prepared: 01/23/2014 12:00 Analyzed: 01/28/2014 15:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Methyl-4,6-dinitrophenol	2.9	U	10	ug/L							
2-Methylnaphthalene	1.5	U	10	ug/L							
2-Methylphenol	1.4	U	10	ug/L							
2-Naphthylamine	3.0	U	10	ug/L							
2-Nitroaniline	1.5	U	10	ug/L							
2-Nitrophenol	1.1	U	10	ug/L							
3 & 4-Methylphenol	1.6	U	10	ug/L							
3,3'-Dichlorobenzidine	3.3	U	10	ug/L							
3,3'-Dimethylbenzidine	2.2	U	10	ug/L							
3-Methylcholanthrene	1.3	U	10	ug/L							
3-Nitroaniline	2.1	U	10	ug/L							
4-Aminobiphenyl	2.1	U	10	ug/L							
4-Bromophenyl-phenylether	1.0	U	10	ug/L							
4-Chloro-3-methylphenol	1.5	U	10	ug/L							
4-Chloroaniline	1.2	U	10	ug/L							
4-Chlorophenyl-phenylether	1.6	U	10	ug/L							
4-Nitroaniline	3.2	U	10	ug/L							
4-Nitrophenol	2.0	U	10	ug/L							
5-Nitro-o-toluidine	3.2	U	10	ug/L							
7,12-Dimethylbenz(a)anthracene	1.1	U	10	ug/L							
Acenaphthene	1.4	U	10	ug/L							
Acenaphthylene	1.2	U	10	ug/L							
Acetophenone	1.3	U	10	ug/L							
Anthracene	1.6	U	10	ug/L							
Benzo(a)anthracene	1.3	U	10	ug/L							
Benzo(a)pyrene	1.3	U	10	ug/L							
Benzo(b)fluoranthene	1.0	U	10	ug/L							
Benzo(g,h,i)perylene	2.4	U	10	ug/L							
Benzo(k)fluoranthene	1.3	U	10	ug/L							
Benzyl alcohol	1.4	U	10	ug/L							
Bis(2-chloroethoxy)methane	1.4	U	10	ug/L							
Bis(2-chloroethyl)ether	1.2	U	10	ug/L							
Bis(2-chloroisopropyl)ether	1.3	U	10	ug/L							
Bis(2-ethylhexyl)phthalate	1.7	U	5.0	ug/L							
Butylbenzylphthalate	2.0	U	10	ug/L							
Chlorobenzilate	1.0	U	10	ug/L							
Chrysene	2.0	U	10	ug/L							
Diallate	1.0	U	10	ug/L							
Dibenzo(a,h)anthracene	2.3	U	10	ug/L							
Dibenzofuran	1.4	U	10	ug/L							
Diethylphthalate	2.1	U	10	ug/L							
Dimethoate	2.3	U	10	ug/L							QV-01
Dimethylphthalate	1.4	U	10	ug/L							
Di-n-butylphthalate	1.5	U	10	ug/L							
Di-n-octylphthalate	3.1	U	10	ug/L							
Disulfoton	1.1	U	10	ug/L							
Ethyl methanesulfonate	1.2	U	10	ug/L							
Famphur	2.7	U	10	ug/L							
Fluoranthene	2.1	U	10	ug/L							

