OCTOBER 2013
SEMI-ANNUAL MONITORING OF GROUNDWATER AND SURFACE WATER

LINCOLN COUNTY LANDFILL
PERMIT # 55-03
LINCOLN COUNTY
CROUSE, NORTH CAROLINA
S&ME PROJECT No. 1356-07-004

Prepared for:

LINCOLN COUNTY
5291 Crouse Road
Crouse, North Carolina 28033

Prepared by:

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November 12, 2013

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

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

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

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- In Accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

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

Consultant - S&ME, INC.

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

Name: Courtney W. Murphy, P.G. Phone: 704-523-4726

E-mail: cmurphy@smeinc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Lincoln County Landfill	5291 Crouse Rd. Crouse, NC 28033	55-03	.0500 and .1600	October 7-9, 2013

Environmental Status: (Check all that apply)

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

Type of data submitted: (Check all that apply)

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

Notification attached?

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

Certification

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

Courtney W. Murphy, P.G. — Facility Representative Name (Print)

Project Geologist — Title

704-523-4726 — (Area Code) Telephone Number

Courtney W. Murphy — Signature

11-12-13 — Date

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

NORTH CAROLINA LICENSED SEAL 2203 11-12-13 GEOLOGIST COURTNEY WITHERS MURPHY

Revised 10/2006

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1.0 INTRODUCTION

S&ME, Inc. (S&ME) was contracted by Lincoln County to provide groundwater, surface water, and leachate monitoring services at the Lincoln County Landfill located at 5291 Crouse Road in Crouse, North Carolina. This semi-annual monitoring event was conducted October 7 through October 9, 2013.

This report presents the results of the second semi-annual sampling event for the year 2013 at the facility. The facility's monitoring network includes one (1) background well (MW-1A), twenty-nine (29) compliance wells, six (6) surface water sample locations, and one (1) leachate sample. The next sampling event is scheduled for April 2014.

2.0 GROUNDWATER LEVELS AND FLOW DATA

The water table elevations and our interpretation of the groundwater surface expressed as a potentiometric map along with groundwater flow direction are shown on ***Figure 1***. Based upon the groundwater elevations in the vicinity of the landfill, groundwater in this area is projected to flow primarily to the south, with secondary flow toward the southwest and southeast toward tributaries located east and west of the landfills. Groundwater levels for the monitoring wells are presented in ***Table 1***.

3.0 ANALYTICAL DATA

Analytical results for the landfill monitoring wells, surface water samples, and leachate sample are summarized in ***Tables 2 through 8***. Detections above the NCAC 2L .0202 Groundwater Quality Standards (2L Standards), NCAC 2B surface water standards (2B Standards), and/or SW GWP Standard are highlighted in gray. Well sampling logs containing field measurements of pH, conductivity, temperature and water levels are included in ***Appendix I***.

3.1 Groundwater Monitoring Well Sampling

3.1.1 MSW Area "E" and Phase 1

MSW Area "E" and Phase 1 groundwater monitoring well locations were sampled for Appendix I volatile organic compounds (VOCs) and Appendix I metals. In addition to Appendix I VOCs and metals, the groundwater analysis for background monitoring well MW-1A also included inorganic constituents iron and manganese. A summary of the detected analytes associated with this Phase of the landfill is included as ***Table 2***. The groundwater monitoring wells associated with these areas include background well MW-1A, compliance wells MW-8, MW-9, and MW-10R that monitor the abandoned leachate pond, and compliance wells MW-12 through MW-20 that monitor down gradient and side gradient of the unlined MSW landfill Area "E" and the lined MSW landfill identified as Phase 1.

Based on the laboratory analytical reports, fourteen (14) VOCs and fifteen (15) metals were detected in MSW Area "E" and Phase 1 groundwater monitoring wells during the

October 2013 monitoring event. Please note that groundwater monitoring well MW-8 was dry during the October 2013 sampling event, and was not sampled.

3.1.1.1 Volatile Organic Compounds (VOCs)

Background monitoring well MW-1A had a detection of Chloroform at a concentration of 17 micrograms per liter (µg/L), which is below the 2L Standard of 70 µg/L. Both Bromoform and Chloroform have historically been detected in monitoring well MW-1A which are commonly associated with chlorinated municipal water. Due to MW-1A's close proximity to Crouse Road, it is likely the detection of Chloroform in the well is from a leaking nearby municipal water or sewer line.

No VOCs were detected in groundwater monitoring wells MW-9, MW-10R, MW-12, MW-15, and MW-18 during the October 2013 monitoring event.

Monitoring wells MW-13, MW-14, MW-16R, MW-17, MW-19, and MW-20 contained one (1) or more of the total fourteen (14) VOCs detected. Of the VOCs detected, four (4) compounds were detected above their respective 2L Standard: 1,1-Dichloroethane, Benzene, Tetrachloroethene, and Vinyl Chloride. Please note that groundwater monitoring well MW-14 had no VOC detections above respective 2L Standards.

The analytical results for groundwater monitoring well MW-13 indicated that 1,1-Dichloroethane, Benzene, Tetrachloroethene, and Vinyl Chloride were detected above their respective 2L Standards. The results of which are as follows:

- 1,1-Dichloroethane detected at 12 µg/L. 2L Standard is 6 µg/L.
- Benzene detected at 4.6 µg/L. 2L Standard is 1 µg/L.
- Tetrachloroethane detected at 2.8 µg/L. 2L Standard is 0.7 µg/L.
- Vinyl chloride detected at 0.93 J µg/L. 2L Standard is 0.03 µg/L.

The results for groundwater monitoring well MW-16R indicated that Benzene and Vinyl Chloride were detected above their respective 2L Standard. The results of which are as follows:

- Benzene detected at 5.8 µg/L. 2L Standard is 1 µg/L.
- Vinyl chloride detected at 3.7 µg/L. 2L Standard is 0.03 µg/L.

The results for groundwater monitoring well MW-17 indicated that Tetrachloroethene was detected above its respective 2L Standard. Tetrachloroethene was detected at 2.0 µg/L, the 2L Standard is 0.7 µg/L.

The results for groundwater monitoring well MW-19 indicated that 1,1-Dichloroethane, Benzene, and Tetrachloroethene were detected above their respective 2L Standards. The results of which are as follows:

- 1,1-Dichloroethane detected at 11 µg/L. 2L Standard is 6 µg/L.
- Benzene detected at 1.5 µg/L. 2L Standard is 1 µg/L.
- Tetrachloroethane detected at 2.5 µg/L. 2L Standard is 0.7 µg/L.

Groundwater monitoring wells MW-13, MW-14, MW-16R, MW-17, MW-19 and MW-20 monitor down gradient and side gradient of the of the unlined Area "E" landfill, and

the volatile organic constituents detected in these wells are associated with the unlined landfill section.

3.1.1.2 Inorganic Constituents (Metals)

The groundwater monitoring wells associated with the MSW Area "E" and Phase 1 landfills had two (2) or more Appendix I metals detected. Six (6) constituents were detected above their respective 2L Standard or SW GWP Standard: Antimony, Arsenic, Cobalt, Iron, Thallium, and Vanadium.

Antimony was detected above its SW GWP Standard of 1.4 µg/L in background monitoring well MW-1A and compliance monitoring wells MW-9, MW-13, and MW-14 at concentrations ranging from 2.79 J to 7.32 µg/L.

Arsenic was detected above its 2L Standard of 10 µg/L in groundwater monitoring well MW-16R at a concentration of 12.2 µg/L.

Cobalt was detected above its SW GWP Standard of 70 µg/L in groundwater monitoring well MW-13 at a concentration of 250 µg/L.

Iron was detected above its 2L Standard of 300 µg/L in the background groundwater monitoring well MW-1A at a concentration of 2,600 µg/L.

Thallium was detected above its SW GWP Standard of 0.28 µg/L in groundwater monitoring wells MW-13 and MW-16R at concentrations of 0.740 J and 0.723 J µg/L, respectively.

Vanadium was detected above its SW GWP Standard of 0.3 µg/L in background groundwater monitoring well MW-1A at a concentration of 4.78 J µg/L and compliance groundwater monitoring well MW-10R at a concentration of 8.75 J µg/L.

Total metal concentrations in groundwater sampled from wells are often dependant on the turbidity or suspended particulates (from the aquifer formation) retrieved with the groundwater sample. The turbidity is a function of the sampling method, well construction, how the well was developed, and the grain size/consolidation of the lithologic unit sampled. Since the unfiltered samples are acidified in the field at the time of collection, metals contained within the particulates are dissolved into the sample. Thus, the presence of turbidity in groundwater samples often results in elevated (false positive) analytical results for total metal concentrations. Therefore, the presence of elevated total metal concentrations does not necessarily correlate with groundwater impact.

Based on historical water quality data, the background well and each of the compliance groundwater monitoring wells (excluding MW-19) have contained at least one (1) total metal at concentrations above the 2L Standards. Metal concentrations in several wells have fluctuated below and above detection limits. In background well MW-1A, beryllium, cadmium, chromium, cobalt, iron, lead, silver, and vanadium have been detected at concentrations above the 2L Standards. Based on this data, it appears that the

majority of the metals detected within the monitoring wells are either naturally occurring or a product of turbidity during sampling.

3.1.2 MSW Phase 2

MSW Phase 2 groundwater monitoring well locations were sampled for Appendix I VOCs and Appendix I metals. A summary of the detected analytes associated with this Phase of the landfill is included as ***Table 3***. The groundwater monitoring wells associated with this Phase are compliance wells MW-21 and MW-24 that monitor side gradient of the landfill and MW-25 and MW-25A that monitor the Phase 2 sump.

3.1.2.1 Volatile Organic Compounds (VOCs)

No VOCs were detected in the MSW Phase 2 monitoring wells during the October 2013 monitoring event.

3.1.2.2 Inorganic Constituents (Metals)

The groundwater monitoring wells associated with the Phase 2 landfill had two (2) or more Appendix I metals detections, two (2) of which were detected above their respective 2L Standard or SW GWP Standard. The detections above standards are as follows:

- Antimony was detected above the SW GWP Standard of 1.4 µg/L in groundwater monitoring well MW-25A at a concentration of 1.84 J µg/L.
- Vanadium was detected above the SW GWP Standard of 0.3 µg/L in groundwater monitoring well MW-25A at a concentration of 3.85 J µg/L.

As previously discussed above, it appears that the majority of the metals detected within the groundwater monitoring wells are either naturally occurring or a product of turbidity during sampling.

3.1.3 MSW Phase 3

MSW Phase 3 groundwater monitoring well locations were sampled for Appendix I VOCs and Appendix I metals. A summary of the detected analytes associated with this phase of the landfill is included in ***Table 4***. The groundwater monitoring wells associated with this area include compliance wells MW-32R and MW-34 that monitor down gradient and side gradient of the landfill and MW-33/33A and MW-35/35A that monitor the Phase 3 sump locations.

3.1.3.1 Volatile Organic Compounds (VOCs)

No VOCs were detected in the MSW Phase 3 monitoring wells during the October 2013 monitoring event.

3.1.3.2 Inorganic Constituents (Metals)

The groundwater monitoring wells associated with the Phase 3 landfill had three (3) or more Appendix I metals detected, two (2) of which were detected above their respective 2L Standard or SW GWP Standard. The detections above standards are as follows:

- Antimony was detected above the SW GWP Standard of 1.4 µg/L in groundwater monitoring well MW-33A at a concentration of 1.66 J µg/L, respectively.

- Vanadium was detected above the SW GWP Standard of 0.3 µg/L in groundwater monitoring well MW-35A at a concentration of 2.78 J µg/L, respectively.

As previously discussed above, it appears that the majority of the metals detected within the groundwater monitoring wells are either naturally occurring or a product of turbidity during sampling.

3.1.4 C&D Landfill Phase 1 and Phase 2

C&D Landfill Phase 1 and Phase 2 groundwater monitoring well locations were sampled for Appendix I VOCs; Appendix I metals plus mercury, manganese, and iron; and four (4) classical chemistry compounds: Chloride, Total Dissolved Solids, Sulfate, and Alkalinity. A summary of the detected analytes associated with the C&D Landfills is included as ***Table 5*** and ***6***. The groundwater monitoring wells associated with the C&D landfill include compliance wells MW-26, MW-27, and MW-28 that monitor Phase 1 and MW-29, MW-30, MW-31, and MW-36 that monitor Phase 2. Groundwater monitoring well MW-36 was installed near the C&D compliance boundary as part of the 2013 C&D Assessment. The October 2013 sampling event was the first sampling event for groundwater monitoring well MW-36.

3.1.4.1 Volatile Organic Compounds (VOCs)

C&D Landfill groundwater monitoring wells had six (6) VOCs detected during the October 2013 monitoring event, two (2) of which were detected above their respective 2L Standard.

- Tetrachloroethene was detected in groundwater monitoring well MW-28 at a concentration of 6.8 µg/L, which is above its 2L Standard of 0.7 µg/L.
- Vinyl Chloride was detected in groundwater monitoring well MW-28 at a concentration of 0.53 J gµ/L, which is above its 2L Standard of 0.03 µg/L.

3.1.4.2 Inorganic Constituents (Metals)

The groundwater monitoring wells associated with the C&D landfill had five (5) or more metals detections, and three (3) constituents were detected above their respective 2L Standard and/or SW GWP Standard. The detections above standards are as follows:

- Iron was detected in groundwater monitoring wells MW-26, MW-27, MW-29, MW-30, MW-31, and MW-36 at concentrations ranging from 589 to 22400 µg/L, which are above the 2L Standard of 300 µg/L.
- Manganese was detected in groundwater monitoring wells MW-27 and MW-29 at concentrations of 1330 and 53.6 µg/L, respectively, which are above the 2L Standard of 50 µg/L.
- Vanadium was detected in groundwater monitoring wells MW-26, MW-30, MW-31, and MW-36 at concentrations ranging from 1.47 J to 3.54 J µg/L, which are above the SW GWP Standard of 0.3 µg/L.

As previously discussed above, it appears that the majority of the metals detected within the groundwater monitoring wells are either naturally occurring or a product of turbidity during sampling. Since October 2007, Iron and Manganese have been included in the analysis for the C&D wells, and since April 2008, Iron and Manganese were included in

the analysis for the background well MW-1A. Iron and Manganese have been detected in MW-1A in each monitoring event that has included their analysis.

3.1.4.3 Classical Chemistry Compounds

Total Dissolved Solids, Chloride, Sulfate, and Alkalinity were analyzed for in the C&D landfill groundwater monitoring wells. The results of the analyses are summarized in ***Tables 5 and 6***. Please note that none of the classical chemistry compounds analyzed for exceeded any of the established 2L Standards and/or SW GWP Standards.

3.2 Surface Water Sampling

Lincoln County Landfill has five (5) surface water sampling locations positioned in the tributaries located to the east, south, and west of the landfill as indicated on the attached ***Figure 1***. The original five (5) surface water samples are analyzed for Appendix I VOCs and Appendix I metals plus Mercury, Iron and Manganese. Beginning with the April 2010 sampling event, a sixth (6th) surface water sample location was added to the semi-annual monitoring plan, SW-6. The addition of SW-6 to the monitoring plan was in response to the January 2009 leachate release at the facility. SW-6 is located at the discharge of the lowland area downgradient from the leachate holding tanks as indicated on the attached ***Figure 1***. A summary of the detected analytes associated with the surface water samples collected is included as ***Table 7***.

3.2.1 Surface Water Locations SW-1 through SW-5

Surface water sampling location SW-1 had one (1) VOC detected during the October 2013 monitoring event. Chloroform was detected at a concentration of 0.84 J µg/L. There is not a 2B Standard established for Chloroform. This constituent is commonly associated with chlorinated municipal water, and it is likely that a source of municipal water entered the stream prior to sampling. More specifically, it is likely that the source is a hydrant located upgradient of SW-1 near the facility office, that is purged daily and water from the hydrant drains towards SW-1.

Surface water sampling location SW-3 had one (1) VOC detected during the October 2013 monitoring event. Toluene was detected at a concentration of 3.0 µg/L, which is below its respective 2B Standard of 11 µg/L.

Surface water sampling locations SW-2, SW-4, and SW-5 had no volatile organic compounds detected during the October 2013 monitoring event.

Four (4) or more metals were detected in surface water sampling locations SW-1, SW-2, SW-3, SW-4, and SW-5, two (2) of which were detected above their respective 2B Standard.

- Iron was detected in surface water locations SW-3 and SW-5 at concentrations of 17,300 µg/L and 35,500 µg/L, respectively. The 2B Standard for Iron is 1,000 µg/L.
- Zinc was detected in surface water location SW-1 at a concentration of 653 µg/L. The 2B Standard for Zinc is 50 g/L.

Please note that surface water sampling locations SW-3 and SW-5 were noted to be visually turbid and sediment laden at the time of sampling.

3.2.2 Surface Water Location SW-6

Surface water from SW-6 is analyzed for Appendix I VOCs, Appendix I metals, and classic chemistry compounds : Biologic Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Nitrate/Nitrite, Sulfate, Total Suspended Solids (TSS), and Phosphorous.

One (1) VOC was detected in surface water SW-6, Acetone, at a concentration of 1.2 J µg/L, which is below the 2B Standard of 2000 µg/L.

Seven (7) metals were detected in surface water SW-6, one (1) of which was detected above its respective 2B Standard. Zinc was detected at a concentration of 53.2 µg/L. The 2B Standard for Zinc is 50 µg/L.

3.3 Leachate Sampling

A sample of the leachate from the leachate collection system for the landfill was collected from the lift station prior to leachate entering the on-site leachate holding tanks. The leachate sample was analyzed for Appendix I VOCs, Appendix I metals, BOD, COD, Nitrate/Nitrite, Sulfate, TSS, and Phosphorous. A summary of the detected analytes for the leachate is included as ***Table 8***.

4.0 STATISTICAL ANALYSIS

S&ME compared the water quality data with the 2L Standards and the SW GWP standards and performed a statistical evaluation of the data. S&ME utilized three (3) statistical methods to evaluate statistically significant increases between the compliance monitoring wells and the background monitoring well (MW-1A).

The first method utilized was a one-way parametric Analysis of Variance (Parametric ANOVA). The parametric ANOVA analysis is recommended by the 1992 guidance document for parameters with fewer than 15% non-detects in a specific well.

The second method used was the Kruskal-Wallis non-parametric rank method. The Kruskal-Wallis method is recommended by the 1992 guidance document for parameters that have 15% to 90% non-detects in a specific well.

The third method used was an inter-well non-parametric prediction limit. The prediction limit was used for parameters with greater than 90% non-detects in a specific well. The 1992 guidance document recommends this method when a significant portion of the samples are non-detect.

Tables 9 through 11 summarize the results of the statistical analysis. Copies of the analytical procedures used to perform the analysis used by the ChemStat® software are included in ***Appendix II***. A copy of the statistical analysis results, for parameters with detections, has been included on the attached CD.

4.1 Volatile Organic Compounds (VOCs)

One (1) or more volatile organic compounds were found to have a statistical increase over background concentrations in groundwater monitoring wells MW-13, MW-14, MW-16(16R), MW-19, and MW-20 that are located downgradient from the unlined closed landfill Area "E". The statistical increases are as follows:

- 1,1-Dichloroethane in groundwater monitoring wells MW-13, MW-14, MW-16(16R), MW-19 and MW-20. It should be noted that concentrations of 1,1-Dichloroethene in MW-13 and MW-16 have decreased over time.
- 1,4-Dichlorobenzene in groundwater monitoring wells MW-13 and MW-16(16R).
- Acetone in groundwater monitoring well MW-13. It should be noted that concentrations of acetone in MW-13 vary from detect to non-detect.
- Benzene in groundwater monitoring wells MW-13 and MW-16(16R).
- cis-1,2-Dichloroethene in groundwater monitoring wells MW-13 and MW-16(16R).
- Chlorobenzene in groundwater monitoring well MW-16(16R). It should be noted that October 2013 is the first statistically significant increase (SSI) for Chlorobenzene in MW-16(16R).
- Chloroethane in groundwater monitoring wells MW-13 and MW-16(16R). It should be noted that concentrations of Chloroethane in well MW-13 have decreased over time and the concentrations in MW-16(16R) fluctuate between detect and non-detect.
- Methylene Chloride in groundwater monitoring wells MW-13, MW-16(16R), MW-19 and MW-20. It should be noted that concentrations of Methylene Chloride in MW-13, MW-19 and MW-20 have decreased over time, and the concentrations in MW-16(16R) have been below detection limits since October 2011.
- Tetrachloroethene in groundwater monitoring wells MW-13 and MW-19.
- Trichloroethene in groundwater monitoring wells MW-13 and MW-19.
- Vinyl Chloride in groundwater monitoring well MW-16(16R). It should be noted that concentrations of Vinyl Chloride in MW-16(16R) have decreased over time.
- Total Xylenes in groundwater monitoring wells MW-13 and MW-16(16R). It should be noted that concentrations of Total Xylenes in MW-16(16R) have been below detection limits since April 2013.

There were no volatile organic compounds with statistically significant increases over background for the Phase 2 and Phase 3 MSW wells. Graphs depicting concentrations over time for constituents with a statistical increase are provided in ***Appendix III***.

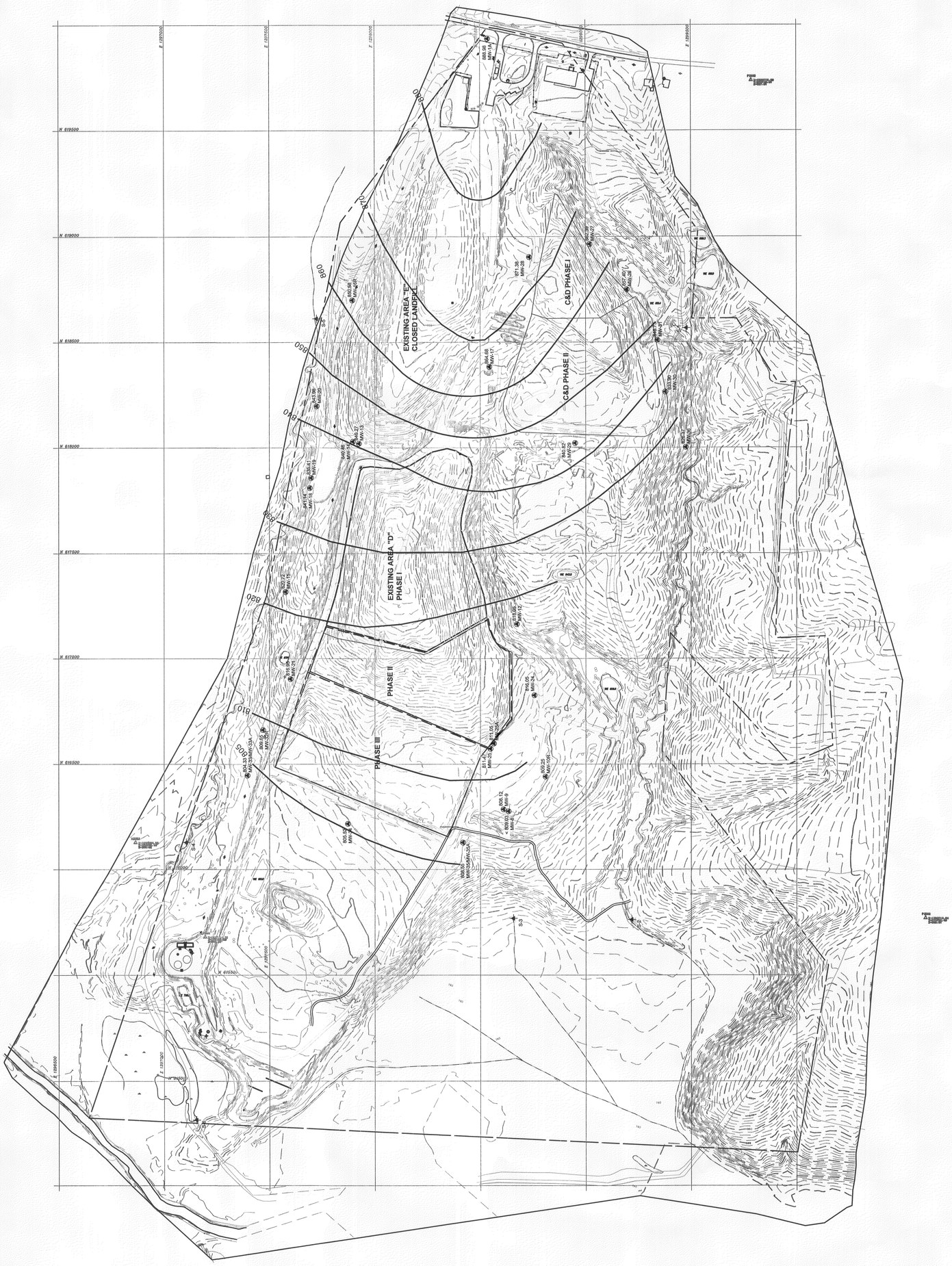
4.2 Total Metals

Total metal concentrations in groundwater sampled from wells are often dependent on the turbidity or suspended particulates (from the aquifer formation) retrieved with the groundwater sample. The turbidity is a function of the sampling method, well construction, how the well was developed, and the grain size/consolidation of the lithologic unit sampled. Since the unfiltered samples are acidified in the field at the time of sample collection, metals contained within the particulates are dissolved into the water sample. Thus, the presence of turbidity in groundwater samples often results in elevated

(false positive) analytical results for total metal concentrations. Therefore, the presence of elevated total metal concentrations does not necessarily correlate with groundwater impact.

Based on the historical water quality data, the background well and each of the compliance groundwater monitoring wells (excluding MW-19, 22, 24 and 25) have contained at least one (1) total metal at concentrations above the 2L Standards. The statistical evaluation indicates that eight (8) of the compliance groundwater monitoring wells (MW-8, 12, 13, 15, 16, 17, 33A, and 34,) contained at least one (1) metal at a statistically significant level higher than the background well. Metal concentrations in several wells have fluctuated between non-detect and detect. In the background well, MW-1A, antimony, beryllium, cadmium, chromium, cobalt, iron, lead, silver, and vanadium have been detected at concentrations above the 2L Standards. Graphs depicting concentrations over time for constituents with a statistical increase are provided in ***Appendix III***.

FIGURES


EXISTING AREA "E"
CLOSED LANDFILL
C&D PHASE I
C&D PHASE II
EXISTING AREA "D"
PHASE I
PHASE II
PHASE III
S-1
S-2
S-3
N 619500
N 619000
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TABLES

Table 1
October 2013 - Water Level Elevations
Lincoln County Landfill
S&ME Project No. 1356-07-004

Well Identification		Top of Casing Elevation (ft - MSL)	Depth to Groundwater From Top of Casing (ft)	Groundwater Elevation (ft - MSL)
Background Well	MW-1A	929.27	40.29	888.98
Leachate Lagoon	MW-8	840.03	>31.00	<809.03
Leachate Lagoon	MW-9	840.20	32.08	808.12
Leachate Lagoon	MW-10R	834.97	25.72	809.25
Area "E" and Phase 1	MW-12	827.57	9.52	818.05
Area "E" and Phase 1	MW-13	872.78	32.51	840.27
Area "E" and Phase 1	MW-14	871.44	30.98	840.46
Area "E" and Phase 1	MW-15	847.86	27.14	820.72
Area "E" and Phase 1	MW-16R	876.39	15.81	860.58
Area "E" and Phase 1	MW-17	899.64	34.96	864.68
Area "E" and Phase 1	MW-18	861.41	20.27	841.14
Area "E" and Phase 1	MW-19	862.40	26.99	835.41
Area "E" and Phase 1	MW-20	860.00	16.02	843.98
Phase 2	MW-21	855.91	38.96	816.95
Phase 2	MW-24	841.13	25.08	816.05
Phase 2	MW-25	838.73	27.26	811.47
Phase 2	MW-25A	838.84	27.79	811.05
C&D Phase 1	MW-26	871.19	13.79	857.40
C&D Phase 1	MW-27	880.90	18.51	862.39
C&D Phase 1	MW-28	915.68	44.30	871.38
C&D Phase 2	MW-29	879.97	39.15	840.82
C&D Phase 2	MW-30	886.35	52.45	833.90
C&D Phase 2	MW-31	879.88	31.15	848.73
Phase 3	MW-32R	827.25	17.60	809.65
Phase 3	MW-33	819.38	15.05	804.33
Phase 3	MW-33A	818.67	14.94	803.73
Phase 3	MW-34	832.77	27.25	805.52
Phase 3	MW-35	839.64	31.09	808.55
Phase 3	MW-35A	839.65	32.39	807.26
C&D Phase 1	MW-36	854.83	28.46	826.37

Notes:

(ft - MSL) - Feet Mean Sea Level

(ft) - Feet

The "A" suffix on the well locations indicates the deep well of the pair.

Notes for Tables 2 through 8
S&ME Project No. 1356-07-004

Notes:

(1) ug/L = micrograms per liter (parts per billion)

(2) mg/L = milligrams per liter (parts per million)

(3) 15A NCAC 2L = North Carolina Groundwater Quality Standards

(4) 15A NCAC 2B = North Carolina Surface Water Quality Standards

(5) GWP ST = Solid Waste Groundwater Protection Standard

(6) NE = No established standard

(7) Bold and highlighted indicates above 15A NCAC 2L, 15A NCAC 2B, or SW GWP standard

(8) Compounds not shown were not detected.

(9) SWSL = North Carolina Department of Environmtent and Natural Resources Solid Waste Section Limit established in 2007

(10) NA = Not Analyzed

(11) J = Analyte detected is between the Method Detection Limit (MDL) and the SWSL

(12) B = Analyte was detected in the associated method blank

(13) D = The sample was analyzed at dilution

Table 2
October 2013 - Detected Analytes in Monitoring Wells for MSW Area "E" and Phase 1
Lincoln County Landfill
S&ME Project No. 1356-07-004

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	**NCDENR SWSL**	**15A NCAC 2L**	**Soild Waste GWP ST**	**MW-1A**	**MW-8**	**MW-9**	**MW-10R**	**MW-12**	**MW-13**	**MW-14**	**MW-15**	**MW-16R**	**MW-17**	**MW-18**	**MW-19**	**MW-20**
1,1-Dichloroethane	5	6	NE		DRY				**12**	2.0 J		2.9 J	1.3 J		**11**	**14**
1,4 - Dichlorobenzene	1	6	NE						2.6			3.7				1.0
cis-1,2,-Dichloroethene	5	70	NE						2.9 J			9.7			0.93 J	3.4 J
Acetone	100	6000	NE						1.7 J				43 J			
Benzene	1	1	NE						**4.6**			**5.8**	0.45 J		**1.5**	**1.6**
Chlorobenzene	3	50	NE									4.5				
Chloroform	5	70	NE	17												
Ethyl Chloride (Chloroethane)	10	3000	NE						2.5 J						0.94 J	1.6 J
Methylene Chloride	1	5	NE													2.1
Tetrachloroethene	1	0.7	NE						**2.8**				**2.0**		**2.5**	**1.1**
Trichloroethene	1	3	NE						2.8			0.48 J	1.1		1.4	1.7
Trichlorofluoromethane	1	2000	NE												0.81 J	
Vinyl chloride	1	0.03	NE						**0.93 J**			**3.7**				**0.48 J**
Xylenes (total)	5	500	NE						1.4 J						1.3 J	1.7 J
EPA Appendix I Metals Method 6010B/6020 (ug/L)																
Antimony	6	NE	1.4	**3.48 J**		**2.79 J**			**2.96 J**	**7.32**		0.998 J		0.525 J	0.409 J	0.620 J
Arsenic	10	10	NE						9.11 J			**12.2**				
Barium	100	700	NE	44.4 J		28.9 J	74.2 J	200	102	27.1 J	69.3 J	309	104	55.2 J	30.8 J	81.1 J
Beryllium	1	NE	4				0.234 J				0.257 J		0.383 J			
Chromium	10	10	NE	8.90 J		2.53 J	4.78 J		3.33 J			9.31 J		1.57 J		
Cobalt	10	NE	70	1.39 J			1.45 J	35.4	**250**			36.9	36.7			4.23 J
Copper	10	1000	NE	3.37 J			3.70 J		3.44 J	4.82 J			10.5	2.57 J		
Iron	300	300	NE	**2,600**		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	10	15	NE									5.12 J				
Manganese	50	50	NE	27.0 J		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	50	100	NE	5.47 J			4.54 J	4.79 J	17.0 J	1.88 J		13.7 J	40.6 J			
Silver	10	20	NE						2.58 J			7.15 J				
Thallium	5.5	NE	0.28	0.153 J				0.162 J	**0.740 J**			**0.723 J**		0.168 J		
Vanadium	25	NE	0.3	**4.78 J**			**8.75 J**							**3.93 J**		
Zinc	10	1000	NE	14.5		7.55 J	22.2	33.7	8.06 J	24.4		6.85 J	12.5	7.72 J		4.49 J

Table 3
October 2013 - Detected Analytes in Monitoring Wells for MSW Phase 2
Lincoln County Landfill
S&ME Project No. 1356-07-004

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	**NCDENR SWSL**	**15A NCAC 2L**	**Soild Waste GWP ST**	**MW-21**	**MW-24**	**MW-25**	**MW-25A**
No Volatile Organic Compounds Detected in Phase 2 Monitoring Wells During October 2013 Sampling							
EPA Appendix I Metals Method 6010B/6020 (ug/L)							
Antimony	6	NE	1.4	0.894 J			**1.84 J**
Barium	100	700	NE	36.9 J	174	235	46.9 J
Beryllium	1	NE	4		0.894 J	0.163 J	
Chromium	10	10	NE			5.56 J	5.09 J
Cobalt	10	NE	70				7.88 J
Copper	10	1000	NE				4.39 J
Nickel	50	100	NE		1.85 J	2.91 J	
Thallium	5.5	NE	0.28		0.126 J		
Vanadium	25	NE	0.3				**3.85 J**
Zinc	10	1000	NE		28.5	19.0	4.58 J

Table 4
October 2013 - Detected Analytes in Monitoring Wells for MSW Phase 3
Lincoln County Landfill
S&ME Project No. 1356-07-004

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	**NCDENR SWSL**	**15A NCAC 2L**	**Soild Waste GWP ST**	**MW-32R**	**MW-33**	**MW-33A**	**MW-34**	**MW-35**	**MW-35A**
No Volatile Organic Compounds Detected in Phase 3 During October 2013 Sampling									
EPA Appendix I Metals Method 6010B/6020 (ug/L)									
Antimony	6	NE	1.4	1.00 J	0.513 J	**1.66 J**			
Barium	100	700	NE	19.4 J	44.0 J	7.18 J	278	52.6 J	42.1 J
Beryllium	1	NE	4		0.131 J		1.55	0.186 J	
Chromium	10	10	NE						2.74 J
Cobalt	10	NE	70				4.59 J	1.18 J	
Copper	10	1000	NE			2.96 J			
Thallium	5.5	NE	0.28				0.219 J		
Vanadium	25	NE	0.3						**2.78 J**
Zinc	10	1000	NE	5.35 J	5.42 J	14.8	17.1	9.16 J	4.26 J

Table 5
October 2013 - Detected Analytes in Monitoring Wells for C&D Phase 1
Lincoln County Landfill
S&ME Project No. 1356-07-004

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	**NCDENR SWSL**	**15A NCAC 2L**	**Soild Waste GWP ST**	**MW-26**	**MW-27**	**MW-28**
Acetone	100	6000	NE			2.4 J
Benzene	1	1	NE		0.54 J	
Tetrachloroethene	1	0.7	NE			**6.8**
Tetrahydrofuran	NE	NE	NE		10	
Vinyl Chloride	1	0.03	NE			**0.53 J**
EPA Appendix I Metals Method 6010B/6020 (ug/L)						
Barium	100	700	NE	80.2 J	309	96.5 J
Beryllium	1	NE	4		0.465 J	0.167 J
Chromium	10	10	NE	3.52 J	1.85 J	
Cobalt	10	NE	70		12.3	3.02 J
Copper	10	1000	NE		1.65 J	
Iron	300	300	NE	**589**	**729**	
Manganese	50	50	NE	15.3 J	**1,330**	41.4 J
Nickel	50	100	NE		19.2 J	3.60 J
Thallium	5.5	NE	0.28		0.117 J	
Vanadium	25	NE	0.3	**1.47 J**		
Zinc	10	1000	NE		20.0	8.55 J
Classical Chemistry Compounds (mg/L)						
Chloride	NE	250	NE	3 J	21	2.2 J
Sulfate as SO4	250	250	NE	3.6 J	56	
Total Dissolved Solids	NE	500	NE	32	210	10
Total Alkalinity	NE	NE	NE	28	56	16

Table 6
October 2013 - Detected Analytes in Monitoring Wells for C&D Phase 2
Lincoln County Landfill
S&ME Project No. 1356-07-004

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	**NCDENR SWSL**	**15A NCAC 2L**	**Soild Waste GWP ST**	**MW-29**	**MW-30**	**MW-31**	**MW-36**
Toluene	1	600	NE	1.3			
EPA Appendix I Metals Method 6010B/6020 (ug/L)							
Barium	100	700	NE	15.0 J	65.1 J	26.3 J	78.1 J
Beryllium	1	NE	4	0.214 J		0.287 J	0.140 J
Chromium	10	10	NE		1.91 J	3.79 J	2.91 J
Cobalt	10	NE	70	1.63 J		1.98 J	2.00 J
Copper	10	1000	NE	11.90	2.31 J	5.61 J	
Iron	300	300	NE	**22,300**	**2,160**	**22,400**	**1,740**
Manganese	50	50	NE	**53.6**	37.2 J	45.3 J	42.6 J
Nickel	50	100	NE		1.93 J	2.89 J	
Vanadium	25	NE	0.3		**2.37 J**	**3.54 J**	**2.60 J**
Zinc	10	1000	NE	14.8	9.58 J	8.17 J	11.9
Classical Chemistry Compounds (mg/L)							
Chloride	NE	250	NE	3.9 J	2.3 J	2.4 J	2.4 J
Sulfate as SO4	250	250	NE	6.9 J	3.7 J	7.9 J	
Total Dissolved Solids	NE	500	NE	110	24		
Total Alkalinity	NE	NE	NE	84			

Table 7
October 2013 - Detected Analytes in Surface Water Samples
Lincoln County Landfill
S&ME Project No. 1356-07-004

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	**15A NCAC 2B**	**SW-1**	**SW-2**	**SW-3**	**SW-4**	**SW-5**	**SW-6**
Acetone	2000						1.2 J
Chloroform	NE	0.84 J					
Toluene	11			3.0			
EPA Appendix I Metals Method 6010B/6020 (ug/L)							
Arsenic	50					5.73 J	
Barium	200,000	22.0 J	22.7 J	79.8 J	25.5 J	76.2 J	61.6 J
Beryllium	6.5					0.219 J	
Chromium	74			2.08 J		3.40 J	2.42 J
Cobalt	270	1.41 J		6.56 J		20.7	6.29 J
Copper	7			1.90 J		2.10 J	3.19 J
Iron	1,000	879	214 J	**17,300**	462	**35,500**	
Lead	25					2.75 J	
Manganese	NE	89.4	37.6 J	573	50.4	1,070	
Nickel	88					2.57 J	3.19 J
Thallium	0.47					0.158 J	
Vanadium	NE	1.81 J	1.40 J	4.83 J		4.67 J	3.14 J
Zinc	50	**653**		13.6	3.90 J	15.1	**53.2**
Classical Chemistry Compounds (mg/L)							
BOD	NE	NA	NA	NA	NA	NA	11
COD	NE	NA	NA	NA	NA	NA	53
Phosphorous	NE	NA	NA	NA	NA	NA	0.120 B
Total Suspended Solids	NE	NA	NA	NA	NA	NA	46

Table 8
October 2013 - Detected Analytes in Leachate
Lincoln County Landfill
S&ME Project No. 1356-07-004

EPA Appendix I Volatile Organic Compounds Method 8260 (ug/L)	**NCDENR SWSL**	**Lift Station**
No Volatile Organic Compounds Detected in October 2013		
EPA Appendix I Metals Method 6010B/6020 (ug/L)		
Arsenic	10	371
Barium	100	2,860
Beryllium	1	0.444 J
Chromium	10	81.2
Cobalt	10	52.1
Copper	10	33.1
Lead	10	30.0
Nickel	50	93.0
Silver	10	12.5
Vanadium	25	87.1
Zinc	10	1,700
Classical Chemistry Compounds (mg/L)		
BOD	NE	57
COD	NE	700
Sulfate as SO4	250	4.6 J
Phosphorous	NE	7.7 JB
Nitrate as N	10	0.11 J
Nitrite as N	1000	0.073 J
Nitrate/Nitrite as N	NE	0.180
Total Alkalinity	NE	1,900 D
Total Suspended Solids	NE	2,300

Notes for Tables 9 through 11
October 2013 Statistical Analysis

Notes:

(1) SSI = Statistically Significant Increase

(2) PA = One Way Parametric Analysis of Variance (Parametric ANOVA)
The parametric ANOVA analysis is recommended by the 1992 guidance document for parameters with fewer than 15% non-detects in a specific well.

(3) KW = Kruskal Wallis Non-Parametric Rank Analysis
The Kruskal-Wallis method is recommended by the 1992 guidance document for parameters that have 15% to 90% non-detects in a specific well.

(4) PL = Non-Parametric Inter-Well Prediction Limit Analysis
The prediction limit was used for parameters with greater than 90% non-detects in a specific well. The 1992 guidance document recommends this method when a significant portion of the samples are non-detect.