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 4A23034 - EPA 3510C_MS

Blank (4A23034-BLK1) Continued Prepared: 01/23/2014 12:00 Analyzed: 01/28/2014 15:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Fluorene	1.7	U	10	ug/L							
Hexachlorobenzene	1.0	U	10	ug/L							
Hexachlorobutadiene	1.2	U	10	ug/L							
Hexachlorocyclopentadiene	1.3	U	10	ug/L							
Hexachloroethane	1.1	U	10	ug/L							
Hexachloropropene	1.7	U	10	ug/L							
Indeno(1,2,3-cd)pyrene	2.2	U	10	ug/L							
Isodrin	1.0	U	10	ug/L							
Isophorone	1.3	U	10	ug/L							
Isosafrole	1.3	U	10	ug/L							
Kepone	7.2	U	20	ug/L							QV-01
Methapyrilene	3.5	U	10	ug/L							
Methyl Methanesulfonate	1.0	U	10	ug/L							
Methyl parathion	2.5	U	10	ug/L							
Nitrobenzene	1.2	U	10	ug/L							
N-Nitrosodiethylamine	1.3	U	10	ug/L							
N-Nitrosodimethylamine	1.3	U	10	ug/L							
N-Nitrosodi-n-butylamine	1.2	U	10	ug/L							
N-Nitroso-di-n-propylamine	1.5	U	10	ug/L							
N-nitrosodiphenylamine/Diphenylamine	2.1	U	10	ug/L							
N-Nitrosomethylethylamine	1.9	U	10	ug/L							
N-Nitrosopiperidine	1.1	U	10	ug/L							
N-Nitrosopyrrolidine	1.3	U	10	ug/L							
O,O,O-Triethyl phosphorothioate	1.3	U	10	ug/L							
o-Toluidine	1.1	U	10	ug/L							
Parathion	1.7	U	10	ug/L							
p-Dimethylaminoazobenzene	1.4	U	10	ug/L							
Pentachlorobenzene	1.3	U	10	ug/L							
Pentachloronitrobenzene	1.0	U	10	ug/L							
Phenacetin	2.7	U	10	ug/L							
Phenanthrene	1.4	U	10	ug/L							
Phenol	1.4	U	10	ug/L							
Phorate	1.0	U	10	ug/L							
Pronamide	1.4	U	10	ug/L							
Pyrene	2.1	U	10	ug/L							
Safrole	1.2	U	10	ug/L							
Thionazin	2.3	U	10	ug/L							
Surrogate: 2,4,6-Tribromophenol	*81*			*ug/L*	*100*		*81*	*10-179*			
Surrogate: 2-Fluorobiphenyl	*40*			*ug/L*	*50.0*		*79*	*10-149*			
Surrogate: 2-Fluorophenol	*65*			*ug/L*	*100*		*65*	*10-110*			
Surrogate: Nitrobenzene-d5	*38*			*ug/L*	*50.0*		*76*	*10-149*			
Surrogate: Phenol-d5	*64*			*ug/L*	*100*		*64*	*10-88*			
Surrogate: Terphenyl-d14	*46*			*ug/L*	*50.0*		*92*	*10-188*			

LCS (4A23034-BS1) Prepared: 01/23/2014 12:00 Analyzed: 01/28/2014 16:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Chlorophenol	42		10	ug/L	50.0		85	40-109			

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 4A23034 - EPA 3510C_MS

LCS (4A23034-BS1) Continued Prepared: 01/23/2014 12:00 Analyzed: 01/28/2014 16:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
4-Chloro-3-methylphenol	46		10	ug/L	50.0		92	58-121			
4-Nitrophenol	31		10	ug/L	50.0		63	33-105			
Acenaphthene	46		10	ug/L	50.0		92	39-125			
N-Nitroso-di-n-propylamine	46		10	ug/L	50.0		93	48-126			
Phenol	33		10	ug/L	50.0		66	19-78			
Pyrene	46		10	ug/L	50.0		92	44-137			
Surrogate: 2,4,6-Tribromophenol	*92*			*ug/L*	*100*		*92*	*10-179*			
Surrogate: 2-Fluorobiphenyl	*45*			*ug/L*	*50.0*		*89*	*10-149*			
Surrogate: 2-Fluorophenol	*68*			*ug/L*	*100*		*68*	*10-110*			
Surrogate: Nitrobenzene-d5	*45*			*ug/L*	*50.0*		*89*	*10-149*			
Surrogate: Phenol-d5	*58*			*ug/L*	*100*		*58*	*10-88*			
Surrogate: Terphenyl-d14	*48*			*ug/L*	*50.0*		*95*	*10-188*			