Table 9
October 2013 Statistical Analysis for Phase 1 and Area "E"
Lincoln County Landfill
S&ME Project No. 1356-07-004

Parameter	Well ID	Percent Non-Detect	Statistical Analysis Method	SSI	Comments
1,1,1-Trichloroethane	MW-13	88%	KW	FALSE	
1,1-Dichloroethane	MW-13	2%	PA	TRUE	Concentrations have decreased over time
	MW-14	59%	KW	TRUE	
	MW-16	30%	KW	TRUE	Concentrations have decreased over time
	MW-17	92%	PL	FALSE	
	MW-19	38%	KW	TRUE	
	MW-20	38%	KW	TRUE	
1,1-Dichloroethene	MW-16	95%	PL	FALSE	
	MW-19	97%	PL	FALSE	
1,2-Dichloroethane	MW-13	93%	PL	FALSE	
1,4-Dichlorobenzene	MW-13	63%	KW	TRUE	
	MW-16	65%	KW	TRUE	
	MW-19	91%	PL	FALSE	
	MW-20	88%	KW	FALSE	
2-Butanone	MW-13	97%	PL	FALSE	
Acetone	MW-12	98%	PL	FALSE	
	MW-13	59%	KW	TRUE	Concentrations vary from non-detect to detect
	MW-14	98%	PL	FALSE	
	MW-16	90%	KW	FALSE	
	MW-17	74%	KW	FALSE	
	MW-15	98%	PL	FALSE	
	MW-9	98%	PL	FALSE	
	MW-18	97%	PL	FALSE	
	MW-19	94%	PL	FALSE	
	MW-20	97%	PL	FALSE	
Antimony	MW-12	95%	PL	FALSE	
	MW-13	88%	KW	FALSE	
	MW-14	63%	KW	FALSE	
	MW-16	93%	PL	FALSE	
	MW-10	92%	PL	FALSE	
	MW-9	84%	KW	FALSE	
	MW-18	88%	KW	FALSE	
	MW-19	68%	KW	FALSE	
	MW-20	91%	PL	FALSE	
Arsenic	MW-12	80%	KW	FALSE	
	MW-13	51%	KW	TRUE	
	MW-14	93%	PL	FALSE	
	MW-16	65%	KW	FALSE	
	MW-17	95%	PL	FALSE	
	MW-10	89%	KW	FALSE	
	MW-15	90%	KW	FALSE	
	MW-8	88%	KW	FALSE	
	MW-9	93%	PL	FALSE	
	MW-18	88%	KW	FALSE	
	MW-19	88%	KW	FALSE	
	MW-20	82%	KW	FALSE	
Barium	MW-12	44%	KW	FALSE	
	MW-13	39%	KW	FALSE	
	MW-14	51%	KW	FALSE	
	MW-16	40%	KW	TRUE	
	MW-17	39%	KW	FALSE	
	MW-10	27%	KW	FALSE	
	MW-15	25%	KW	TRUE	
	MW-8	44%	KW	FALSE	
	MW-9	40%	KW	FALSE	
	MW-18	38%	KW	FALSE	
	MW-19	59%	KW	FALSE	
	MW-20	38%	KW	FALSE	
Benzene	MW-13	39%	KW	TRUE	
	MW-16	60%	KW	TRUE	

Table 9
October 2013 Statistical Analysis for Phase 1 and Area "E"
Lincoln County Landfill
S&ME Project No. 1356-07-004

Parameter	Well ID	Percent Non-Detect	Statistical Analysis Method	SSI	Comments
	MW-17	97%	PL	FALSE	
	MW-19	76%	KW	FALSE	
	MW-20	71%	KW	FALSE	
Beryllium	MW-12	66%	KW	FALSE	
	MW-13	73%	KW	FALSE	
	MW-14	98%	PL	FALSE	
	MW-16	78%	KW	FALSE	
	MW-17	63%	KW	FALSE	
	MW-10	59%	KW	FALSE	
	MW-15	45%	KW	TRUE	
	MW-8	52%	KW	FALSE	
	MW-9	88%	KW	FALSE	
	MW-18	85%	KW	FALSE	
	MW-19	94%	PL	FALSE	
	MW-20	74%	KW	FALSE	
cis-1,2-Dichloroethene	MW-13	54%	KW	TRUE	
	MW-16	58%	KW	TRUE	
	MW-19	68%	KW	FALSE	
	MW-20	71%	KW	FALSE	
cis-1,3-Dichloropropene	MW-12	98%	PL	FALSE	
Cadmium	MW-12	66%	KW	FALSE	
	MW-13	71%	KW	FALSE	
	MW-14	73%	KW	FALSE	
	MW-16	70%	KW	FALSE	
	MW-17	74%	KW	FALSE	
	MW-10	73%	KW	FALSE	
	MW-15	75%	KW	FALSE	
	MW-8	72%	KW	FALSE	
	MW-9	88%	KW	FALSE	
	MW-18	88%	KW	FALSE	
	MW-19	97%	PL	FALSE	
	MW-20	85%	KW	FALSE	
Chlorobenzene	MW-13	88%	KW	FALSE	
	MW-16	70%	KW	TRUE	First SSI in October 2013
Chloroethane	MW-13	34%	KW	TRUE	Concentrations have decreased over time
	MW-16	55%	KW	TRUE	Concentrations vary from non-detect to detect
	MW-19	94%	PL	FALSE	
	MW-20	82%	KW	FALSE	
Chloromethane	MW-10	97%	PL	FALSE	
	MW-12	97%	PL	FALSE	
	MW-13	97%	PL	FALSE	
	MW-16	97%	PL	FALSE	
	MW-9	97%	PL	FALSE	
	MW-20	97%	PL	FALSE	
Chromium	MW-12	76%	KW	FALSE	
	MW-13	46%	KW	FALSE	
	MW-14	80%	KW	FALSE	
	MW-16	58%	KW	FALSE	
	MW-17	53%	KW	FALSE	
	MW-10	38%	KW	FALSE	
	MW-15	73%	KW	FALSE	
	MW-8	36%	KW	FALSE	
	MW-9	40%	KW	FALSE	
	MW-18	82%	KW	FALSE	
	MW-20	79%	KW	FALSE	

Table 9
October 2013 Statistical Analysis for Phase 1 and Area "E"
Lincoln County Landfill
S&ME Project No. 1356-07-004

Parameter	Well ID	Percent Non-Detect	Statistical Analysis Method	SSI	Comments
Cobalt	MW-12	34%	KW	TRUE	
	MW-13	0%	PA	TRUE	
	MW-14	85%	KW	FALSE	
	MW-16	10%	PA	FALSE	
	MW-17	45%	KW	TRUE	
	MW-10	62%	KW	FALSE	
	MW-15	73%	KW	FALSE	
	MW-8	32%	KW	TRUE	Dry since April 2011
	MW-9	90%	KW	FALSE	
	MW-18	68%	KW	FALSE	
	MW-20	65%	KW	FALSE	
Copper	MW-12	73%	KW	FALSE	
	MW-13	71%	KW	FALSE	
	MW-14	49%	KW	FALSE	
	MW-16	93%	PL	FALSE	
	MW-17	68%	KW	FALSE	
	MW-10	68%	KW	FALSE	
	MW-15	75%	KW	FALSE	
	MW-8	60%	KW	FALSE	
	MW-9	70%	KW	FALSE	
	MW-18	65%	KW	FALSE	
	MW-19	82%	KW	FALSE	
	MW-20	94%	PL	FALSE	
Ethylbenzene	MW-13	76%	KW	FALSE	
	MW-16	95%	PL	FALSE	
Lead	MW-12	85%	KW	FALSE	
	MW-13	68%	KW	FALSE	
	MW-14	93%	PL	FALSE	
	MW-16	50%	KW	FALSE	
	MW-17	84%	KW	FALSE	
	MW-10	68%	KW	FALSE	
	MW-15	70%	KW	FALSE	
	MW-8	56%	KW	FALSE	
	MW-9	85%	KW	FALSE	
	MW-18	94%	PL	FALSE	
	MW-19	94%	PL	FALSE	
	MW-20	85%	KW	FALSE	
Methylene Chloride	MW-12	98%	PL	FALSE	
	MW-13	44%	KW	TRUE	Concentrations have decreased over time
	MW-14	93%	PL	FALSE	
	MW-16	53%	KW	TRUE	Concentrations have been non-detect since Oct 2011
	MW-19	56%	KW	TRUE	Concentrations have decreased over time
	MW-20	47%	KW	TRUE	Concentrations have decreased over time
Nickel	MW-12	66%	KW	FALSE	
	MW-13	54%	KW	FALSE	
	MW-14	76%	KW	FALSE	
	MW-16	63%	KW	FALSE	
	MW-17	53%	KW	FALSE	
	MW-10	76%	KW	FALSE	
	MW-15	95%	PL	FALSE	
	MW-8	64%	KW	FALSE	
	MW-9	98%	PL	FALSE	
	MW-18	71%	KW	FALSE	
	MW-19	97%	PL	FALSE	
	MW-20	85%	KW	FALSE	

Table 9
October 2013 Statistical Analysis for Phase 1 and Area "E"
Lincoln County Landfill
S&ME Project No. 1356-07-004

Parameter	Well ID	Percent Non-Detect	Statistical Analysis Method	SSI	Comments
Selenium	MW-13	98%	PL	FALSE	
	MW-16	85%	KW	FALSE	
	MW-17	97%	PL	FALSE	
	MW-10	95%	PL	FALSE	
	MW-15	98%	PL	FALSE	
	MW-8	96%	PL	FALSE	
	MW-18	94%	PL	FALSE	
	MW-19	97%	PL	FALSE	
	MW-20	94%	PL	FALSE	
Silver	MW-12	95%	PL	FALSE	
	MW-13	85%	KW	FALSE	
	MW-14	95%	PL	FALSE	
	MW-16	75%	KW	FALSE	
	MW-17	95%	PL	FALSE	
	MW-10	92%	PL	FALSE	
	MW-15	98%	PL	FALSE	
	MW-8	96%	PL	FALSE	
	MW-9	95%	PL	FALSE	
	MW-19	94%	PL	FALSE	
Tetrachloroethene	MW-13	56%	KW	TRUE	
	MW-14	80%	KW	FALSE	
	MW-17	79%	KW	FALSE	
	MW-19	56%	KW	TRUE	
	MW-20	74%	KW	FALSE	
Thallium	MW-12	73%	KW	FALSE	
	MW-13	51%	KW	TRUE	First SSI in April 2013
	MW-14	93%	PL	FALSE	
	MW-16	60%	KW	FALSE	
	MW-17	97%	PL	FALSE	
	MW-10	92%	PL	FALSE	
	MW-15	88%	KW	FALSE	
	MW-8	80%	KW	FALSE	
	MW-18	71%	KW	FALSE	
	MW-19	97%	PL	FALSE	
Toluene	MW-12	98%	PL	FALSE	
	MW-13	71%	KW	FALSE	
Trichloroethene	MW-13	56%	KW	TRUE	
	MW-14	93%	PL	FALSE	
	MW-16	90%	KW	FALSE	
	MW-17	92%	PL	FALSE	
	MW-19	62%	KW	TRUE	
	MW-20	71%	KW	FALSE	
Trichlorofluoromethane	MW-16	90%	KW	FALSE	
	MW-19	68%	KW	TRUE	First SSI in October 2013
Vanadium	MW-12	85%	KW	FALSE	
	MW-13	68%	KW	FALSE	
	MW-14	80%	KW	FALSE	
	MW-16	88%	KW	FALSE	
	MW-17	76%	KW	FALSE	
	MW-10	35%	KW	FALSE	
	MW-15	60%	KW	FALSE	
	MW-8	36%	KW	FALSE	
	MW-9	65%	KW	FALSE	
	MW-18	68%	KW	FALSE	
	MW-19	88%	KW	FALSE	
	MW-20	88%	KW	FALSE	

Table 9
October 2013 Statistical Analysis for Phase 1 and Area "E"
Lincoln County Landfill
S&ME Project No. 1356-07-004

Parameter	Well ID	Percent Non-Detect	Statistical Analysis Method	SSI	Comments
Vinyl Chloride	MW-12	98%	PL	FALSE	
	MW-13	68%	KW	TRUE	
	MW-16	33%	KW	TRUE	Concentrations have decreased over time
	MW-20	85%	KW	FALSE	
Xylenes (Total)	MW-13	48%	KW	TRUE	
	MW-16	55%	KW	TRUE	Non-Detect in April and October 2013
	MW-19	79%	KW	FALSE	
	MW-20	76%	KW	FALSE	
Zinc	MW-12	0%	PA	TRUE	Concentrations have decreased over time
	MW-13	37%	KW	FALSE	
	MW-14	54%	KW	FALSE	
	MW-16	30%	KW	FALSE	
	MW-17	42%	KW	FALSE	
	MW-10	32%	KW	FALSE	
	MW-15	55%	KW	FALSE	
	MW-8	40%	KW	FALSE	
	MW-9	58%	KW	FALSE	
	MW-18	56%	KW	FALSE	
	MW-19	71%	KW	FALSE	
	MW-20	62%	KW	FALSE	

Table 10
October 2013 Statistical Analysis for Phase 2
Lincoln County Landfill
S&ME Project No. 1356-07-004

Parameter	Well ID	Percent Non-Detect	Statistical Analysis Method	SSI	Comments
Acetone	MW-21	94%	PL	FALSE	
	MW-24	97%	PL	FALSE	
	MW-25	97%	PL	FALSE	
	MW-25A	87%	KW	FALSE	
Antimony	MW-21	94%	PL	FALSE	
	MW-24	97%	PL	FALSE	
	MW-25	97%	PL	FALSE	
	MW-25A	55%	KW	FALSE	
Arsenic	MW-21	94%	PL	FALSE	
	MW-24	84%	KW	FALSE	
	MW-25	87%	KW	FALSE	
	MW-25A	81%	KW	FALSE	
Barium	MW-21	39%	KW	FALSE	
	MW-24	45%	KW	FALSE	
	MW-25	47%	KW	FALSE	
	MW-25A	39%	KW	FALSE	
Beryllium	MW-21	61%	KW	FALSE	
	MW-24	61%	KW	FALSE	
	MW-25	63%	KW	FALSE	
	MW-25A	84%	KW	FALSE	
Cadmium	MW-21	87%	KW	FALSE	
	MW-24	90%	KW	FALSE	
	MW-25	93%	PL	FALSE	
	MW-25A	84%	KW	FALSE	
Chloromethane	MW-21	97%	PL	FALSE	
	MW-25	97%	PL	FALSE	
	MW-25A	97%	PL	FALSE	
Chromium	MW-21	77%	KW	FALSE	
	MW-24	74%	KW	FALSE	
	MW-25	50%	KW	FALSE	
	MW-25A	35%	KW	FALSE	
Cobalt	MW-21	90%	KW	FALSE	
	MW-24	94%	PL	FALSE	
	MW-25A	58%	KW	FALSE	
Copper	MW-21	81%	KW	FALSE	
	MW-24	81%	KW	FALSE	
	MW-25	83%	KW	FALSE	
	MW-25A	77%	KW	FALSE	
Lead	MW-21	90%	PL	FALSE	
	MW-24	97%	PL	FALSE	
	MW-25A	94%	PL	FALSE	
Nickel	MW-21	90%	KW	FALSE	
	MW-24	84%	KW	FALSE	
	MW-25	80%	KW	FALSE	
Selenium	MW-21	97%	PL	FALSE	
	MW-25	97%	PL	FALSE	
Silver	MW-24	94%	PL	FALSE	
	MW-25	97%	PL	FALSE	
	MW-25A	97%	PL	FALSE	
Thallium	MW-21	97%	PL	FALSE	
	MW-24	87%	KW	FALSE	
	MW-25	93%	PL	FALSE	
Vanadium	MW-21	68%	KW	FALSE	
	MW-24	87%	KW	FALSE	
	MW-25	93%	PL	FALSE	
	MW-25A	52%	KW	FALSE	
Zinc	MW-21	68%	KW	FALSE	
	MW-24	52%	KW	FALSE	
	MW-25	53%	KW	FALSE	
	MW-25A	52%	KW	FALSE	

Table 11
October 2013 Statistical Analysis for Phase 3
Lincoln County Landfill
S&ME Project No. 1356-07-004

Parameter	Well ID	Percent Non-Detect	Statistical Analysis Method	SSI	Comments
Acetone	MW-32	95%	PL	FALSE	
	MW-33	95%	PL	FALSE	
	MW-33A	90%	PL	FALSE	
	MW-34	95%	PL	FALSE	
	MW-35	95%	PL	FALSE	
	MW-35A	90%	PL	FALSE	
Antimony	MW-32	90%	KW	FALSE	
	MW-33	90%	KW	FALSE	
	MW-33A	35%	KW	TRUE	
	MW-34	90%	KW	FALSE	
	MW-35	89%	KW	FALSE	
	MW-35A	65%	KW	FALSE	
Arsenic	MW-32	85%	KW	FALSE	
	MW-33	85%	KW	FALSE	
	MW-33A	95%	PL	FALSE	
	MW-34	95%	PL	FALSE	
	MW-35	95%	PL	FALSE	
	MW-35A	85%	KW	FALSE	
Barium	MW-32	10%	PA	FALSE	
	MW-33	10%	PA	FALSE	
	MW-33A	30%	KW	FALSE	
	MW-34	10%	PA	FALSE	
	MW-35	11%	PA	FALSE	
	MW-35A	10%	PA	FALSE	
Beryllium	MW-32	50%	KW	FALSE	
	MW-33	55%	KW	FALSE	
	MW-33A	95%	PL	FALSE	
	MW-34	45%	KW	TRUE	Fisr SSI in October 2013
	MW-35	47%	KW	FALSE	
	MW-35A	80%	KW	FALSE	
Cadmium	MW-33A	95%	PL	FALSE	
Chloroform	MW-33A	80%	KW	FALSE	
	MW-35A	95%	PL	FALSE	
Chromium	MW-32	70%	KW	FALSE	
	MW-33	90%	KW	FALSE	
	MW-34	90%	KW	FALSE	
	MW-35	63%	KW	FALSE	
	MW-35A	35%	KW	FALSE	
Cobalt	MW-32	90%	KW	FALSE	
	MW-34	30%	KW	TRUE	
	MW-35	63%	KW	FALSE	
	MW-35A	95%	PL	FALSE	
Copper	MW-32	75%	KW	FALSE	
	MW-33	85%	KW	FALSE	
	MW-33A	40%	KW	FALSE	
	MW-34	75%	KW	FALSE	
	MW-35	89%	KW	FALSE	
	MW-35A	75%	KW	FALSE	
Lead	MW-32	55%	KW	FALSE	
	MW-33	95%	PL	FALSE	
	MW-33A	95%	PL	FALSE	
	MW-34	95%	PL	FALSE	
	MW-35	89%	KW	FALSE	
Nickel	MW-32	75%	KW	FALSE	
	MW-33	95%	PL	FALSE	
	MW-34	65%	KW	FALSE	
	MW-35	79%	KW	FALSE	

Table 11
October 2013 Statistical Analysis for Phase 3
Lincoln County Landfill
S&ME Project No. 1356-07-004

Parameter	Well ID	Percent Non-Detect	Statistical Analysis Method	SSI	Comments
	MW-35A	90%	KW	FALSE	
Selenium	MW-32	90%	KW	FALSE	
	MW-33	90%	KW	FALSE	
	MW-35A	95%	PL	FALSE	
Silver	MW-32	90%	KW	FALSE	
	MW-33	95%	PL	FALSE	
	MW-33A	95%	PL	FALSE	
Thallium	MW-32	80%	KW	FALSE	
	MW-33	95%	PL	FALSE	
	MW-34	40%	KW	TRUE	
	MW-35	84%	KW	FALSE	
Vanadium	MW-32	40%	KW	FALSE	
	MW-33	90%	KW	FALSE	
	MW-33A	85%	KW	FALSE	
	MW-34	65%	KW	FALSE	
	MW-35	53%	KW	FALSE	
	MW-35A	30%	KW	FALSE	
Zinc	MW-32	35%	KW	FALSE	
	MW-33	35%	KW	FALSE	
	MW-33A	30%	KW	FALSE	
	MW-34	25%	KW	FALSE	
	MW-35	26%	KW	FALSE	
	MW-35A	40%	KW	FALSE	

APPENDIX I

WELL SAMPLING LOGS AND LABORATORY REPORTS

Surface Water and Leachate Samples
Lincoln County Landfill
S&ME Project 1356-07-004

Location	Date	Time Sampled	Sample Observations
SW-1	10/9/2013	13:50	Clear; minor floating solids
SW-2	10/9/2013	12:40	Clear
SW-3	10/9/2013	14:15	Stagnant; moderate floating solids
SW-4	10/9/2013	15:10	Clear
SW-5	10/9/2013	14:40	Stagnant; heavy floating solids; orange film
SW-6	10/9/2013	12:25	Floating organic debris
Lift Station	10/9/2013	12:05	Moderately turbid (Sampled from Pump #2 Lift Station)

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-1A

Sampling Personnel	(1) Courtney Murphy	(2) Jasmine Tayouga
Weather Conditions	Approx. 80°F, sunny, post-rain event	
Unusual Site Conditions	Fire ants	

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	2.7
Depth to Water (ft)	40.29		
Depth to Base of Well (ft)	57.00	(well casing volume = water column*0.164)	
Water Column (ft)	16.71		
Equipment Used to Measure Depths	Electric Water Level Probe		

Well Purging Data

Date 10/7/2013 Purging Equipment Field-Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	11:27	5.27	19.2	62
	2.7	11:31	5.03	18.3	15
	5.4	11:33	4.90	18.4	13
Final	8.1	11:37	4.94	18.5	12

Well Sampling Data

Sampling Date	10/8/2013
Sampling Time	09:35
Sampling Equipment	disposable teflon bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 500 mL plastic bottle	HNO3

Comments

Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-8

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC Well Casing Volume
Depth to Water (ft) Dry
Depth to Base of Well (ft) 31.00 (well casing volume = water column*0.164)
Water Column (ft)
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0				
Final					

Well Sampling Data

Sampling Date
Sampling Time
Sampling Equipment Disposable Teflon Bailer
Sample Observations

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-9

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 6.3
Depth to Water (ft) 32.08
Depth to Base of Well (ft) 70.50
(well casing volume = water column*0.164)
Water Column (ft) 38.42
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Field Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	15:15	6.64	19.0	31
	6.3	15:21	6.73	16.7	33
	12.6	15:27	6.58	16.6	34
Final	18.9	15:33	6.79	16.6	35

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 11:15
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-10R

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.0
Depth to Water (ft) 25.72
Depth to Base of Well (ft) 31.50
(well casing volume = water column*0.164)
Water Column (ft) 5.78
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	15:52	5.94	17.6	60
	1.0	15:53	5.93	17.0	61
	2.0	15:54	5.95	16.8	65
Final	3.0	15:55	5.85	16.8	53

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 11:35
Sampling Equipment disposable teflon bailer
Sample Observations Slightly turbid

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-12

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.5
Depth to Water (ft) 9.52
Depth to Base of Well (ft) 18.50
(well casing volume = water column*0.164)
Water Column (ft) 8.99
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	16:52	5.88	17.3	269
	1.5	16:53	5.39	17.4	157
	3.0	16:54	5.44	17.1	160
Final	4.5	16:55	5.48	16.7	162

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 11:45
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Broken hinge
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-13

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, sunny, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.3
Depth to Water (ft) 32.51
Depth to Base of Well (ft) 40.50
(well casing volume = water column*0.164)
Water Column (ft) 7.99
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	13:10	5.67	19.0	221
	1.3	13:12	5.62	18.3	207
	2.6	13:14	5.67	18.2	219
Final	3.9	13:16	5.71	17.7	243

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 9:55
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-14

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, sunny, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 7.4
Depth to Water (ft) 30.98
Depth to Base of Well (ft) 76.00
(well casing volume = water column*0.164)
Water Column (ft) 45.02
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Field Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	13:06	6.85	22.8	95
	7.4	13:13	5.93	18.0	92
	14.8	13:20	5.96	18.3	92
Final	22.2	13:27	5.95	18.3	93

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:00
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-15

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, cloudy, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 0.55
Depth to Water (ft) 27.14
Depth to Base of Well (ft) 30.50
(well casing volume = water column*0.164)
Water Column (ft) 3.36
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	15:43	5.09	17.0	27
	0.55	15:45	5.03	16.4	31
	1.10	15:46	5.00	16.0	28
Final	1.65	15:47	5.02	16.0	33

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:50
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-16R

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, cloudy, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 0.95
Depth to Water (ft) 15.81
Depth to Base of Well (ft) 21.60
(well casing volume = water column*0.164)
Water Column (ft) 5.79
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	12:50	6.09	19.8	716
	1.0	12:51	6.05	18.9	717
	2.0	12:52	6.09	18.7	707
Final	3.0	12:54	6.09	18.6	710

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 9:45
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-17

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 0.25
Depth to Water (ft) 34.96
Depth to Base of Well (ft) 36.50
(well casing volume = water column*0.164)
Water Column (ft) 1.54
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	12:51	5.45	17.2	125
	0.25	12:52	5.43	17.1	114
	0.50	12:53	5.39	17.1	98
Final	0.75	12:54	5.38	16.9	102

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 10:05
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-18

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, sunny, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.9
Depth to Water (ft) 20.27
Depth to Base of Well (ft) 32.00
(well casing volume = water column*0.164)
Water Column (ft) 11.73
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	14:00	5.83	17.0	207
	1.9	14:05	5.67	17.4	169
	3.8	14:07	5.78	17.3	180
Final	5.7*	14:08	5.89	17.1	180

*Dry at 5 gallons

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:10
Sampling Equipment disposable teflon bailer
Sample Observations Slightly turbid

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-19

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, cloudy, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 7.4
Depth to Water (ft) 26.99
Depth to Base of Well (ft) 72.00
(well casing volume = water column*0.164)
Water Column (ft) 45.01
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Field Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	13:51	5.94	20.4	100
	7.4	13:58	5.99	16.9	100
	14.8	14:05	5.98	16.8	114
Final	22.2	14:12	5.99	16.9	108

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:15
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-20

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, cloudy, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.8
Depth to Water (ft) 16.02
Depth to Base of Well (ft) 27.00
(well casing volume = water column*0.164)
Water Column (ft) 10.98
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	13:41	5.46	17.7	151
	1.8	13:43	5.27	17.9	100
	3.6	13:45	5.30	17.8	82
Final	5.4	13:47	5.26	17.5	77

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:05
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-21

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, cloudy, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 0.85
Depth to Water (ft) 38.96
Depth to Base of Well (ft) 44.11
(well casing volume = water column*0.164)
Water Column (ft) 5.15
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	14:27	5.20	18.2	47
	0.8	14:30	5.20	17.6	53
	1.6	14:33	5.15	17.2	55
Final	2.4	14:35	5.18	16.9	61

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:25
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-24

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.1
Depth to Water (ft) 25.08
Depth to Base of Well (ft) 31.60
(well casing volume = water column*0.164)
Water Column (ft) 6.52
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	16:08	5.17	17.4	161
	1.1	16:09	5.32	16.6	143
	2.2	16:10	5.30	16.4	154
Final	3.3	16:11	5.26	16.3	167

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 11:40
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Hornet nest; hinge wouldn't close - was able to lock it but there is a gap
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-25

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 0.7
Depth to Water (ft) 27.26
Depth to Base of Well (ft) 31.50
(well casing volume = water column*0.164)
Water Column (ft) 4.24
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	14:25	5.59	17.6	128
	0.7	14:26	5.64	17.5	128
	1.38*	14:27	5.68	17.4	129
Final	2.1	-	-	-	-

*Dry at 1.4 gallons

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 11:20
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Wells almost buried/very low to the ground
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-25A

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 5.3
Depth to Water (ft) 27.79
Depth to Base of Well (ft) 60.00
(well casing volume = water column*0.164)
Water Column (ft) 32.21
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Field Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	16:24	6.39	19.3	33
	5.3	16:29	6.67	18.0	32
	10.6	16:34	6.56	17.8	32
Final	15.9	16:40	6.65	17.8	30

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 11:25
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottle	HNO3

Comments Wells almost buried/very low to the ground
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-26

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.5
Depth to Water (ft) 13.79
Depth to Base of Well (ft) 23.00
(well casing volume = water column*0.164)
Water Column (ft) 9.21
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	14:07	5.65	18.2	64
	1.5	14:10	5.71	17.7	65
	3.0	14:11	5.68	17.6	58
Final	4.5	14:13	5.67	17.2	62

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 10:45
Sampling Equipment disposable teflon bailer
Sample Observations Fairly clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-27

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.4
Depth to Water (ft) 18.51
Depth to Base of Well (ft) 27.00
(well casing volume = water column*0.164)
Water Column (ft) 8.49
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	14:19	5.03	17.2	287
	1.4	14:21	5.00	16.7	239
	2.8	14:23	5.05	16.7	269
Final	3.2	14:24	5.03	16.5	222

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 10:55
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-28

Sampling Personnel	(1) Courtney Murphy	(2) Jasmine Tayouga
Weather Conditions	Approx. 70°F, sunny, windy	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.7
Depth to Water (ft)	44.30		
Depth to Base of Well (ft)	54.50	(well casing volume = water column*0.164)	
Water Column (ft)	10.20		
Equipment Used to Measure Depths	Electric Water Level Probe		

Well Purging Data

Date 10/8/2013 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	11:41	4.84	17.3	39
	1.7	11:43	4.88	17.2	29
	3.4	11:45	4.94	17.2	25
Final	5.1	11:46	4.94	17.2	22

Well Sampling Data

Sampling Date	10/9/2013
Sampling Time	9:55
Sampling Equipment	disposable teflon bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments Needs new hinge - still broken on 10/9/13

Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-29

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.0
Depth to Water (ft) 39.15
Depth to Base of Well (ft) 45.00
(well casing volume = water column*0.164)
Water Column (ft) 5.85
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	13:06	5.62	18.5	192
	1.0	13:10	5.56	17.7	209
	2.0	13:12	5.51	17.5	179
Final	3.0	13:16	5.51	17.2	175

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 10:10
Sampling Equipment disposable teflon bailer
Sample Observations Clear, contained materials and odo

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments Water contained small white material and odor
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-30

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.9
Depth to Water (ft) 52.45
Depth to Base of Well (ft) 64.00
(well casing volume = water column*0.164)
Water Column (ft) 11.55
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	13:40	5.76	17.0	29
	1.9	13:41	5.75	17.3	23
	3.8	13:43	5.69	17.4	24
Final	5.7	13:46	5.73	17.3	27

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 10:30
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments Cover lid doesn't line up/wouldn't lock
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-31

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.5
Depth to Water (ft) 31.15
Depth to Base of Well (ft) 40.00
(well casing volume = water column*0.164)
Water Column (ft) 8.85
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Bailer & Twine

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	13:55	5.93	17.1	53
	1.5	13:57	5.68	16.7	53
	3.0	13:59	5.30	16.5	39
Final	4.5	14:01	5.21	16.3	39

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 10:40
Sampling Equipment disposable teflon bailer
Sample Observations Slightly turbid

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-32R

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, sunny, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.7
Depth to Water (ft) 17.60
Depth to Base of Well (ft) 28.05
(well casing volume = water column*0.164)
Water Column (ft) 10.45
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	14:41	5.49	17.4	54
	1.7	14:44	5.50	17.4	57
	3.4	14:45	5.51	17.4	54
Final	4.1	14:47	5.52	17.3	57

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:30
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-33

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, cloudy, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.7
Depth to Water (ft) 15.05
Depth to Base of Well (ft) 25.30
(well casing volume = water column*0.164)
Water Column (ft) 10.25
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	15:11	5.33	17.8	82
	1.7	15:13	5.23	18.2	73
	3.4	15:15	5.45	17.9	81
Final	5.1	15:17	5.75	17.8	94

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:40
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-33A

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, cloudy, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 8.1
Depth to Water (ft) 14.94
Depth to Base of Well (ft) 64.55
(well casing volume = water column*0.164)
Water Column (ft) 49.61
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Field Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	15:10	7.03	17.8	172
	8.1	15:18	6.86	16.7	209
	16.2	15:24	6.96	16.9	200
Final	24.3	15:32	6.85	17.3	184

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 10:45
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-34

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 80°F, cloudy, post-rain event
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.3
Depth to Water (ft) 27.25
Depth to Base of Well (ft) 35.27
(well casing volume = water column*0.164)
Water Column (ft) 8.02
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/7/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	15:58	4.41	18.3	57
	1.3	16:00	4.43	17.5	57
	2.6	16:03	4.46	17.3	57
Final	3.9*	16:05	4.60	17.2	59

*Dry at 3.5 gallons

Well Sampling Data

Sampling Date 10/8/2013
Sampling Time 11:00
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-35

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.0
Depth to Water (ft) 31.09
Depth to Base of Well (ft) 37.25
(well casing volume = water column*0.164)
Water Column (ft) 6.16
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	14:39	4.86	16.7	16
	1.0	14:40	4.75	16.3	9
	2.0	14:41	4.75	16.2	10
Final	3.0	14:42	4.73	16.0	9

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 11:00
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-35A

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 6.1
Depth to Water (ft) 32.39
Depth to Base of Well (ft) 69.69
(well casing volume = water column*0.164)
Water Column (ft) 37.30
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment Field Cleaned Typhoon Pump

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	14:38	7.02	20.1	44
	6.1	14:44	6.32	16.2	40
	12.2	14:50	6.60	16.4	44
Final	18.3	14:56	6.69	16.4	42

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 11:05
Sampling Equipment disposable teflon bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs	(3) 40 mL glass vials	HCL
Appendix I Metals	(1) 500 mL plastic bottles	HNO3

Comments
Lab ENCO

Project Name: Lincoln County Landfill
Project Location: Crouse, North Carolina
Project Number: 1356-07-004

Well ID MW-36

Sampling Personnel (1) Courtney Murphy (2) Jasmine Tayouga
Weather Conditions Approx. 70°F, sunny, windy
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Well Casing Volume 1.4
Depth to Water (ft) 28.46
Depth to Base of Well (ft) 38.88
(well casing volume = water column*0.164)
Water Column (ft) 10.42
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 10/8/2013
Purging Equipment

	Total Voume (Gal)	Time	pH	Temp (C)	Conductance (µS)
Initial	0	13:25	5.37	15.9	11
	1.4	13:27	5.34	15.2	12
	2.8	13:30	5.36	15.0	11
Final	4.2	13:32	5.44	14.9	8

Well Sampling Data

Sampling Date 10/9/2013
Sampling Time 10:20
Sampling Equipment disposable teflon bailer
Sample Observations Slightly to moderately turbid

Analytical Data

Method	Container Type and No.	Preservation
Appendix I VOCs & THF	(3) 40 mL glass vials	HCL
Appendix I Metals + Hg, Mn, Fe	(1) 250 mL plastic bottle	HNO3
Alkalinity/TDS/ Chloride/Sulfate	(1) 250 mL plastic bottle	None

Comments Needs lock
Lab ENCO

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Tuesday, October 22, 2013

S&ME, Inc. (SM002)

Attn: Courtney Murphy

9751 Southern Pine Blvd.

Charlotte, NC 28273

RE: Laboratory Results for
Project Number: 1356-07-004, Project Name/Desc: Lincoln County LF - App Is
ENCO Workorder(s): C312337

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, October 10, 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,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 93.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 5503-MW1A | **Lab ID: C312337-01** | **Sampled: 10/08/13 09:35** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 12:33
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:06
EPA 7470A	11/05/13	10/11/13 12:55	10/11/2013 15:18
EPA 8260B	10/22/13	10/14/13 09:58	10/15/2013 02:14

Client ID: 5503-MW9 | **Lab ID: C312337-02** | **Sampled: 10/09/13 11:15** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/10/13 09:54	10/14/2013 12:56
EPA 6020A	04/07/14	10/10/13 09:55	10/17/2013 10:46
EPA 8260B	10/23/13	10/15/13 12:58	10/15/2013 16:56

Client ID: 5503-MW10R | **Lab ID: C312337-03** | **Sampled: 10/09/13 11:35** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/10/13 09:54	10/14/2013 12:59
EPA 6020A	04/07/14	10/10/13 09:55	10/17/2013 11:10
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 04:11

Client ID: 5503-MW12 | **Lab ID: C312337-04** | **Sampled: 10/09/13 11:45** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/10/13 09:54	10/14/2013 13:01
EPA 6020A	04/07/14	10/10/13 09:55	10/17/2013 11:14
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 04:40

Client ID: 5503-MW13 | **Lab ID: C312337-05** | **Sampled: 10/08/13 09:55** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:03
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:26
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 17:26

Client ID: 5503-MW14 | **Lab ID: C312337-06** | **Sampled: 10/08/13 10:00** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:06
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:30
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 17:55

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Client ID: 5503-MW15	Lab ID: C312337-07	Sampled: 10/08/13 10:50	Received: 10/10/13 07:50
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:08
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:34
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 18:25

Client ID: 5503-MW16R	Lab ID: C312337-08	Sampled: 10/08/13 09:45	Received: 10/10/13 07:50
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:11
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:38
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 18:54

Client ID: 5503-MW17	Lab ID: C312337-09	Sampled: 10/09/13 10:05	Received: 10/10/13 07:50
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	04/07/14	10/10/13 09:54	10/14/2013 13:13
EPA 6020A	04/07/14	10/10/13 09:55	10/17/2013 11:42
EPA 8260B	10/23/13	10/15/13 12:58	10/15/2013 19:23

Client ID: 5503-MW18	Lab ID: C312337-10	Sampled: 10/08/13 10:10	Received: 10/10/13 07:50
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:23
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:46
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 19:52

Client ID: 5503-MW19	Lab ID: C312337-11	Sampled: 10/08/13 10:15	Received: 10/10/13 07:50
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:25
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:50
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 20:22

Client ID: 5503-MW20	Lab ID: C312337-12	Sampled: 10/08/13 10:05	Received: 10/10/13 07:50
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:28
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:54
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 20:51

Client ID: 5503-MW21	Lab ID: C312337-13	Sampled: 10/08/13 10:25	Received: 10/10/13 07:50
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:30
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 11:58
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 21:20

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Client ID: 5503-MW24	Lab ID: C312337-14	Sampled: 10/09/13 11:40	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/10/13 09:54	10/14/2013 13:33
EPA 6020A	04/07/14	10/10/13 09:55	10/17/2013 12:02
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 05:10

Client ID: 5503-MW25	Lab ID: C312337-15	Sampled: 10/09/13 11:20	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/10/13 09:54	10/14/2013 13:36
EPA 6020A	04/07/14	10/10/13 09:55	10/17/2013 12:18
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 05:39

Client ID: 5503-MW25A	Lab ID: C312337-16	Sampled: 10/09/13 11:25	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/10/13 09:54	10/14/2013 13:38
EPA 6020A	04/07/14	10/10/13 09:55	10/17/2013 12:22
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 06:09

Client ID: 5503-MW32R	Lab ID: C312337-17	Sampled: 10/08/13 10:30	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:40
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 12:26
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 21:50

Client ID: 5503-MW33	Lab ID: C312337-18	Sampled: 10/08/13 10:40	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:43
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 12:30
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 22:19

Client ID: 5503-MW33A	Lab ID: C312337-19	Sampled: 10/08/13 10:45	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:45
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 12:34
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 22:49

Client ID: 5503-MW34	Lab ID: C312337-20	Sampled: 10/08/13 11:00	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/06/14	10/10/13 09:54	10/14/2013 13:55
EPA 6020A	04/06/14	10/10/13 09:55	10/17/2013 12:38
EPA 8260B	10/22/13	10/15/13 12:58	10/15/2013 23:18

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Client ID: 5503-MW35	Lab ID: C312337-21	Sampled: 10/09/13 11:00	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 11:18
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:02
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 06:38

Client ID: 5503-MW35A	Lab ID: C312337-22	Sampled: 10/09/13 11:05	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 11:20
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:06
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 07:08

Client ID: 5503-Trip Blank	Lab ID: C312337-23	Sampled: 10/08/13 09:35	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	10/22/13	10/15/13 14:51	10/16/2013 07:37

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 5503-MW1A **Lab ID: C312337-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	3.48	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	44.4	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chloroform	17		1	0.18	1.0	5	ug/L	EPA 8260B	
Chromium - Total	8.90	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	1.39	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	3.37	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	2600		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	27.0	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	5.47	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total	0.153	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Vanadium - Total	4.78	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	14.5		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW9 **Lab ID: C312337-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	2.79	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	28.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	2.53	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Zinc - Total	7.55	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW10R **Lab ID: C312337-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	74.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.234	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	4.78	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	1.45	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	3.70	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	4.54	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	8.75	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	22.2		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW12 **Lab ID: C312337-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	200		1	1.00	10.0	100	ug/L	EPA 6010C	
Cobalt - Total	35.4		1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	4.79	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total	0.162	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Zinc - Total	33.7		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW13 **Lab ID: C312337-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	12		1	0.13	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	2.6		1	0.19	1.0	1	ug/L	EPA 8260B	
Acetone	1.7	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Antimony - Total	2.96	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Arsenic - Total	9.11	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	102		1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	4.6		1	0.15	1.0	1	ug/L	EPA 8260B	

Client ID: 5503-MW13 **Lab ID: C312337-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Chloroethane	2.5	J	1	0.23	1.0	10	ug/L	EPA 8260B	
Chromium - Total	3.33	J	1	1.40	10.0	10	ug/L	EPA 6010C	
cis-1,2-Dichloroethene	2.9	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	250		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	3.44	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	17.0	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Silver - Total	2.58	J	1	1.90	10.0	10	ug/L	EPA 6010C	
Tetrachloroethene	2.8		1	0.17	1.0	1	ug/L	EPA 8260B	
Thallium - Total	0.740	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Trichloroethene	2.8		1	0.15	1.0	1	ug/L	EPA 8260B	
Vinyl chloride	0.93	J	1	0.32	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)	1.4	J	1	0.45	3.0	5	ug/L	EPA 8260B	
Zinc - Total	8.06	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW14 **Lab ID: C312337-06**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	2.0	J	1	0.13	1.0	5	ug/L	EPA 8260B	
Antimony - Total	7.32		1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	27.1	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	4.82	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	1.88	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Zinc - Total	24.4		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW15 **Lab ID: C312337-07**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	69.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.257	J	1	0.100	1.00	1	ug/L	EPA 6010C	

Client ID: 5503-MW16R **Lab ID: C312337-08**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	2.9	J	1	0.13	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	3.7		1	0.19	1.0	1	ug/L	EPA 8260B	
Antimony - Total	0.998	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Arsenic - Total	12.2		1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	309		1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	5.8		1	0.15	1.0	1	ug/L	EPA 8260B	
Chlorobenzene	4.5		1	0.17	1.0	3	ug/L	EPA 8260B	
Chromium - Total	9.31	J	1	1.40	10.0	10	ug/L	EPA 6010C	
cis-1,2-Dichloroethene	9.7		1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	36.9		1	1.10	10.0	10	ug/L	EPA 6010C	
Lead - Total	5.12	J	1	2.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	13.7	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Silver - Total	7.15	J	1	1.90	10.0	10	ug/L	EPA 6010C	
Thallium - Total	0.723	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Trichloroethene	0.48	J	1	0.15	1.0	1	ug/L	EPA 8260B	
Vinyl chloride	3.7		1	0.32	1.0	1	ug/L	EPA 8260B	
Zinc - Total	6.85	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW17 **Lab ID: C312337-09**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	1.3	J	1	0.13	1.0	5	ug/L	EPA 8260B	