Matrix Spike (4A23034-MS1) Prepared: 01/23/2014 12:00 Analyzed: 01/28/2014 17:40

Source: C400970-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Chlorophenol	43		10	ug/L	50.0	1.2 U	86	40-109			
4-Chloro-3-methylphenol	47		10	ug/L	50.0	1.5 U	94	58-121			
4-Nitrophenol	34		10	ug/L	50.0	2.0 U	68	33-105			
Acenaphthene	47		10	ug/L	50.0	1.4 U	93	39-125			
N-Nitroso-di-n-propylamine	46		10	ug/L	50.0	1.5 U	92	48-126			
Phenol	34		10	ug/L	50.0	1.4 U	68	19-78			
Pyrene	48		10	ug/L	50.0	2.1 U	96	44-137			
Surrogate: 2,4,6-Tribromophenol	*93*			*ug/L*	*100*		*93*	*10-179*			
Surrogate: 2-Fluorobiphenyl	*44*			*ug/L*	*50.0*		*87*	*10-149*			
Surrogate: 2-Fluorophenol	*68*			*ug/L*	*100*		*68*	*10-110*			
Surrogate: Nitrobenzene-d5	*44*			*ug/L*	*50.0*		*88*	*10-149*			
Surrogate: Phenol-d5	*58*			*ug/L*	*100*		*58*	*10-88*			
Surrogate: Terphenyl-d14	*47*			*ug/L*	*50.0*		*94*	*10-188*			

Matrix Spike Dup (4A23034-MSD1) Prepared: 01/23/2014 12:00 Analyzed: 01/28/2014 18:11

Source: C400970-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Chlorophenol	42		10	ug/L	50.0	1.2 U	84	40-109	3	22	
4-Chloro-3-methylphenol	46		10	ug/L	50.0	1.5 U	92	58-121	3	22	
4-Nitrophenol	35		10	ug/L	50.0	2.0 U	70	33-105	2	27	
Acenaphthene	46		10	ug/L	50.0	1.4 U	92	39-125	2	25	
N-Nitroso-di-n-propylamine	45		10	ug/L	50.0	1.5 U	90	48-126	3	23	
Phenol	34		10	ug/L	50.0	1.4 U	67	19-78	0.7	18	
Pyrene	47		10	ug/L	50.0	2.1 U	95	44-137	1	24	
Surrogate: 2,4,6-Tribromophenol	*92*			*ug/L*	*100*		*92*	*10-179*			
Surrogate: 2-Fluorobiphenyl	*42*			*ug/L*	*50.0*		*84*	*10-149*			
Surrogate: 2-Fluorophenol	*67*			*ug/L*	*100*		*67*	*10-110*			
Surrogate: Nitrobenzene-d5	*43*			*ug/L*	*50.0*		*86*	*10-149*			
Surrogate: Phenol-d5	*57*			*ug/L*	*100*		*57*	*10-88*			

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 4A23034 - EPA 3510C_MS

Matrix Spike Dup (4A23034-MSD1) Continued Prepared: 01/23/2014 12:00 Analyzed: 01/28/2014 18:11

Source: C400970-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Terphenyl-d14	*47*			*ug/L*	*50.0*		*94*	*10-188*			

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 4A23009 - EPA 7470A

Blank (4A23009-BLK1) Prepared: 01/23/2014 09:38 Analyzed: 01/24/2014 10:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.170	U	0.200	ug/L							

LCS (4A23009-BS1) Prepared: 01/23/2014 09:38 Analyzed: 01/24/2014 10:55

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.86		0.200	ug/L	5.00		97	80-120			

Matrix Spike (4A23009-MS1) Prepared: 01/23/2014 09:38 Analyzed: 01/24/2014 10:59

Source: C400414-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.19		0.200	ug/L	5.00	0.170 U	104	75-125			

Matrix Spike Dup (4A23009-MSD1) Prepared: 01/23/2014 09:38 Analyzed: 01/24/2014 11:01

Source: C400414-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.88		0.200	ug/L	5.00	0.170 U	98	75-125	6	25	