Client ID: 5503-MW17 **Lab ID: C312337-09**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Acetone	43	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Barium - Total	104		1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	0.45	J	1	0.15	1.0	1	ug/L	EPA 8260B	
Beryllium - Total	0.383	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Cobalt - Total	36.7		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	10.5		1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	40.6	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Tetrachloroethene	2.0		1	0.17	1.0	1	ug/L	EPA 8260B	
Trichloroethene	1.1		1	0.15	1.0	1	ug/L	EPA 8260B	
Zinc - Total	12.5		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW18 **Lab ID: C312337-10**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.525	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	55.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	1.57	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Copper - Total	2.57	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Thallium - Total	0.168	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Vanadium - Total	3.93	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	7.72	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW19 **Lab ID: C312337-11**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	11		1	0.13	1.0	5	ug/L	EPA 8260B	
Antimony - Total	0.409	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	30.8	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	1.5		1	0.15	1.0	1	ug/L	EPA 8260B	
Chloroethane	0.94	J	1	0.23	1.0	10	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	0.93	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Tetrachloroethene	2.5		1	0.17	1.0	1	ug/L	EPA 8260B	
Trichloroethene	1.4		1	0.15	1.0	1	ug/L	EPA 8260B	
Trichlorofluoromethane	0.81	J	1	0.24	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)	1.3	J	1	0.45	3.0	5	ug/L	EPA 8260B	

Client ID: 5503-MW20 **Lab ID: C312337-12**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	14		1	0.13	1.0	5	ug/L	EPA 8260B	
1,4-Dichlorobenzene	1.0		1	0.19	1.0	1	ug/L	EPA 8260B	
Antimony - Total	0.620	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	81.1	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	1.6		1	0.15	1.0	1	ug/L	EPA 8260B	
Chloroethane	1.6	J	1	0.23	1.0	10	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	3.4	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	4.23	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Methylene chloride	2.1		1	0.23	1.0	1	ug/L	EPA 8260B	
Tetrachloroethene	1.1		1	0.17	1.0	1	ug/L	EPA 8260B	
Trichloroethene	1.7		1	0.15	1.0	1	ug/L	EPA 8260B	
Vinyl chloride	0.48	J	1	0.32	1.0	1	ug/L	EPA 8260B	
Xylenes (Total)	1.7	J	1	0.45	3.0	5	ug/L	EPA 8260B	
Zinc - Total	4.49	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW21 **Lab ID: C312337-13**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.894	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	36.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	

Client ID: 5503-MW24 **Lab ID: C312337-14**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	174		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.894	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Nickel - Total	1.85	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total	0.126	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Zinc - Total	28.5		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW25 **Lab ID: C312337-15**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	235		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.163	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	5.56	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.91	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Zinc - Total	19.0		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW25A **Lab ID: C312337-16**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	1.84	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	46.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	5.09	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	7.88	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	4.39	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	3.85	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	4.58	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW32R **Lab ID: C312337-17**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	1.00	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	19.4	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Zinc - Total	5.35	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW33 **Lab ID: C312337-18**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.513	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	44.0	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.131	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Zinc - Total	5.42	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW33A **Lab ID: C312337-19**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	1.66	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	7.18	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	2.96	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Zinc - Total	14.8		1	3.80	10.0	10	ug/L	EPA 6010C	

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Client ID: 5503-MW34								Lab ID: C312337-20	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	278		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	1.55		1	0.100	1.00	1	ug/L	EPA 6010C	
Cobalt - Total	4.59	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Thallium - Total	0.219	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Zinc - Total	17.1		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW35								Lab ID: C312337-21	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	52.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.186	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Cobalt - Total	1.18	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Zinc - Total	9.16	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW35A								Lab ID: C312337-22	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	42.1	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	2.74	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	2.78	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	4.26	J	1	3.80	10.0	10	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 5503-MW1A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-01
Sampled: 10/08/13 09:35
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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

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Description: 5503-MW1A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-01
Sampled: 10/08/13 09:35
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 02:14	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 02:14	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 02:14	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/15/13 02:14	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*3J14009*	*EPA 8260B*	*10/15/13 02:14*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*68-117*	*3J14009*	*EPA 8260B*	*10/15/13 02:14*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J14009*	*EPA 8260B*	*10/15/13 02:14*	*MSZ*	

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Description:	5503-MW1A	**Lab Sample ID:**	C312337-01	**Received:**	10/10/13 07:50
Matrix:	Ground Water	**Sampled:**	10/08/13 09:35	**Work Order:**	C312337
Project:	Lincoln County LF - App Is	**Sampled By:**	Courtney Murphy		

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	10/11/13 15:18	T1D	

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Description: 5503-MW1A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-01
Sampled: 10/08/13 09:35
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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] ^	**3.48**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 11:06	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 12:33	JDH	
Barium [7440-39-3] ^	**44.4**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 12:33	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 12:33	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 12:33	JDH	
Chromium [7440-47-3] ^	**8.90**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 12:33	JDH	
Cobalt [7440-48-4] ^	**1.39**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 12:33	JDH	
Copper [7440-50-8] ^	**3.37**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 12:33	JDH	
Iron [7439-89-6] ^	**2600**		ug/L	1	22.0	50.0	300	EPA 6010C	10/14/13 12:33	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 12:33	JDH	
Manganese [7439-96-5] ^	**27.0**	J	ug/L	1	1.10	10.0	50	EPA 6010C	10/14/13 12:33	JDH	
Nickel [7440-02-0] ^	**5.47**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 12:33	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:06	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 12:33	JDH	
Thallium [7440-28-0] ^	**0.153**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:06	VLO	
Vanadium [7440-62-2] ^	**4.78**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 12:33	JDH	
Zinc [7440-66-6] ^	**14.5**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 12:33	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: 5503-MW9 | **Lab Sample ID:** C312337-02 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:15 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 16:56	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 16:56	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 16:56	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 16:56	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 16:56	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 16:56	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 16:56	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 16:56	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 16:56	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 16:56	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 16:56	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 16:56	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 16:56	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 16:56	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 16:56	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 16:56	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 16:56	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 16:56	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 16:56	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 16:56	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 16:56	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 16:56	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 16:56	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 16:56	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 16:56	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 16:56	MSZ	

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Description: 5503-MW9 | **Lab Sample ID:** C312337-02 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:15 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 16:56	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 16:56*	*MSZ*	
Dibromofluoromethane	*44*	*1*	*50.0*	*87 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 16:56*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 16:56*	*MSZ*	

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Description: 5503-MW9 | **Lab Sample ID:** C312337-02 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:15 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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] ^	**2.79**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 10:46	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 12:56	JDH	
Barium [7440-39-3] ^	**28.9**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 12:56	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 12:56	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 12:56	JDH	
Chromium [7440-47-3] ^	**2.53**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 12:56	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 12:56	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 12:56	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 12:56	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 12:56	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 10:46	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 12:56	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 10:46	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 12:56	JDH	
Zinc [7440-66-6] ^	**7.55**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 12:56	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: 5503-MW10R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-03
Sampled: 10/09/13 11:35
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/16/13 04:11	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 04:11	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 04:11	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 04:11	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 04:11	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 04:11	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 04:11	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 04:11	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 04:11	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 04:11	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 04:11	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 04:11	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 04:11	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 04:11	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 04:11	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 04:11	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 04:11	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 04:11	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 04:11	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 04:11	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 04:11	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 04:11	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 04:11	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 04:11	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 04:11	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 04:11	MSZ	

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Description: 5503-MW10R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-03
Sampled: 10/09/13 11:35
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/16/13 04:11	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 04:11*	*MSZ*	
Dibromofluoromethane	*43*	*1*	*50.0*	*85 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 04:11*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 04:11*	*MSZ*	

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Description: 5503-MW10R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-03
Sampled: 10/09/13 11:35
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/17/13 11:10	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 12:59	JDH	
Barium [7440-39-3] ^	**74.2**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 12:59	JDH	
Beryllium [7440-41-7] ^	**0.234**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 12:59	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 12:59	JDH	
Chromium [7440-47-3] ^	**4.78**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 12:59	JDH	
Cobalt [7440-48-4] ^	**1.45**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 12:59	JDH	
Copper [7440-50-8] ^	**3.70**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 12:59	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 12:59	JDH	
Nickel [7440-02-0] ^	**4.54**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 12:59	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:10	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 12:59	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:10	VLO	
Vanadium [7440-62-2] ^	**8.75**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 12:59	JDH	
Zinc [7440-66-6] ^	**22.2**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 12:59	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: 5503-MW12 | **Lab Sample ID:** C312337-04 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:45 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/16/13 04:40	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 04:40	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 04:40	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 04:40	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 04:40	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 04:40	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 04:40	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 04:40	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 04:40	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 04:40	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 04:40	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 04:40	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 04:40	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 04:40	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 04:40	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 04:40	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 04:40	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 04:40	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 04:40	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 04:40	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 04:40	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 04:40	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 04:40	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 04:40	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 04:40	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 04:40	MSZ	

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Description: 5503-MW12	**Lab Sample ID:** C312337-04	**Received:** 10/10/13 07:50
Matrix: Ground Water	**Sampled:** 10/09/13 11:45	**Work Order:** C312337
Project: Lincoln County LF - App Is	**Sampled By:** Courtney Murphy	

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	10/16/13 04:40	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*79 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 04:40*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*89 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 04:40*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 04:40*	*MSZ*	

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Description: 5503-MW12 | **Lab Sample ID:** C312337-04 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:45 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/17/13 11:14	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:01	JDH	
Barium [7440-39-3] ^	**200**		ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:01	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:01	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:01	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:01	JDH	
Cobalt [7440-48-4] ^	**35.4**		ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:01	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:01	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:01	JDH	
Nickel [7440-02-0] ^	**4.79**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:01	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:14	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:01	JDH	
Thallium [7440-28-0] ^	**0.162**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:14	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:01	JDH	
Zinc [7440-66-6] ^	**33.7**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:01	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: 5503-MW13 | **Lab Sample ID:** C312337-05 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 09:55 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 17:26	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 17:26	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
1,1-Dichloroethane [75-34-3] ^	**12**		ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 17:26	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 17:26	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 17:26	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 17:26	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	**2.6**		ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 17:26	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 17:26	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 17:26	MSZ	
Acetone [67-64-1] ^	**1.7**	J	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 17:26	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 17:26	MSZ	
Benzene [71-43-2] ^	**4.6**		ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 17:26	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 17:26	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 17:26	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 17:26	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 17:26	MSZ	
Chloroethane [75-00-3] ^	**2.5**	J	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 17:26	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 17:26	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	**2.9**	J	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 17:26	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 17:26	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 17:26	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 17:26	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Tetrachloroethene [127-18-4] ^	**2.8**		ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 17:26	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 17:26	MSZ	
Trichloroethene [79-01-6] ^	**2.8**		ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 17:26	MSZ	
Vinyl chloride [75-01-4] ^	**0.93**	J	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 17:26	MSZ	

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Description: 5503-MW13	**Lab Sample ID:** C312337-05	**Received:** 10/10/13 07:50
Matrix: Ground Water	**Sampled:** 10/08/13 09:55	**Work Order:** C312337
Project: Lincoln County LF - App Is	**Sampled By:** Courtney Murphy	

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] ^	**1.4**	J	ug/L	1	0.45	3.0	5	EPA 8260B	10/15/13 17:26	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 17:26*	*MSZ*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 17:26*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 17:26*	*MSZ*	

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Description: 5503-MW13 | **Lab Sample ID:** C312337-05 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 09:55 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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] ^	**2.96**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 11:26	VLO	
Arsenic [7440-38-2] ^	**9.11**	J	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:03	JDH	
Barium [7440-39-3] ^	**102**		ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:03	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:03	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:03	JDH	
Chromium [7440-47-3] ^	**3.33**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:03	JDH	
Cobalt [7440-48-4] ^	**250**		ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:03	JDH	
Copper [7440-50-8] ^	**3.44**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:03	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:03	JDH	
Nickel [7440-02-0] ^	**17.0**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:03	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:26	VLO	
Silver [7440-22-4] ^	**2.58**	J	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:03	JDH	
Thallium [7440-28-0] ^	**0.740**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:26	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:03	JDH	
Zinc [7440-66-6] ^	**8.06**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:03	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: 5503-MW14 | **Lab Sample ID:** C312337-06 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:00 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 17:55	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 17:55	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
1,1-Dichloroethane [75-34-3] ^	**2.0**	J	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 17:55	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 17:55	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 17:55	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 17:55	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 17:55	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 17:55	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 17:55	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 17:55	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 17:55	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 17:55	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 17:55	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 17:55	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 17:55	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 17:55	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 17:55	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 17:55	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 17:55	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 17:55	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 17:55	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 17:55	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 17:55	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 17:55	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 17:55	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 17:55	MSZ	

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Description: 5503-MW14 | **Lab Sample ID:** C312337-06 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:00 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 17:55	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*41*	*1*	*50.0*	*81 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 17:55*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 17:55*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 17:55*	*MSZ*	

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Description: 5503-MW14 | **Lab Sample ID:** C312337-06 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:00 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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] ^	**7.32**		ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 11:30	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:06	JDH	
Barium [7440-39-3] ^	**27.1**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:06	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:06	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:06	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:06	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:06	JDH	
Copper [7440-50-8] ^	**4.82**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:06	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:06	JDH	
Nickel [7440-02-0] ^	**1.88**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:06	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:30	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:06	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:30	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:06	JDH	
Zinc [7440-66-6] ^	**24.4**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:06	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: 5503-MW15 | **Lab Sample ID:** C312337-07 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:50 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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

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Description: 5503-MW15 | **Lab Sample ID:** C312337-07 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:50 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 18:25	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 18:25*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 18:25*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 18:25*	*MSZ*	

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Description: 5503-MW15 | **Lab Sample ID:** C312337-07 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:50 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/17/13 11:34	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:08	JDH	
Barium [7440-39-3] ^	**69.3**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:08	JDH	
Beryllium [7440-41-7] ^	**0.257**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:08	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:08	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:08	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:08	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:08	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:08	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:08	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:34	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:08	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:34	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:08	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:08	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: 5503-MW16R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-08
Sampled: 10/08/13 09:45
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 18:54	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 18:54	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
1,1-Dichloroethane [75-34-3] ^	**2.9**	J	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 18:54	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 18:54	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 18:54	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 18:54	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	**3.7**		ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 18:54	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 18:54	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 18:54	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 18:54	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 18:54	MSZ	
Benzene [71-43-2] ^	**5.8**		ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 18:54	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 18:54	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 18:54	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 18:54	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Chlorobenzene [108-90-7] ^	**4.5**		ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 18:54	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 18:54	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 18:54	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	**9.7**		ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 18:54	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 18:54	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 18:54	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 18:54	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 18:54	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 18:54	MSZ	
Trichloroethene [79-01-6] ^	**0.48**	J	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 18:54	MSZ	
Vinyl chloride [75-01-4] ^	**3.7**		ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 18:54	MSZ	

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Description: 5503-MW16R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-08
Sampled: 10/08/13 09:45
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 18:54	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*81 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 18:54*	*MSZ*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 18:54*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 18:54*	*MSZ*	

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Description: 5503-MW16R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-08
Sampled: 10/08/13 09:45
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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] ^	**0.998**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 11:38	VLO	
Arsenic [7440-38-2] ^	**12.2**		ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:11	JDH	
Barium [7440-39-3] ^	**309**		ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:11	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:11	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:11	JDH	
Chromium [7440-47-3] ^	**9.31**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:11	JDH	
Cobalt [7440-48-4] ^	**36.9**		ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:11	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:11	JDH	
Lead [7439-92-1] ^	**5.12**	J	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:11	JDH	
Nickel [7440-02-0] ^	**13.7**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:11	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:38	VLO	
Silver [7440-22-4] ^	**7.15**	J	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:11	JDH	
Thallium [7440-28-0] ^	**0.723**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:38	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:11	JDH	
Zinc [7440-66-6] ^	**6.85**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:11	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: 5503-MW17 | **Lab Sample ID:** C312337-09 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:05 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 19:23	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 19:23	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
1,1-Dichloroethane [75-34-3] ^	**1.3**	J	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 19:23	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 19:23	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 19:23	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 19:23	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 19:23	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 19:23	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 19:23	MSZ	
Acetone [67-64-1] ^	**43**	J	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 19:23	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 19:23	MSZ	
Benzene [71-43-2] ^	**0.45**	J	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 19:23	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 19:23	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 19:23	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 19:23	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 19:23	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 19:23	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 19:23	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 19:23	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 19:23	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 19:23	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 19:23	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Tetrachloroethene [127-18-4] ^	**2.0**		ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 19:23	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 19:23	MSZ	
Trichloroethene [79-01-6] ^	**1.1**		ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 19:23	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 19:23	MSZ	

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Description: 5503-MW17
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-09
Sampled: 10/09/13 10:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 19:23	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 19:23*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 19:23*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 19:23*	*MSZ*	

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Description: 5503-MW17 | **Lab Sample ID:** C312337-09 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:05 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/17/13 11:42	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:13	JDH	
Barium [7440-39-3] ^	**104**		ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:13	JDH	
Beryllium [7440-41-7] ^	**0.383**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:13	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:13	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:13	JDH	
Cobalt [7440-48-4] ^	**36.7**		ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:13	JDH	
Copper [7440-50-8] ^	**10.5**		ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:13	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:13	JDH	
Nickel [7440-02-0] ^	**40.6**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:13	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:42	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:13	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:42	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:13	JDH	
Zinc [7440-66-6] ^	**12.5**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:13	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: 5503-MW18 | **Lab Sample ID:** C312337-10 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:10 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 19:52	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 19:52	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 19:52	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 19:52	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 19:52	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 19:52	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 19:52	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 19:52	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 19:52	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 19:52	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 19:52	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 19:52	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 19:52	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 19:52	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 19:52	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 19:52	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 19:52	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 19:52	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 19:52	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 19:52	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 19:52	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 19:52	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 19:52	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 19:52	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 19:52	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 19:52	MSZ	

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Description: 5503-MW18 | **Lab Sample ID:** C312337-10 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:10 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 19:52	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 19:52*	*MSZ*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 19:52*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 19:52*	*MSZ*	

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Description: 5503-MW18 | **Lab Sample ID:** C312337-10 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:10 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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] ^	**0.525**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 11:46	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:23	JDH	
Barium [7440-39-3] ^	**55.2**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:23	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:23	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:23	JDH	
Chromium [7440-47-3] ^	**1.57**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:23	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:23	JDH	
Copper [7440-50-8] ^	**2.57**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:23	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:23	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:23	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:46	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:23	JDH	
Thallium [7440-28-0] ^	**0.168**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:46	VLO	
Vanadium [7440-62-2] ^	**3.93**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:23	JDH	
Zinc [7440-66-6] ^	**7.72**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:23	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: 5503-MW19 | **Lab Sample ID:** C312337-11 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:15 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 20:22	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 20:22	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
1,1-Dichloroethane [75-34-3] ^	**11**		ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 20:22	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 20:22	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 20:22	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 20:22	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 20:22	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 20:22	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 20:22	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 20:22	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 20:22	MSZ	
Benzene [71-43-2] ^	**1.5**		ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 20:22	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 20:22	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 20:22	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 20:22	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 20:22	MSZ	
Chloroethane [75-00-3] ^	**0.94**	J	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 20:22	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 20:22	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	**0.93**	J	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 20:22	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 20:22	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 20:22	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 20:22	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Tetrachloroethene [127-18-4] ^	**2.5**		ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 20:22	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 20:22	MSZ	
Trichloroethene [79-01-6] ^	**1.4**		ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Trichlorofluoromethane [75-69-4] ^	**0.81**	J	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 20:22	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 20:22	MSZ	

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Description: 5503-MW19
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-11
Sampled: 10/08/13 10:15
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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] ^	**1.3**	J	ug/L	1	0.45	3.0	5	EPA 8260B	10/15/13 20:22	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 20:22*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 20:22*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 20:22*	*MSZ*	

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Description: 5503-MW19 | **Lab Sample ID:** C312337-11 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:15 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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] ^	**0.409**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 11:50	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:25	JDH	
Barium [7440-39-3] ^	**30.8**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:25	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:25	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:25	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:25	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:25	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:25	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:25	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:25	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:50	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:25	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:50	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:25	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:25	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: 5503-MW20 | **Lab Sample ID:** C312337-12 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:05 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 20:51	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 20:51	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
1,1-Dichloroethane [75-34-3] ^	**14**		ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 20:51	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 20:51	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 20:51	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 20:51	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	**1.0**		ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 20:51	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 20:51	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 20:51	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 20:51	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 20:51	MSZ	
Benzene [71-43-2] ^	**1.6**		ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 20:51	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 20:51	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 20:51	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 20:51	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 20:51	MSZ	
Chloroethane [75-00-3] ^	**1.6**	J	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 20:51	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 20:51	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	**3.4**	J	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 20:51	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 20:51	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 20:51	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 20:51	MSZ	
Methylene chloride [75-09-2] ^	**2.1**		ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Tetrachloroethene [127-18-4] ^	**1.1**		ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 20:51	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 20:51	MSZ	
Trichloroethene [79-01-6] ^	**1.7**		ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 20:51	MSZ	
Vinyl chloride [75-01-4] ^	**0.48**	J	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 20:51	MSZ	

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Description: 5503-MW20
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-12
Sampled: 10/08/13 10:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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] ^	**1.7**	J	ug/L	1	0.45	3.0	5	EPA 8260B	10/15/13 20:51	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 20:51*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 20:51*	*MSZ*	
Toluene-d8	*42*	*1*	*50.0*	*84 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 20:51*	*MSZ*	

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Description: 5503-MW20 | **Lab Sample ID:** C312337-12 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:05 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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] ^	**0.620**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 11:54	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:28	JDH	
Barium [7440-39-3] ^	**81.1**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:28	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:28	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:28	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:28	JDH	
Cobalt [7440-48-4] ^	**4.23**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:28	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:28	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:28	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:28	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:54	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:28	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:54	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:28	JDH	
Zinc [7440-66-6] ^	**4.49**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:28	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: 5503-MW21 | **Lab Sample ID:** C312337-13 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:25 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 21:20	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 21:20	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 21:20	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 21:20	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 21:20	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 21:20	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 21:20	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 21:20	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 21:20	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 21:20	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 21:20	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 21:20	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 21:20	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 21:20	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 21:20	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 21:20	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 21:20	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 21:20	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 21:20	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 21:20	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 21:20	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 21:20	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 21:20	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 21:20	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 21:20	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 21:20	MSZ	

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Description: 5503-MW21
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-13
Sampled: 10/08/13 10:25
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 21:20	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 21:20*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 21:20*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 21:20*	*MSZ*	

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Description: 5503-MW21 | **Lab Sample ID:** C312337-13 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:25 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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] ^	**0.894**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 11:58	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:30	JDH	
Barium [7440-39-3] ^	**36.9**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:30	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:30	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:30	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:30	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:30	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:30	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:30	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:30	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 11:58	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:30	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 11:58	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:30	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:30	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: 5503-MW24 | **Lab Sample ID:** C312337-14 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:40 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/16/13 05:10	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 05:10	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 05:10	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 05:10	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 05:10	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 05:10	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 05:10	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 05:10	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 05:10	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 05:10	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 05:10	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 05:10	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 05:10	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 05:10	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 05:10	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 05:10	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 05:10	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 05:10	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 05:10	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 05:10	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 05:10	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 05:10	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 05:10	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 05:10	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 05:10	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 05:10	MSZ	

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Description: 5503-MW24 | **Lab Sample ID:** C312337-14 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:40 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/16/13 05:10	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 05:10*	*MSZ*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 05:10*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*89 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 05:10*	*MSZ*	

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Description: 5503-MW24 | **Lab Sample ID:** C312337-14 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:40 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/17/13 12:02	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:33	JDH	
Barium [7440-39-3] ^	**174**		ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:33	JDH	
Beryllium [7440-41-7] ^	**0.894**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:33	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:33	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:33	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:33	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:33	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:33	JDH	
Nickel [7440-02-0] ^	**1.85**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:33	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 12:02	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:33	JDH	
Thallium [7440-28-0] ^	**0.126**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 12:02	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:33	JDH	
Zinc [7440-66-6] ^	**28.5**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:33	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: 5503-MW25 | **Lab Sample ID:** C312337-15 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:20 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/16/13 05:39	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 05:39	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 05:39	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 05:39	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 05:39	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 05:39	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 05:39	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 05:39	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 05:39	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 05:39	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 05:39	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 05:39	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 05:39	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 05:39	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 05:39	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 05:39	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 05:39	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 05:39	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 05:39	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 05:39	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 05:39	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 05:39	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 05:39	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 05:39	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 05:39	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 05:39	MSZ	

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Description:	5503-MW25	**Lab Sample ID:**	C312337-15	**Received:**	10/10/13 07:50
Matrix:	Ground Water	**Sampled:**	10/09/13 11:20	**Work Order:**	C312337
Project:	Lincoln County LF - App Is	**Sampled By:**	Courtney Murphy		

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	10/16/13 05:39	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 05:39*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 05:39*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 05:39*	*MSZ*	

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Description: 5503-MW25 | **Lab Sample ID:** C312337-15 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:20 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/17/13 12:18	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:36	JDH	
Barium [7440-39-3] ^	**235**		ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:36	JDH	
Beryllium [7440-41-7] ^	**0.163**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:36	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:36	JDH	
Chromium [7440-47-3] ^	**5.56**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:36	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:36	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:36	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:36	JDH	
Nickel [7440-02-0] ^	**2.91**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:36	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 12:18	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:36	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 12:18	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:36	JDH	
Zinc [7440-66-6] ^	**19.0**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:36	JDH	

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Description: 5503-MW25A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-16
Sampled: 10/09/13 11:25
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/16/13 06:09	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 06:09	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 06:09	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 06:09	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 06:09	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 06:09	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 06:09	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 06:09	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 06:09	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 06:09	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 06:09	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 06:09	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 06:09	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 06:09	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 06:09	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 06:09	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 06:09	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 06:09	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 06:09	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 06:09	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 06:09	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 06:09	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 06:09	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 06:09	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 06:09	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 06:09	MSZ	

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Description: 5503-MW25A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-16
Sampled: 10/09/13 11:25
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/16/13 06:09	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*81 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 06:09*	*MSZ*	
Dibromofluoromethane	*43*	*1*	*50.0*	*87 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 06:09*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*87 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 06:09*	*MSZ*	

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Description: 5503-MW25A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-16
Sampled: 10/09/13 11:25
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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] ^	**1.84**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 12:22	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:38	JDH	
Barium [7440-39-3] ^	**46.9**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:38	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:38	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:38	JDH	
Chromium [7440-47-3] ^	**5.09**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:38	JDH	
Cobalt [7440-48-4] ^	**7.88**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:38	JDH	
Copper [7440-50-8] ^	**4.39**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:38	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:38	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:38	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 12:22	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:38	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 12:22	VLO	
Vanadium [7440-62-2] ^	**3.85**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:38	JDH	
Zinc [7440-66-6] ^	**4.58**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:38	JDH	

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Description: 5503-MW32R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-17
Sampled: 10/08/13 10:30
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 21:50	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 21:50	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 21:50	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 21:50	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 21:50	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 21:50	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 21:50	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 21:50	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 21:50	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 21:50	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 21:50	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 21:50	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 21:50	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 21:50	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 21:50	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 21:50	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 21:50	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 21:50	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 21:50	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 21:50	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 21:50	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 21:50	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 21:50	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 21:50	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 21:50	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 21:50	MSZ	

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Description: 5503-MW32R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-17
Sampled: 10/08/13 10:30
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 21:50	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 21:50*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 21:50*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 21:50*	*MSZ*	

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Description: 5503-MW32R
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-17
Sampled: 10/08/13 10:30
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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] ^	**1.00**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 12:26	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:40	JDH	
Barium [7440-39-3] ^	**19.4**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:40	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:40	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:40	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:40	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:40	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:40	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:40	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:40	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 12:26	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:40	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 12:26	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:40	JDH	
Zinc [7440-66-6] ^	**5.35**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:40	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: 5503-MW33 | **Lab Sample ID:** C312337-18 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:40 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 22:19	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 22:19	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 22:19	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 22:19	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 22:19	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 22:19	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 22:19	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 22:19	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 22:19	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 22:19	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 22:19	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 22:19	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 22:19	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 22:19	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 22:19	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 22:19	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 22:19	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 22:19	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 22:19	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 22:19	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 22:19	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 22:19	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 22:19	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 22:19	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 22:19	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 22:19	MSZ	

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Description: 5503-MW33
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-18
Sampled: 10/08/13 10:40
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 22:19	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*76 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 22:19*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 22:19*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*85 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 22:19*	*MSZ*	

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Description: 5503-MW33 | **Lab Sample ID:** C312337-18 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 10:40 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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] ^	**0.513**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 12:30	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:43	JDH	
Barium [7440-39-3] ^	**44.0**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:43	JDH	
Beryllium [7440-41-7] ^	**0.131**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:43	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:43	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:43	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:43	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:43	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:43	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:43	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 12:30	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:43	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 12:30	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:43	JDH	
Zinc [7440-66-6] ^	**5.42**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:43	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: 5503-MW33A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-19
Sampled: 10/08/13 10:45
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 22:49	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/15/13 22:49	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/15/13 22:49	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 22:49	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/15/13 22:49	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/15/13 22:49	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/15/13 22:49	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/15/13 22:49	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/15/13 22:49	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/15/13 22:49	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/15/13 22:49	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/15/13 22:49	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/15/13 22:49	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/15/13 22:49	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/15/13 22:49	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 22:49	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/15/13 22:49	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/15/13 22:49	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/15/13 22:49	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/15/13 22:49	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/15/13 22:49	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/15/13 22:49	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/15/13 22:49	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/15/13 22:49	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/15/13 22:49	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/15/13 22:49	MSZ	

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Description: 5503-MW33A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-19
Sampled: 10/08/13 10:45
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/15/13 22:49	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 22:49*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 22:49*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 22:49*	*MSZ*	

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Description: 5503-MW33A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-19
Sampled: 10/08/13 10:45
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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] ^	**1.66**	J	ug/L	1	0.220	2.00	6	EPA 6020A	10/17/13 12:34	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:45	JDH	
Barium [7440-39-3] ^	**7.18**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:45	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:45	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:45	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:45	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:45	JDH	
Copper [7440-50-8] ^	**2.96**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:45	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:45	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:45	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 12:34	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:45	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 12:34	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:45	JDH	
Zinc [7440-66-6] ^	**14.8**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:45	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: 5503-MW34 | **Lab Sample ID:** C312337-20 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 11:00 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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

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Description: 5503-MW34 | **Lab Sample ID:** C312337-20 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 11:00 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/15/13 23:18	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J15021*	*EPA 8260B*	*10/15/13 23:18*	*MSZ*	
Dibromofluoromethane	*43*	*1*	*50.0*	*85 %*	*68-117*	*3J15021*	*EPA 8260B*	*10/15/13 23:18*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*85 %*	*67-127*	*3J15021*	*EPA 8260B*	*10/15/13 23:18*	*MSZ*	

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Description: 5503-MW34 | **Lab Sample ID:** C312337-20 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/08/13 11:00 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/17/13 12:38	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/14/13 13:55	JDH	
Barium [7440-39-3] ^	**278**		ug/L	1	1.00	10.0	100	EPA 6010C	10/14/13 13:55	JDH	
Beryllium [7440-41-7] ^	**1.55**		ug/L	1	0.100	1.00	1	EPA 6010C	10/14/13 13:55	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/14/13 13:55	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/14/13 13:55	JDH	
Cobalt [7440-48-4] ^	**4.59**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/14/13 13:55	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/14/13 13:55	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/14/13 13:55	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/14/13 13:55	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 12:38	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/14/13 13:55	JDH	
Thallium [7440-28-0] ^	**0.219**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 12:38	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/14/13 13:55	JDH	
Zinc [7440-66-6] ^	**17.1**		ug/L	1	3.80	10.0	10	EPA 6010C	10/14/13 13:55	JDH	

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Description: 5503-MW35 | **Lab Sample ID:** C312337-21 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:00 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/16/13 06:38	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 06:38	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 06:38	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 06:38	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 06:38	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 06:38	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 06:38	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 06:38	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 06:38	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 06:38	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 06:38	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 06:38	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 06:38	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 06:38	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 06:38	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 06:38	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 06:38	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 06:38	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 06:38	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 06:38	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 06:38	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 06:38	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 06:38	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 06:38	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 06:38	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 06:38	MSZ	

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Description:	5503-MW35	**Lab Sample ID:**	C312337-21	**Received:**	10/10/13 07:50
Matrix:	Ground Water	**Sampled:**	10/09/13 11:00	**Work Order:**	C312337
Project:	Lincoln County LF - App Is	**Sampled By:**	Courtney Murphy		

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	10/16/13 06:38	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 06:38*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 06:38*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 06:38*	*MSZ*	

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Description: 5503-MW35 | **Lab Sample ID:** C312337-21 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 11:00 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** Courtney Murphy

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	10/18/13 11:02	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 11:18	JDH	
Barium [7440-39-3] ^	**52.6**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 11:18	JDH	
Beryllium [7440-41-7] ^	**0.186**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 11:18	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 11:18	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 11:18	JDH	
Cobalt [7440-48-4] ^	**1.18**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 11:18	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 11:18	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 11:18	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 11:18	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:02	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 11:18	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:02	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 11:18	JDH	
Zinc [7440-66-6] ^	**9.16**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 11:18	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: 5503-MW35A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-22
Sampled: 10/09/13 11:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/16/13 07:08	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 07:08	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 07:08	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 07:08	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 07:08	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 07:08	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 07:08	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 07:08	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 07:08	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 07:08	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 07:08	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 07:08	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 07:08	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 07:08	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 07:08	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 07:08	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 07:08	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 07:08	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 07:08	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 07:08	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 07:08	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 07:08	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 07:08	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 07:08	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 07:08	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 07:08	MSZ	

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Description: 5503-MW35A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-22
Sampled: 10/09/13 11:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/16/13 07:08	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 07:08*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 07:08*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 07:08*	*MSZ*	

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Description: 5503-MW35A
Matrix: Ground Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-22
Sampled: 10/09/13 11:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312337

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	10/18/13 11:06	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 11:20	JDH	
Barium [7440-39-3] ^	**42.1**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 11:20	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 11:20	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 11:20	JDH	
Chromium [7440-47-3] ^	**2.74**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 11:20	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 11:20	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 11:20	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 11:20	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 11:20	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:06	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 11:20	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:06	VLO	
Vanadium [7440-62-2] ^	**2.78**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 11:20	JDH	
Zinc [7440-66-6] ^	**4.26**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 11:20	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: 5503-Trip Blank | **Lab Sample ID:** C312337-23 | **Received:** 10/10/13 07:50

Matrix: Water | **Sampled:** 10/08/13 09:35 | **Work Order:** C312337

Project: Lincoln County LF - App Is | **Sampled By:** ENCO

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	10/16/13 07:37	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 07:37	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 07:37	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 07:37	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 07:37	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 07:37	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 07:37	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 07:37	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 07:37	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 07:37	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 07:37	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 07:37	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 07:37	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 07:37	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 07:37	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 07:37	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 07:37	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 07:37	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 07:37	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 07:37	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 07:37	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 07:37	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 07:37	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 07:37	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 07:37	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 07:37	MSZ	

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Description: 5503-Trip Blank
Matrix: Water
Project: Lincoln County LF - App Is

Lab Sample ID: C312337-23
Sampled: 10/08/13 09:35
Sampled By: ENCO

Received: 10/10/13 07:50
Work Order: C312337

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	10/16/13 07:37	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*77 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 07:37*	*MSZ*	
Dibromofluoromethane	*43*	*1*	*50.0*	*86 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 07:37*	*MSZ*	
Toluene-d8	*42*	*1*	*50.0*	*84 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 07:37*	*MSZ*	

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J14009 - EPA 5030B_MS

Blank (3J14009-BLK1) Prepared: 10/14/2013 09:58 Analyzed: 10/14/2013 23:46

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							
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	*40*			*ug/L*	*50.0*		*79*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J14009 - EPA 5030B_MS

Blank (3J14009-BLK1) Continued Prepared: 10/14/2013 09:58 Analyzed: 10/14/2013 23:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*68-117*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*87*	*67-127*			

LCS (3J14009-BS1) Prepared: 10/14/2013 09:58 Analyzed: 10/15/2013 00:15

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	22		1.0	ug/L	20.0		109	75-133			
Benzene	19		1.0	ug/L	20.0		95	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		100	83-117			
Toluene	19		1.0	ug/L	20.0		96	71-118			
Trichloroethene	21		1.0	ug/L	20.0		103	74-119			

Matrix Spike (3J14009-MS1) Prepared: 10/14/2013 09:58 Analyzed: 10/15/2013 00:45

Source: C313524-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	22		1.0	ug/L	20.0	0.21 U	108	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	97	81-134			
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	97	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	96	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	104	74-119			

Matrix Spike Dup (3J14009-MSD1) Prepared: 10/14/2013 09:58 Analyzed: 10/15/2013 01:14

Source: C313524-01

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	103	75-133	5	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	90	81-134	8	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	94	83-117	3	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	92	71-118	4	17	
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	97	74-119	7	22	

Batch 3J15021 - EPA 5030B_MS

Blank (3J15021-BLK1) Prepared: 10/15/2013 12:58 Analyzed: 10/15/2013 13:01

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							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J15021 - EPA 5030B_MS

Blank (3J15021-BLK1) Continued Prepared: 10/15/2013 12:58 Analyzed: 10/15/2013 13:01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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							
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	*39*			*ug/L*	*50.0*		*78*	*51-122*			
Surrogate: Dibromofluoromethane	*45*			*ug/L*	*50.0*		*91*	*68-117*			
Surrogate: Toluene-d8	*45*			*ug/L*	*50.0*		*90*	*67-127*			

LCS (3J15021-BS1) Prepared: 10/15/2013 12:58 Analyzed: 10/15/2013 13:31

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		107	75-133			
Benzene	19		1.0	ug/L	20.0		95	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		99	83-117			
Toluene	19		1.0	ug/L	20.0		95	71-118			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J15021 - EPA 5030B_MS

LCS (3J15021-BS1) Continued Prepared: 10/15/2013 12:58 Analyzed: 10/15/2013 13:31

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Trichloroethene	20		1.0	ug/L	20.0		101	74-119			

Matrix Spike (3J15021-MS1) Prepared: 10/15/2013 12:58 Analyzed: 10/15/2013 14:00

Source: C313524-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	22		1.0	ug/L	20.0	0.21 U	110	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	94	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	100	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	97	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	102	74-119			

Matrix Spike Dup (3J15021-MSD1) Prepared: 10/15/2013 12:58 Analyzed: 10/15/2013 14:30

Source: C313524-02

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	105	75-133	4	20	
Benzene	19		1.0	ug/L	20.0	0.15 U	94	81-134	0.5	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	97	83-117	3	16	
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118	4	17	
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	102	74-119	0.3	22	

Batch 3J15025 - EPA 5030B_MS

Blank (3J15025-BLK1) Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 01:44

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							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J15025 - EPA 5030B_MS

Blank (3J15025-BLK1) Continued Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 01:44

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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							
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	*39*			*ug/L*	*50.0*		*77*	*51-122*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*87*	*67-127*			

LCS (3J15025-BS1) Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 02:14

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		100	75-133			
Benzene	18		1.0	ug/L	20.0		91	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		94	83-117			
Toluene	18		1.0	ug/L	20.0		92	71-118			
Trichloroethene	19		1.0	ug/L	20.0		97	74-119			

Matrix Spike (3J15025-MS1) Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 02:43

Source: C313524-03

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	105	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	91	81-134			
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	97	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	96	74-119			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J15025 - EPA 5030B_MS

Matrix Spike Dup (3J15025-MSD1) Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 03:13

Source: C313524-03

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	103	75-133	2	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	91	81-134	0.3	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	94	83-117	3	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	91	71-118	1	17	
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	97	74-119	1	22	

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3J10031 - EPA 7470A

Blank (3J10031-BLK1) Prepared: 10/11/2013 12:55 Analyzed: 10/11/2013 14:25

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 (3J10031-BS1) Prepared: 10/11/2013 12:55 Analyzed: 10/11/2013 14:27

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.99		0.200	ug/L	5.00		100	80-120			

Matrix Spike (3J10031-MS1) Prepared: 10/11/2013 12:55 Analyzed: 10/11/2013 14:31

Source: C311896-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.57		0.200	ug/L	5.00	0.657	78	75-125			

Matrix Spike Dup (3J10031-MSD1) Prepared: 10/11/2013 12:55 Analyzed: 10/11/2013 14:34

Source: C311896-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.49		0.200	ug/L	5.00	0.657	77	75-125	2	25	

Post Spike (3J10031-PS1) Prepared: 10/11/2013 12:55 Analyzed: 10/11/2013 14:36

Source: C311896-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.29		0.200	ug/L	5.00	0.657	53	75-125			QM-08

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

Batch 3J10010 - EPA 3005A

Blank (3J10010-BLK1) Prepared: 10/10/2013 09:54 Analyzed: 10/14/2013 12:27

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	5.40	U	10.0	ug/L							

QUALITY CONTROL

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

Batch 3J10010 - EPA 3005A

Blank (3J10010-BLK1) Continued Prepared: 10/10/2013 09:54 Analyzed: 10/14/2013 12:27

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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							
Manganese	1.10	U	10.0	ug/L							
Nickel	1.80	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 (3J10010-BS1) Prepared: 10/10/2013 09:54 Analyzed: 10/14/2013 12:30

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	207		10.0	ug/L	200		104	80-120			
Barium	204		10.0	ug/L	200		102	80-120			
Beryllium	20.3		1.00	ug/L	20.0		102	80-120			
Cadmium	20.6		1.00	ug/L	20.0		103	80-120			
Chromium	206		10.0	ug/L	200		103	80-120			
Cobalt	202		10.0	ug/L	200		101	80-120			
Copper	203		10.0	ug/L	200		101	80-120			
Iron	1050		50.0	ug/L	1000		105	80-120			
Lead	204		10.0	ug/L	200		102	80-120			
Manganese	198		10.0	ug/L	200		99	80-120			
Nickel	205		10.0	ug/L	200		103	80-120			
Silver	213		10.0	ug/L	200		106	80-120			
Vanadium	209		10.0	ug/L	200		104	80-120			
Zinc	202		10.0	ug/L	200		101	80-120			