Post Spike (4A23009-PS1) Prepared: 01/23/2014 09:38 Analyzed: 01/24/2014 11:03

Source: C400414-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.70		0.200	ug/L	5.00	-0.0730	95	75-125			

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 4A22014 - EPA 3005A

Blank (4A22014-BLK1) Prepared: 01/22/2014 11:36 Analyzed: 01/24/2014 11:00

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (4A22014-BS1) Prepared: 01/22/2014 11:36 Analyzed: 01/24/2014 11:04

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

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 4A22014 - EPA 3005A

LCS (4A22014-BS1) Continued Prepared: 01/22/2014 11:36 Analyzed: 01/24/2014 11:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	203		2.00	ug/L	200		102	80-120			
Thallium	200		1.00	ug/L	200		100	80-120			

Matrix Spike (4A22014-MS1) Prepared: 01/22/2014 11:36 Analyzed: 01/24/2014 11:12

Source: C400457-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	209		2.00	ug/L	200	1.25	104	75-125			
Thallium	184		1.00	ug/L	200	0.110 U	92	75-125			

Matrix Spike Dup (4A22014-MSD1) Prepared: 01/22/2014 11:36 Analyzed: 01/24/2014 11:16

Source: C400457-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	208		2.00	ug/L	200	1.25	103	75-125	0.4	20	
Thallium	183		1.00	ug/L	200	0.110 U	92	75-125	0.5	20	

Post Spike (4A22014-PS1) Prepared: 01/22/2014 11:36 Analyzed: 01/24/2014 11:20

Source: C400457-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	210		2.00	ug/L	200	1.25	104	80-120			
Thallium	186		1.00	ug/L	200	0.0568	93	80-120			

Batch 4A22017 - EPA 3005A

Blank (4A22017-BLK1) Prepared: 01/22/2014 11:39 Analyzed: 01/23/2014 11:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	5.40	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	2.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Selenium	5.00	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Tin	2.10	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

LCS (4A22017-BS1) Prepared: 01/22/2014 11:39 Analyzed: 01/23/2014 11:08

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

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 4A22017 - EPA 3005A

LCS (4A22017-BS1) Continued Prepared: 01/22/2014 11:39 Analyzed: 01/23/2014 11:08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	209		10.0	ug/L	200		105	80-120			
Barium	210		10.0	ug/L	200		105	80-120			
Beryllium	20.2		1.00	ug/L	20.0		101	80-120			
Cadmium	20.4		1.00	ug/L	20.0		102	80-120			
Chromium	201		10.0	ug/L	200		101	80-120			
Cobalt	204		10.0	ug/L	200		102	80-120			
Copper	197		10.0	ug/L	200		99	80-120			
Lead	204		10.0	ug/L	200		102	80-120			
Nickel	207		10.0	ug/L	200		104	80-120			
Selenium	203		10.0	ug/L	200		101	80-120			
Silver	207		10.0	ug/L	200		103	80-120			
Tin	202		10.0	ug/L	200		101	80-120			
Vanadium	205		10.0	ug/L	200		102	80-120			
Zinc	209		10.0	ug/L	200		104	80-120			

Matrix Spike (4A22017-MS1) Prepared: 01/22/2014 11:39 Analyzed: 01/23/2014 11:13

Source: C400457-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200	7.12	99	75-125			
Barium	245		10.0	ug/L	200	38.0	103	75-125			
Beryllium	20.4		1.00	ug/L	20.0	0.100 U	102	75-125			
Cadmium	20.2		1.00	ug/L	20.0	0.360 U	101	75-125			
Chromium	203		10.0	ug/L	200	1.80	101	75-125			
Cobalt	207		10.0	ug/L	200	5.59	101	75-125			
Copper	207		10.0	ug/L	200	9.65	99	75-125			
Lead	202		10.0	ug/L	200	2.10 U	101	75-125			
Nickel	210		10.0	ug/L	200	4.50	103	75-125			
Selenium	203		10.0	ug/L	200	5.00 U	101	75-125			
Silver	206		10.0	ug/L	200	1.90 U	103	75-125			
Tin	200		10.0	ug/L	200	2.10 U	100	75-125			
Vanadium	208		10.0	ug/L	200	2.12	103	75-125			
Zinc	253		10.0	ug/L	200	50.0	102	75-125			