Matrix Spike (3J10010-MS1) Prepared: 10/10/2013 09:54 Analyzed: 10/14/2013 12:36

Source: C312337-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	209		10.0	ug/L	200	5.40 U	105	75-125			
Barium	252		10.0	ug/L	200	44.4	104	75-125			
Beryllium	20.2		1.00	ug/L	20.0	0.100 U	101	75-125			
Cadmium	20.8		1.00	ug/L	20.0	0.360 U	104	75-125			
Chromium	212		10.0	ug/L	200	8.90	102	75-125			
Cobalt	207		10.0	ug/L	200	1.39	103	75-125			
Copper	200		10.0	ug/L	200	3.37	98	75-125			
Iron	3820		50.0	ug/L	1000	2600	122	75-125			
Lead	208		10.0	ug/L	200	2.10 U	104	75-125			
Manganese	223		10.0	ug/L	200	27.0	98	75-125			
Nickel	216		10.0	ug/L	200	5.47	105	75-125			
Silver	207		10.0	ug/L	200	1.90 U	104	75-125			

QUALITY CONTROL

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

Batch 3J10010 - EPA 3005A

Matrix Spike (3J10010-MS1) Continued Prepared: 10/10/2013 09:54 Analyzed: 10/14/2013 12:36

Source: C312337-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vanadium	210		10.0	ug/L	200	4.78	103	75-125			
Zinc	221		10.0	ug/L	200	14.5	103	75-125			

Matrix Spike Dup (3J10010-MSD1) Prepared: 10/10/2013 09:54 Analyzed: 10/14/2013 12:38

Source: C312337-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	218		10.0	ug/L	200	5.40 U	109	75-125	4	20	
Barium	261		10.0	ug/L	200	44.4	108	75-125	3	20	
Beryllium	21.0		1.00	ug/L	20.0	0.100 U	105	75-125	4	20	
Cadmium	21.6		1.00	ug/L	20.0	0.360 U	108	75-125	3	20	
Chromium	220		10.0	ug/L	200	8.90	105	75-125	3	20	
Cobalt	214		10.0	ug/L	200	1.39	106	75-125	3	20	
Copper	208		10.0	ug/L	200	3.37	102	75-125	4	20	
Iron	3940		50.0	ug/L	1000	2600	135	75-125	3	20	QM-05
Lead	216		10.0	ug/L	200	2.10 U	108	75-125	4	20	
Manganese	229		10.0	ug/L	200	27.0	101	75-125	3	20	
Nickel	223		10.0	ug/L	200	5.47	109	75-125	3	20	
Silver	215		10.0	ug/L	200	1.90 U	107	75-125	4	20	
Vanadium	219		10.0	ug/L	200	4.78	107	75-125	4	20	
Zinc	227		10.0	ug/L	200	14.5	106	75-125	3	20	

Post Spike (3J10010-PS1) Prepared: 10/10/2013 09:54 Analyzed: 10/14/2013 12:52

Source: C312337-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.209		0.0100	mg/L	0.200	0.00276	103	80-120			
Barium	0.252		0.0100	mg/L	0.200	0.0444	104	80-120			
Beryllium	0.0204		0.00100	mg/L	0.0200	6.97E-5	101	80-120			
Cadmium	0.0208		0.00100	mg/L	0.0200	-1.42E-5	104	80-120			
Chromium	0.213		0.0100	mg/L	0.200	0.00890	102	80-120			
Cobalt	0.206		0.0100	mg/L	0.200	0.00139	102	80-120			
Copper	0.201		0.0100	mg/L	0.200	0.00337	99	80-120			
Iron	3.60		0.0500	mg/L	1.00	2.60	101	80-120			
Lead	0.208		0.0100	mg/L	0.200	-0.000907	104	80-120			
Manganese	0.224		0.0100	mg/L	0.200	0.0270	98	80-120			
Nickel	0.216		0.0100	mg/L	0.200	0.00547	105	80-120			
Silver	0.209		0.0100	mg/L	0.200	0.000573	104	80-120			
Vanadium	0.212		0.0100	mg/L	0.200	0.00478	104	80-120			
Zinc	0.222		0.0100	mg/L	0.200	0.0145	104	80-120			

Batch 3J10011 - EPA 3005A

Blank (3J10011-BLK1) Prepared: 10/10/2013 09:55 Analyzed: 10/17/2013 10:38

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

QUALITY CONTROL

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

Batch 3J10011 - EPA 3005A

Blank (3J10011-BLK1) Continued Prepared: 10/10/2013 09:55 Analyzed: 10/17/2013 10:38

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Selenium	0.910	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (3J10011-BS1) Prepared: 10/10/2013 09:55 Analyzed: 10/17/2013 10:42

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	206		2.00	ug/L	200		103	80-120			
Selenium	214		1.00	ug/L	200		107	80-120			
Thallium	201		1.00	ug/L	200		101	80-120			

Matrix Spike (3J10011-MS1) Prepared: 10/10/2013 09:55 Analyzed: 10/17/2013 10:50

Source: C312337-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	209		2.00	ug/L	200	2.79	103	75-125			
Selenium	217		1.00	ug/L	200	0.910 U	109	75-125			
Thallium	200		1.00	ug/L	200	0.110 U	100	75-125			

Matrix Spike Dup (3J10011-MSD1) Prepared: 10/10/2013 09:55 Analyzed: 10/17/2013 10:54

Source: C312337-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	213		2.00	ug/L	200	2.79	105	75-125	2	20	
Selenium	220		1.00	ug/L	200	0.910 U	110	75-125	1	20	
Thallium	204		1.00	ug/L	200	0.110 U	102	75-125	2	20	

Post Spike (3J10011-PS1) Prepared: 10/10/2013 09:55 Analyzed: 10/17/2013 10:58

Source: C312337-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	217		2.00	ug/L	200	2.79	107	80-120			
Selenium	222		1.00	ug/L	200	0.338	111	80-120			
Thallium	206		1.00	ug/L	200	0.0450	103	80-120			

Batch 3J14016 - EPA 3005A

Blank (3J14016-BLK1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 10:56

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							

QUALITY CONTROL

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

Batch 3J14016 - EPA 3005A

Blank (3J14016-BLK1) Continued Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 10:56

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nickel	1.80	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 (3J14016-BS1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 10:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	209		10.0	ug/L	200		104	80-120			
Barium	215		10.0	ug/L	200		107	80-120			
Beryllium	20.7		1.00	ug/L	20.0		103	80-120			
Cadmium	21.7		1.00	ug/L	20.0		109	80-120			
Chromium	207		10.0	ug/L	200		104	80-120			
Cobalt	213		10.0	ug/L	200		107	80-120			
Copper	205		10.0	ug/L	200		102	80-120			
Lead	209		10.0	ug/L	200		105	80-120			
Nickel	215		10.0	ug/L	200		108	80-120			
Silver	215		10.0	ug/L	200		107	80-120			
Vanadium	210		10.0	ug/L	200		105	80-120			
Zinc	215		10.0	ug/L	200		108	80-120			

Matrix Spike (3J14016-MS1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 11:07

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	228		10.0	ug/L	200	38.2	95	75-125			
Barium	292		10.0	ug/L	200	92.1	100	75-125			
Beryllium	19.0		1.00	ug/L	20.0	0.100 U	95	75-125			
Cadmium	19.4		1.00	ug/L	20.0	0.360 U	97	75-125			
Chromium	193		10.0	ug/L	200	2.31	95	75-125			
Cobalt	586		10.0	ug/L	200	397	94	75-125			
Copper	191		10.0	ug/L	200	1.60 U	96	75-125			
Lead	203		10.0	ug/L	200	3.93	100	75-125			
Nickel	205		10.0	ug/L	200	2.51	101	75-125			
Silver	205		10.0	ug/L	200	7.10	99	75-125			
Vanadium	189		10.0	ug/L	200	1.40 U	94	75-125			
Zinc	206		10.0	ug/L	200	5.84	100	75-125			

Matrix Spike Dup (3J14016-MSD1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 11:10

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	223		10.0	ug/L	200	38.2	92	75-125	2	20	
Barium	282		10.0	ug/L	200	92.1	95	75-125	4	20	
Beryllium	18.8		1.00	ug/L	20.0	0.100 U	94	75-125	1	20	
Cadmium	18.1		1.00	ug/L	20.0	0.360 U	90	75-125	7	20	
Chromium	190		10.0	ug/L	200	2.31	94	75-125	1	20	

QUALITY CONTROL

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

Batch 3J14016 - EPA 3005A

Matrix Spike Dup (3J14016-MSD1) Continued Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 11:10

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cobalt	566		10.0	ug/L	200	397	84	75-125	3	20	
Copper	189		10.0	ug/L	200	1.60 U	95	75-125	1	20	
Lead	196		10.0	ug/L	200	3.93	96	75-125	4	20	
Nickel	198		10.0	ug/L	200	2.51	98	75-125	4	20	
Silver	202		10.0	ug/L	200	7.10	97	75-125	2	20	
Vanadium	186		10.0	ug/L	200	1.40 U	93	75-125	1	20	
Zinc	197		10.0	ug/L	200	5.84	95	75-125	4	20	

Post Spike (3J14016-PS1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 11:12

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.230		0.0100	mg/L	0.200	0.0382	96	80-120			
Barium	0.294		0.0100	mg/L	0.200	0.0921	101	80-120			
Beryllium	0.0198		0.00100	mg/L	0.0200	-4.13E-5	99	80-120			
Cadmium	0.0194		0.00100	mg/L	0.0200	-0.000811	101	80-120			
Chromium	0.200		0.0100	mg/L	0.200	0.00231	99	80-120			
Cobalt	0.587		0.0100	mg/L	0.200	0.397	95	80-120			
Copper	0.198		0.0100	mg/L	0.200	0.00159	98	80-120			
Lead	0.205		0.0100	mg/L	0.200	0.00393	101	80-120			
Nickel	0.207		0.0100	mg/L	0.200	0.00251	102	80-120			
Silver	0.218		0.0100	mg/L	0.200	0.00710	106	80-120			
Vanadium	0.196		0.0100	mg/L	0.200	-0.00687	102	80-120			
Zinc	0.207		0.0100	mg/L	0.200	0.00584	101	80-120			

Batch 3J14018 - EPA 3005A

Blank (3J14018-BLK1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.910	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (3J14018-BS1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:38

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			
Selenium	211		1.00	ug/L	200		106	80-120			
Thallium	198		1.00	ug/L	200		99	80-120			

Matrix Spike (3J14018-MS1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:46

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	210		2.00	ug/L	200	0.220 U	105	75-125			

QUALITY CONTROL

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

Batch 3J14018 - EPA 3005A

Matrix Spike (3J14018-MS1) Continued Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:46

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Selenium	207		1.00	ug/L	200	0.910 U	104	75-125			
Thallium	194		1.00	ug/L	200	0.110 U	97	75-125			

Matrix Spike Dup (3J14018-MSD1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:50

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	208		2.00	ug/L	200	0.220 U	104	75-125	0.9	20	
Selenium	199		1.00	ug/L	200	0.910 U	100	75-125	4	20	
Thallium	195		1.00	ug/L	200	0.110 U	97	75-125	0.3	20	

Post Spike (3J14018-PS1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:54

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	213		2.00	ug/L	200	-0.488	107	80-120			
Selenium	205		1.00	ug/L	200	0.269	103	80-120			
Thallium	198		1.00	ug/L	200	0.0393	99	80-120			

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
QM-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-08	Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr. Orlando, FL 32824 (407) 826-5314 Fax (407) 850-6945
4810 Executive Park Court, Suite 111 Jacksonville, FL 32216-6069 (904) 296-3007 Fax (904) 296-6210
102-A Woodwinds Industrial Ct. Cary, NC 27511 (919) 467-3090 Fax (919) 467-3515
www.encolabs.com

Client Name: S&ME, Inc. (SM002)	Project Number: 1356-07-004
Address: 9751 Southern Pine Blvd.	Project Name/Desc: Lincoln County LF - App Is
City/ST/Zip: Charlotte, NC 28273	PO # / Billing Info: ~~5934~~ 59302
Tel: (704) 523-4726 Fax: (704) 525-3953	Reporting Contact: Courtney Murphy
Sampler(s) Name, Affiliation (Print): Courtney Murphy, S&ME	Billing Contact: Barbara Ellington
Sampler(s) Signature:	Site Location / Time Zone: Crouse, NC

Requested Analyses: 8260B Appendix 1; Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Mn,Ni,Pb,Sb,Se,Tl,V,Zn; Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn; Hg

Preservation (Site Codes) (Combine as necessary)

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

Lab Workorder: C312337

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Mn,Ni,Pb,Sb,Se,Tl,V,Zn	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Hg							Sample Comments
	5503-MW1A	10/8/13	09:35	G	GW	4	X	X		X						OK	
	~~5503-MW1B~~																
	5503-MW9	10/9/13	11:15	G	GW	4	X		X								
	5503-MW10R	10/9/13	11:35	G	GW	4	X		X								
	5503-MW12	10/9/13	11:45	G	GW	4	X		X								
	5503-MW13	10/8/13	09:55	G	GW	4	X		X								
	5503-MW14	10/8/13	10:00	G	GW	4	X		X								
	5503-MW15	10/8/13	10:50	G	GW	4	X		X								
	5503-MW16R	10/8/13	09:45	G	GW	4	X		X								
	5503-MW17	10/9/13	10:05	G	GW	4	X		X								
	5503-MW18	10/8/13	10:10	G	GW	4	X		X								
	5503-MW19	10/8/13	10:15	G	GW	4	X		X								

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By: Courtney Murphy	Date/Time: 10-9-13 1700	Received By: John Kiy	Date/Time: 10/10/13 7:50
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: 2.4c		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

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
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102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

www.encolabs.com

Client Name: S&ME, Inc. (SM002)	Project Number: 1356-07-004
Address: 9751 Southern Pine Blvd.	Project Name/Desc: Lincoln County LF - App Is
City/ST/Zip: Charlotte, NC 28273	PO # / Billing Info: ~~50341~~ 59302
Tel: (704) 523-4726 Fax: (704) 525-3953	Reporting Contact: Courtney Murphy
Sampler(s) Name, Affiliation (Print): Courtney Murphy, SLME	Billing Contact: Barbara Ellington
Sampler(s) Signature: Courtney Murphy	Site Location / Time Zone: Crouse, NC

Requested Analyses: 8260B Appendix 1; Ag As Ba Be Cd Ca Cr Cu Fe Mn Ni Pb Se Sb Tl V Zn; Ag As Ba Be Cd Ca Cr Cu Ni Pb Se Sn Tl V Zn; Hg

Preservation (See Codes) (Combine as necessary)

Requested Turnaround Times

Note: Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C312337

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag As Ba Be Cd Ca Cr Cu Fe Mn Ni Pb Se Sb Tl V Zn	Ag As Ba Be Cd Ca Cr Cu Ni Pb Se Sn Tl V Zn	Hg							Sample Comments
	5503-MW20	10/8/13	10:05	G	GW	4	X		X								
	5503-MW21	10/8/13	10:25	G	GW	4	X		X								
	5503-MW24	10/9/13	11:40	G	GW	4	X		X								
	5503-MW25	10/9/13	11:20	G	GW	4	X		X								
	5503-MW25A	10/9/13	11:25	G	GW	4	X		X								
	5503-MW32R	10/8/13	10:30	G	GW	4	X		X								
	5503-MW33	10/8/13	10:40	G	GW	4	X		X								
	5503-MW33A	10/8/13	10:45	G	GW	4	X		X								
	5503-MW34	10/8/13	11:00	G	GW	4	X		X								
	5503-MW35	10/9/13	11:00	G	GW	4	X		X								
	5503-MW35A	10/9/13	11:05	G	GW	4	X		X								
	5503-Trip Blank				WA	2	X										

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By: Courtney Murphy	Date/Time: 10-9-13 1700	Received By: [illegible]	Date/Time: 10/10/13 750
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: 2.4c		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, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515
www.encolabs.com

Thursday, October 24, 2013

S&ME, Inc. (SM002)

Attn: Courtney Murphy

9751 Southern Pine Blvd.

Charlotte, NC 28273

RE: Laboratory Results for
Project Number: 1356-07-004, Project Name/Desc: Lincoln County LF - C&D
ENCO Workorder(s): C312338

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, October 10, 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,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 54.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 5503-MW26 **Lab ID: C312338-01** **Sampled: 10/09/13 10:45** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/10/2013 21:31
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:10
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 11:23
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:10
EPA 7470A	11/06/13	10/10/13 12:58	10/11/2013 15:36
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 08:06
SM 2540C-1997	10/16/13	10/14/13 08:39	10/14/2013 08:39

Client ID: 5503-MW27 **Lab ID: C312338-02** **Sampled: 10/09/13 10:55** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/10/2013 21:48
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:13
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 12:17
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:22
EPA 7470A	11/06/13	10/10/13 12:58	10/11/2013 15:38
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 08:35
SM 2540C-1997	10/16/13	10/15/13 11:35	10/15/2013 11:35

Client ID: 5503-MW28 **Lab ID: C312338-03** **Sampled: 10/09/13 09:55** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/10/2013 22:05
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:14
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 12:20
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:26
EPA 7470A	11/06/13	10/10/13 12:58	10/11/2013 15:45
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 09:05
SM 2540C-1997	10/16/13	10/15/13 11:35	10/15/2013 11:35

Client ID: 5503-MW29 **Lab ID: C312338-04** **Sampled: 10/09/13 10:10** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/10/2013 22:22
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:15
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 12:22
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:30
EPA 7470A	11/06/13	10/10/13 12:58	10/11/2013 15:47
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 09:34
SM 2540C-1997	10/16/13	10/15/13 11:35	10/15/2013 11:35

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Client ID: 5503-MW30	Lab ID: C312338-05	Sampled: 10/09/13 10:30	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/10/2013 22:40
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:16
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 12:25
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:34
EPA 7470A	11/06/13	10/10/13 12:58	10/11/2013 15:49
EPA 8260B	10/23/13	10/15/13 14:51	10/16/2013 10:04
SM 2540C-1997	10/16/13	10/16/13 13:33	10/16/2013 13:33

Client ID: 5503-MW31	Lab ID: C312338-06	Sampled: 10/09/13 10:40	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/10/2013 22:57
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:17
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 12:27
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:38
EPA 7470A	11/06/13	10/10/13 12:58	10/11/2013 15:51
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 17:47
SM 2540C-1997	10/16/13	10/16/13 13:33	10/16/2013 13:33

Client ID: 5503-MW36	Lab ID: C312338-07	Sampled: 10/09/13 10:20	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/10/2013 23:14
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:19
EPA 6010C	04/07/14	10/14/13 11:13	10/15/2013 12:29
EPA 6020A	04/07/14	10/14/13 11:20	10/18/2013 11:42
EPA 7470A	11/06/13	10/10/13 12:58	10/11/2013 15:53
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 18:17
SM 2540C-1997	10/16/13	10/16/13 15:25	10/16/2013 15:25

Client ID: 5503-TripBlank	Lab ID: C312338-08	Sampled: 10/09/13 09:55	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 18:46

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 5503-MW26 **Lab ID: C312338-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	80.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chloride	3000	J	1	2200	5000	NE	ug/L	EPA 300.0	
Chromium - Total	3.52	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Iron - Total	589		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	15.3	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4	3600	J	1	2900	5000	250000	ug/L	EPA 300.0	
Total Alkalinity as CaCO3	28000		1	14000	15000	NE	ug/L	EPA 310.2	
Total Dissolved Solids	32000		1	10000	10000	NE	ug/L	SM 2540C-1997	
Vanadium - Total	1.47	J	1	1.40	10.0	25	ug/L	EPA 6010C	

Client ID: 5503-MW27 **Lab ID: C312338-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	309		1	1.00	10.0	100	ug/L	EPA 6010C	
Benzene	0.54	J	1	0.15	1.0	1	ug/L	EPA 8260B	
Beryllium - Total	0.465	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloride	21000		1	2200	5000	NE	ug/L	EPA 300.0	
Chromium - Total	1.85	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	12.3		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	1.65	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	729		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	1330		1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	19.2	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4	56000	J	1	2900	5000	250000	ug/L	EPA 300.0	
Tetrahydrofuran	10		1	0.80	1.0	NE	ug/L	EPA 8260B	
Thallium - Total	0.117	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Total Alkalinity as CaCO3	56000		1	14000	15000	NE	ug/L	EPA 310.2	
Total Dissolved Solids	210000		1	10000	10000	NE	ug/L	SM 2540C-1997	
Zinc - Total	20.0		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW28 **Lab ID: C312338-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Acetone	2.4	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Barium - Total	96.5	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.167	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloride	2200	J	1	2200	5000	NE	ug/L	EPA 300.0	
Cobalt - Total	3.02	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Manganese - Total	41.4	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	3.60	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Tetrachloroethene	6.8		1	0.17	1.0	1	ug/L	EPA 8260B	
Total Alkalinity as CaCO3	16000		1	14000	15000	NE	ug/L	EPA 310.2	
Total Dissolved Solids	10000		1	10000	10000	NE	ug/L	SM 2540C-1997	
Vinyl chloride	0.53	J	1	0.32	1.0	1	ug/L	EPA 8260B	
Zinc - Total	8.55	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW29 **Lab ID: C312338-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	15.0	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.214	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloride	3900	J	1	2200	5000	NE	ug/L	EPA 300.0	