Matrix Spike Dup (4A22017-MSD1) Prepared: 01/22/2014 11:39 Analyzed: 01/23/2014 11:15

Source: C400457-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	211		10.0	ug/L	200	7.12	102	75-125	3	20	
Barium	249		10.0	ug/L	200	38.0	105	75-125	2	20	
Beryllium	20.3		1.00	ug/L	20.0	0.100 U	102	75-125	0.5	20	
Cadmium	20.6		1.00	ug/L	20.0	0.360 U	103	75-125	2	20	
Chromium	203		10.0	ug/L	200	1.80	101	75-125	0.2	20	
Cobalt	210		10.0	ug/L	200	5.59	102	75-125	2	20	
Copper	207		10.0	ug/L	200	9.65	98	75-125	0.4	20	
Lead	206		10.0	ug/L	200	2.10 U	103	75-125	2	20	
Nickel	214		10.0	ug/L	200	4.50	105	75-125	2	20	
Selenium	204		10.0	ug/L	200	5.00 U	102	75-125	0.6	20	

QUALITY CONTROL

Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 4A22017 - EPA 3005A

Matrix Spike Dup (4A22017-MSD1) Continued Prepared: 01/22/2014 11:39 Analyzed: 01/23/2014 11:15

Source: C400457-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	205		10.0	ug/L	200	1.90 U	103	75-125	0.3	20	
Tin	204		10.0	ug/L	200	2.10 U	102	75-125	2	20	
Vanadium	207		10.0	ug/L	200	2.12	102	75-125	0.4	20	
Zinc	258		10.0	ug/L	200	50.0	104	75-125	2	20	

Post Spike (4A22017-PS1) Prepared: 01/22/2014 11:39 Analyzed: 01/23/2014 11:18

Source: C400457-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.205		0.0100	mg/L	0.200	0.00712	99	80-120			
Barium	0.244		0.0100	mg/L	0.200	0.0380	103	80-120			
Beryllium	0.0199		0.00100	mg/L	0.0200	7.70E-5	99	80-120			
Cadmium	0.0202		0.00100	mg/L	0.0200	0.000219	100	80-120			
Chromium	0.199		0.0100	mg/L	0.200	0.00180	98	80-120			
Cobalt	0.206		0.0100	mg/L	0.200	0.00559	100	80-120			
Copper	0.203		0.0100	mg/L	0.200	0.00965	96	80-120			
Lead	0.203		0.0100	mg/L	0.200	0.00120	101	80-120			
Nickel	0.209		0.0100	mg/L	0.200	0.00450	102	80-120			
Selenium	0.204		0.0100	mg/L	0.200	0.000219	102	80-120			
Silver	0.200		0.0100	mg/L	0.200	0.000653	100	80-120			
Tin	0.200		0.0100	mg/L	0.200	0.000881	100	80-120			
Vanadium	0.202		0.0100	mg/L	0.200	0.00212	100	80-120			
Zinc	0.254		0.0100	mg/L	0.200	0.0500	102	80-120			

Classical Chemistry Parameters - Quality Control

Batch 4A22038 - NO PREP

Blank (4A22038-BLK1) Prepared & Analyzed: 01/22/2014 18:14

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Turbidity	0.50	U	1.0	NTU							

LCS (4A22038-BS1) Prepared & Analyzed: 01/22/2014 18:14

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Turbidity	20		1.0	NTU	20.0		99	90-110			

Duplicate (4A22038-DUP1) Prepared & Analyzed: 01/22/2014 18:14

Source: C315797-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Turbidity	3.0		1.0	NTU		3.1			3	25	

Duplicate (4A22038-DUP2) Prepared & Analyzed: 01/22/2014 18:14

Source: C315797-02

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 4A22038 - NO PREP

Duplicate (4A22038-DUP2) Continued Prepared & Analyzed: 01/22/2014 18:14

Source: C315797-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Turbidity	15		1.0	NTU		15			0.7	25	

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.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, the impact on data quality is minimal.
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page ____ of ____

Client Name: Shield Engineering, Inc. (SH007)	Project Number: 1110192
Address: 4301 Taggart Creek Road	Project Name/Desc: Albemarle Closed LF
City/ST/Zip: Charlotte, NC 28208	PO # / Billing Info:
Tel: (704) 394-6913 Fax: (704) 394-6968	Reporting Contact: Danny Hefner
Sampler(s) Name, Affiliation (Print): DANNY HEFNER, JOHN HUDSPETH/SHIELD	Billing Contact: Accounts Payable
Sampler(s) Signature: [signature] [signature]	Site Location / Time Zone: NC / EASTERN

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

___ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C400457

Requested Analyses

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	8260B Appendix 1,8260B Extended	8260B Appendix 2,8260B Extended	8270D Appendix 2	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Se,Sn,Ti,V,Zn	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Se,Ti,V,Zn	Hg	Turbidity SM2130B			Sample Comments
	8401-MW1	1-21-14	08:45	GRAB	GW	5		X				X		X			
	8401-MW2		09:30		GW	5		X				X		X			
	8401-MW3		11:31		GW	5		X				X		X			
	8401-MW4R		10:25		GW	4		X				X					
	8401-MW5R		10:12		GW	4		X				X					
	8401-MW6		09:40		GW	5		X				X		X			
	8401-MW7		09:18		GW	5		X				X		X			
	8401-MW8D		09:05		GW	4		X				X					
	8401-MW9		10:54		GW	5		X				X		X			
	8401-MW10		11:08		GW	5		X				X		X			
	8401-MW11		11:43		GW	5		X				X		X			
	8401-MW12		12:08		GW	5			X		X		X	X			
						<-- Total # of Containers											

Preservation (See Codes) (Combine as necessary)

Sample Kit Prepared By: RAY	Date/Time: 1/15	Relinquished By: [signature]	Date/Time:	Received By: [signature]	Date/Time: 1/21/14 1630
Comments/Special Reporting Requirements:		Relinquished By:	Date/Time:	Received By: [signature]	Date/Time: 1-22-14 10:40
		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Cooler #'s & Temps on Receipt: 1.8c		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

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page ____ of ____

Client Name: Shield Engineering, Inc. (SH007)	Project Number: 1110192
Address: 4301 Taggart Creek Road	Project Name/Desc: Albemarle Closed LF
City/ST/Zip: Charlotte, NC 28208	PO # / Billing Info:
Tel: (704) 394-6913 Fax: (704) 394-6968	Reporting Contact: Danny Hefner
Sampler(s) Name, Affiliation (Print): DANNY HEFNER, JOHN HUDSPETH / SHIELD	Billing Contact: Accounts Payable
Sampler(s) Signature: [signature]	Site Location / Time Zone: NC

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

___ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C400457

Requested Analyses / Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	8260B Appendix 1,8260B Extended	8260B Appendix 2,8260B Extended	8270D Appendix 2	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Se,Sn,Ti,V,Zn	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Se,Ti,V,Zn	Hg	Turbidity SM2130B			Sample Comments
	8401-MW13		12:35		GW	5			X		X		X	X			
	8401-MW23		12:25		GW	6			X	X	X		X	X			
	8401-MW29		09:55		GW	4	X					X					
	8401-Trip Blank		—		GW	3		X									
	8401-Bailer Blank		11:23		GW	4		X			X		X				
	8401-Field Blank		12:18		GW	4		X				X					

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By: [signature]	Date/Time	Received By: [signature]	Date/Time: 1/21/14 1630
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By: [signature]	Date/Time: 1-22-14 1040
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt		Condition Upon Receipt: ✓ Acceptable ___ Unacceptable	

atrix : **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