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Client ID: 5503-MW29								Lab ID: C312338-04	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Cobalt - Total	1.63	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	11.9		1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	22300		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	53.6		1	1.10	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4	6900	J	1	2900	5000	250000	ug/L	EPA 300.0	
Toluene	1.3		1	0.14	1.0	1	ug/L	EPA 8260B	
Total Alkalinity as CaCO3	84000		1	14000	15000	NE	ug/L	EPA 310.2	
Total Dissolved Solids	110000		1	10000	10000	NE	ug/L	SM 2540C-1997	
Zinc - Total	14.8		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW30								Lab ID: C312338-05	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	65.1	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chloride	2300	J	1	2200	5000	NE	ug/L	EPA 300.0	
Chromium - Total	1.91	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Copper - Total	2.31	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	2160		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	37.2	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	1.93	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4	3700	J	1	2900	5000	250000	ug/L	EPA 300.0	
Total Dissolved Solids	24000		1	10000	10000	NE	ug/L	SM 2540C-1997	
Vanadium - Total	2.37	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	9.58	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW31								Lab ID: C312338-06	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	26.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.287	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloride	2400	J	1	2200	5000	NE	ug/L	EPA 300.0	
Chromium - Total	3.79	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	1.98	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	5.61	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	22400		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	45.3	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	2.89	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Sulfate as SO4	7900	J	1	2900	5000	250000	ug/L	EPA 300.0	
Vanadium - Total	3.54	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	8.17	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-MW36								Lab ID: C312338-07	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	78.1	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.140	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloride	2400	J	1	2200	5000	NE	ug/L	EPA 300.0	
Chromium - Total	2.91	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	2.00	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Iron - Total	1740		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	42.6	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	2.60	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	11.9		1	3.80	10.0	10	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 5503-MW26 | **Lab Sample ID:** C312338-01 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:45 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/16/13 08:06	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 08:06	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 08:06	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 08:06	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 08:06	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 08:06	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 08:06	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 08:06	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 08:06	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 08:06	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 08:06	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 08:06	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 08:06	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 08:06	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 08:06	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 08:06	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 08:06	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 08:06	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 08:06	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 08:06	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 08:06	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 08:06	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/16/13 08:06	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 08:06	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 08:06	MSZ	

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Description: 5503-MW26
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-01
Sampled: 10/09/13 10:45
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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	10/16/13 08:06	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 08:06	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 08:06	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 08:06	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 08:06*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 08:06*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 08:06*	*MSZ*	

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Description:	5503-MW26	**Lab Sample ID:**	C312338-01	**Received:**	10/10/13 07:50
Matrix:	Ground Water	**Sampled:**	10/09/13 10:45	**Work Order:**	C312338
Project:	Lincoln County LF - C&D	**Sampled By:**	Courtney Murphy		

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	10/11/13 15:36	T1D	

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Description: 5503-MW26 | **Lab Sample ID:** C312338-01 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:45 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/18/13 11:10	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 11:23	JDH	
Barium [7440-39-3] ^	**80.2**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 11:23	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 11:23	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 11:23	JDH	
Chromium [7440-47-3] ^	**3.52**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 11:23	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 11:23	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 11:23	JDH	
Iron [7439-89-6] ^	**589**		ug/L	1	22.0	50.0	300	EPA 6010C	10/15/13 11:23	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 11:23	JDH	
Manganese [7439-96-5] ^	**15.3**	J	ug/L	1	1.10	10.0	50	EPA 6010C	10/15/13 11:23	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 11:23	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:10	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 11:23	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:10	VLO	
Vanadium [7440-62-2] ^	**1.47**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 11:23	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 11:23	JDH	

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Description: 5503-MW26
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-01
Sampled: 10/09/13 10:45
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] ^	**3000**	J	ug/L	1	2200	5000	NE	EPA 300.0	10/10/13 21:31	AJB	
Sulfate as SO4 [14808-79-8] ^	**3600**	J	ug/L	1	2900	5000	250000	EPA 300.0	10/10/13 21:31	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	**28000**		ug/L	1	14000	15000	NE	EPA 310.2	10/16/13 10:10	c1v	
Total Dissolved Solids [ECL-0156] ^	**32000**		ug/L	1	10000	10000	NE	SM 2540C-1997	10/14/13 08:39	HMS	

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

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Description: 5503-MW27 | **Lab Sample ID:** C312338-02 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:55 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/16/13 08:35	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 08:35	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 08:35	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 08:35	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 08:35	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 08:35	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 08:35	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 08:35	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 08:35	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 08:35	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 08:35	MSZ	
Benzene [71-43-2] ^	**0.54**	J	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 08:35	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 08:35	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 08:35	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 08:35	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 08:35	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 08:35	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 08:35	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 08:35	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 08:35	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 08:35	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 08:35	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Tetrahydrofuran [109-99-9] ^	**10**		ug/L	1	0.80	1.0	NE	EPA 8260B	10/16/13 08:35	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 08:35	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 08:35	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 08:35	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 08:35	MSZ	

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Description: 5503-MW27
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-02
Sampled: 10/09/13 10:55
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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	10/16/13 08:35	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 08:35	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 08:35*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 08:35*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*87 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 08:35*	*MSZ*	

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Description:	5503-MW27	**Lab Sample ID:**	C312338-02	**Received:**	10/10/13 07:50
Matrix:	Ground Water	**Sampled:**	10/09/13 10:55	**Work Order:**	C312338
Project:	Lincoln County LF - C&D	**Sampled By:**	Courtney Murphy		

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	10/11/13 15:38	T1D	

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Description: 5503-MW27 | **Lab Sample ID:** C312338-02 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:55 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/18/13 11:22	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 12:17	JDH	
Barium [7440-39-3] ^	**309**		ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 12:17	JDH	
Beryllium [7440-41-7] ^	**0.465**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 12:17	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 12:17	JDH	
Chromium [7440-47-3] ^	**1.85**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 12:17	JDH	
Cobalt [7440-48-4] ^	**12.3**		ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 12:17	JDH	
Copper [7440-50-8] ^	**1.65**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 12:17	JDH	
Iron [7439-89-6] ^	**729**		ug/L	1	22.0	50.0	300	EPA 6010C	10/15/13 12:17	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 12:17	JDH	
Manganese [7439-96-5] ^	**1330**		ug/L	1	1.10	10.0	50	EPA 6010C	10/15/13 12:17	JDH	
Nickel [7440-02-0] ^	**19.2**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 12:17	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:22	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 12:17	JDH	
Thallium [7440-28-0] ^	**0.117**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:22	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 12:17	JDH	
Zinc [7440-66-6] ^	**20.0**		ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 12:17	JDH	

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Description: 5503-MW27
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-02
Sampled: 10/09/13 10:55
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] ^	**21000**		ug/L	1	2200	5000	NE	EPA 300.0	10/10/13 21:48	AJB	
Sulfate as SO4 [14808-79-8] ^	**56000**	J	ug/L	1	2900	5000	250000	EPA 300.0	10/10/13 21:48	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	**56000**		ug/L	1	14000	15000	NE	EPA 310.2	10/16/13 10:13	c1v	
Total Dissolved Solids [ECL-0156] ^	**210000**		ug/L	1	10000	10000	NE	SM 2540C-1997	10/15/13 11:35	HMS	

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

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Description: 5503-MW28 | **Lab Sample ID:** C312338-03 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 09:55 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/16/13 09:05	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 09:05	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 09:05	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 09:05	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 09:05	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 09:05	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 09:05	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 09:05	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 09:05	MSZ	
Acetone [67-64-1] ^	**2.4**	J	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 09:05	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 09:05	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 09:05	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 09:05	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 09:05	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 09:05	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 09:05	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 09:05	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 09:05	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 09:05	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 09:05	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 09:05	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 09:05	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Tetrachloroethene [127-18-4] ^	**6.8**		ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/16/13 09:05	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 09:05	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 09:05	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 09:05	MSZ	

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Description: 5503-MW28
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-03
Sampled: 10/09/13 09:55
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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] ^	**0.53**	J	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 09:05	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 09:05	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 09:05*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 09:05*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 09:05*	*MSZ*	

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Description: 5503-MW28
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-03
Sampled: 10/09/13 09:55
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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	10/11/13 15:45	T1D	

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Description: 5503-MW28 | **Lab Sample ID:** C312338-03 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 09:55 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/18/13 11:26	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 12:20	JDH	
Barium [7440-39-3] ^	**96.5**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 12:20	JDH	
Beryllium [7440-41-7] ^	**0.167**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 12:20	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 12:20	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 12:20	JDH	
Cobalt [7440-48-4] ^	**3.02**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 12:20	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 12:20	JDH	
Iron [7439-89-6] ^	22.0	U	ug/L	1	22.0	50.0	300	EPA 6010C	10/15/13 12:20	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 12:20	JDH	
Manganese [7439-96-5] ^	**41.4**	J	ug/L	1	1.10	10.0	50	EPA 6010C	10/15/13 12:20	JDH	
Nickel [7440-02-0] ^	**3.60**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 12:20	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:26	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 12:20	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:26	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 12:20	JDH	
Zinc [7440-66-6] ^	**8.55**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 12:20	JDH	

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Description: 5503-MW28
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-03
Sampled: 10/09/13 09:55
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] ^	**2200**	J	ug/L	1	2200	5000	NE	EPA 300.0	10/10/13 22:05	AJB	
Sulfate as SO4 [14808-79-8] ^	2900	U	ug/L	1	2900	5000	250000	EPA 300.0	10/10/13 22:05	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	**16000**		ug/L	1	14000	15000	NE	EPA 310.2	10/16/13 10:14	c1v	
Total Dissolved Solids [ECL-0156] ^	**10000**		ug/L	1	10000	10000	NE	SM 2540C-1997	10/15/13 11:35	HMS	

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

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Description: 5503-MW29 | **Lab Sample ID:** C312338-04 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:10 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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

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Description: 5503-MW29
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-04
Sampled: 10/09/13 10:10
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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	10/16/13 09:34	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 09:34	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 09:34*	*MSZ*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 09:34*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 09:34*	*MSZ*	

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Description: 5503-MW29
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-04
Sampled: 10/09/13 10:10
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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	10/11/13 15:47	T1D	

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Description: 5503-MW29 | **Lab Sample ID:** C312338-04 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:10 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/18/13 11:30	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 12:22	JDH	
Barium [7440-39-3] ^	**15.0**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 12:22	JDH	
Beryllium [7440-41-7] ^	**0.214**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 12:22	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 12:22	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 12:22	JDH	
Cobalt [7440-48-4] ^	**1.63**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 12:22	JDH	
Copper [7440-50-8] ^	**11.9**		ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 12:22	JDH	
Iron [7439-89-6] ^	**22300**		ug/L	1	22.0	50.0	300	EPA 6010C	10/15/13 12:22	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 12:22	JDH	
Manganese [7439-96-5] ^	**53.6**		ug/L	1	1.10	10.0	50	EPA 6010C	10/15/13 12:22	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 12:22	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:30	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 12:22	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:30	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 12:22	JDH	
Zinc [7440-66-6] ^	**14.8**		ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 12:22	JDH	

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Description: 5503-MW29
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-04
Sampled: 10/09/13 10:10
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] ^	**3900**	J	ug/L	1	2200	5000	NE	EPA 300.0	10/10/13 22:22	AJB	
Sulfate as SO4 [14808-79-8] ^	**6900**	J	ug/L	1	2900	5000	250000	EPA 300.0	10/10/13 22:22	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	**84000**		ug/L	1	14000	15000	NE	EPA 310.2	10/16/13 10:15	c1v	
Total Dissolved Solids [ECL-0156] ^	**110000**		ug/L	1	10000	10000	NE	SM 2540C-1997	10/15/13 11:35	HMS	

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

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Description: 5503-MW30 | **Lab Sample ID:** C312338-05 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:30 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/16/13 10:04	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 10:04	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 10:04	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 10:04	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 10:04	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 10:04	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 10:04	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 10:04	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 10:04	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 10:04	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 10:04	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 10:04	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 10:04	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 10:04	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 10:04	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 10:04	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 10:04	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 10:04	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 10:04	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 10:04	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 10:04	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 10:04	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/16/13 10:04	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 10:04	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 10:04	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 10:04	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 10:04	MSZ	

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Description: 5503-MW30 | **Lab Sample ID:** C312338-05 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:30 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/16/13 10:04	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 10:04	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*77 %*	*51-122*	*3J15025*	*EPA 8260B*	*10/16/13 10:04*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J15025*	*EPA 8260B*	*10/16/13 10:04*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*67-127*	*3J15025*	*EPA 8260B*	*10/16/13 10:04*	*MSZ*	

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Description: 5503-MW30
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-05
Sampled: 10/09/13 10:30
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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	10/11/13 15:49	T1D	

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Description: 5503-MW30 | **Lab Sample ID:** C312338-05 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:30 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/18/13 11:34	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 12:25	JDH	
Barium [7440-39-3] ^	**65.1**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 12:25	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 12:25	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 12:25	JDH	
Chromium [7440-47-3] ^	**1.91**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 12:25	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 12:25	JDH	
Copper [7440-50-8] ^	**2.31**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 12:25	JDH	
Iron [7439-89-6] ^	**2160**		ug/L	1	22.0	50.0	300	EPA 6010C	10/15/13 12:25	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 12:25	JDH	
Manganese [7439-96-5] ^	**37.2**	J	ug/L	1	1.10	10.0	50	EPA 6010C	10/15/13 12:25	JDH	
Nickel [7440-02-0] ^	**1.93**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 12:25	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:34	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 12:25	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:34	VLO	
Vanadium [7440-62-2] ^	**2.37**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 12:25	JDH	
Zinc [7440-66-6] ^	**9.58**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 12:25	JDH	

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Description: 5503-MW30
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-05
Sampled: 10/09/13 10:30
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] ^	**2300**	J	ug/L	1	2200	5000	NE	EPA 300.0	10/10/13 22:40	AJB	
Sulfate as SO4 [14808-79-8] ^	**3700**	J	ug/L	1	2900	5000	250000	EPA 300.0	10/10/13 22:40	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	14000	U	ug/L	1	14000	15000	NE	EPA 310.2	10/16/13 10:16	c1v	
Total Dissolved Solids [ECL-0156] ^	**24000**		ug/L	1	10000	10000	NE	SM 2540C-1997	10/16/13 13:33	HMS	

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

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Description: 5503-MW31 | **Lab Sample ID:** C312338-06 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:40 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/16/13 17:47	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 17:47	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 17:47	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 17:47	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 17:47	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 17:47	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 17:47	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 17:47	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 17:47	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 17:47	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 17:47	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 17:47	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 17:47	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 17:47	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 17:47	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 17:47	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 17:47	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 17:47	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 17:47	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 17:47	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 17:47	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 17:47	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/16/13 17:47	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 17:47	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 17:47	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 17:47	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 17:47	MSZ	

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Description: 5503-MW31
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-06
Sampled: 10/09/13 10:40
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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	10/16/13 17:47	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 17:47	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*80 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 17:47*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 17:47*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 17:47*	*MSZ*	

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Description:	5503-MW31	**Lab Sample ID:**	C312338-06	**Received:**	10/10/13 07:50
Matrix:	Ground Water	**Sampled:**	10/09/13 10:40	**Work Order:**	C312338
Project:	Lincoln County LF - C&D	**Sampled By:**	Courtney Murphy		

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	10/11/13 15:51	T1D	

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Description: 5503-MW31 | **Lab Sample ID:** C312338-06 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:40 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/18/13 11:38	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 12:27	JDH	
Barium [7440-39-3] ^	**26.3**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 12:27	JDH	
Beryllium [7440-41-7] ^	**0.287**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 12:27	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 12:27	JDH	
Chromium [7440-47-3] ^	**3.79**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 12:27	JDH	
Cobalt [7440-48-4] ^	**1.98**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 12:27	JDH	
Copper [7440-50-8] ^	**5.61**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 12:27	JDH	
Iron [7439-89-6] ^	**22400**		ug/L	1	22.0	50.0	300	EPA 6010C	10/15/13 12:27	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 12:27	JDH	
Manganese [7439-96-5] ^	**45.3**	J	ug/L	1	1.10	10.0	50	EPA 6010C	10/15/13 12:27	JDH	
Nickel [7440-02-0] ^	**2.89**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 12:27	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:38	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 12:27	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:38	VLO	
Vanadium [7440-62-2] ^	**3.54**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 12:27	JDH	
Zinc [7440-66-6] ^	**8.17**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 12:27	JDH	

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Description: 5503-MW31
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-06
Sampled: 10/09/13 10:40
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] ^	**2400**	J	ug/L	1	2200	5000	NE	EPA 300.0	10/10/13 22:57	AJB	
Sulfate as SO4 [14808-79-8] ^	**7900**	J	ug/L	1	2900	5000	250000	EPA 300.0	10/10/13 22:57	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	14000	U	ug/L	1	14000	15000	NE	EPA 310.2	10/16/13 10:17	c1v	
Total Dissolved Solids [ECL-0156] ^	10000	U	ug/L	1	10000	10000	NE	SM 2540C-1997	10/16/13 13:33	HMS	

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Description: 5503-MW36 | **Lab Sample ID:** C312338-07 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:20 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/16/13 18:17	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 18:17	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 18:17	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 18:17	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 18:17	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 18:17	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 18:17	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 18:17	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 18:17	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 18:17	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 18:17	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 18:17	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 18:17	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 18:17	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 18:17	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 18:17	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 18:17	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 18:17	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 18:17	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 18:17	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 18:17	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 18:17	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/16/13 18:17	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 18:17	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 18:17	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 18:17	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 18:17	MSZ	

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Description: 5503-MW36
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-07
Sampled: 10/09/13 10:20
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

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	10/16/13 18:17	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 18:17	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*79 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 18:17*	*MSZ*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 18:17*	*MSZ*	
Toluene-d8	*42*	*1*	*50.0*	*84 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 18:17*	*MSZ*	

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Description:	5503-MW36	**Lab Sample ID:**	C312338-07	**Received:**	10/10/13 07:50
Matrix:	Ground Water	**Sampled:**	10/09/13 10:20	**Work Order:**	C312338
Project:	Lincoln County LF - C&D	**Sampled By:**	Courtney Murphy		

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	10/11/13 15:53	T1D	

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Description: 5503-MW36 | **Lab Sample ID:** C312338-07 | **Received:** 10/10/13 07:50

Matrix: Ground Water | **Sampled:** 10/09/13 10:20 | **Work Order:** C312338

Project: Lincoln County LF - C&D | **Sampled By:** Courtney Murphy

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	10/18/13 11:42	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 12:29	JDH	
Barium [7440-39-3] ^	**78.1**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 12:29	JDH	
Beryllium [7440-41-7] ^	**0.140**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 12:29	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 12:29	JDH	
Chromium [7440-47-3] ^	**2.91**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 12:29	JDH	
Cobalt [7440-48-4] ^	**2.00**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 12:29	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 12:29	JDH	
Iron [7439-89-6] ^	**1740**		ug/L	1	22.0	50.0	300	EPA 6010C	10/15/13 12:29	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 12:29	JDH	
Manganese [7439-96-5] ^	**42.6**	J	ug/L	1	1.10	10.0	50	EPA 6010C	10/15/13 12:29	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 12:29	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/18/13 11:42	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 12:29	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/18/13 11:42	VLO	
Vanadium [7440-62-2] ^	**2.60**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 12:29	JDH	
Zinc [7440-66-6] ^	**11.9**		ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 12:29	JDH	

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Description: 5503-MW36
Matrix: Ground Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-07
Sampled: 10/09/13 10:20
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312338

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] ^	**2400**	J	ug/L	1	2200	5000	NE	EPA 300.0	10/10/13 23:14	AJB	
Sulfate as SO4 [14808-79-8] ^	2900	U	ug/L	1	2900	5000	250000	EPA 300.0	10/10/13 23:14	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	14000	U	ug/L	1	14000	15000	NE	EPA 310.2	10/16/13 10:19	c1v	
Total Dissolved Solids [ECL-0156] ^	10000	U	ug/L	1	10000	10000	NE	SM 2540C-1997	10/16/13 15:25	HMS	

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Description: 5503-TripBlank
Matrix: Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-08
Sampled: 10/09/13 09:55
Sampled By: ENCO

Received: 10/10/13 07:50
Work Order: C312338

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

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Description: 5503-TripBlank
Matrix: Water
Project: Lincoln County LF - C&D

Lab Sample ID: C312338-08
Sampled: 10/09/13 09:55
Sampled By: ENCO

Received: 10/10/13 07:50
Work Order: C312338

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	10/16/13 18:46	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 18:46	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 18:46*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 18:46*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 18:46*	*MSZ*	

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 3J15025 - EPA 5030B_MS

Blank (3J15025-BLK1) Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 01:44

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 3J15025 - EPA 5030B_MS

Blank (3J15025-BLK1) Continued Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 01:44

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*77*	*51-122*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*87*	*67-127*			

LCS (3J15025-BS1) Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 02:14

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		100	75-133			
Benzene	18		1.0	ug/L	20.0		91	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		94	83-117			
Toluene	18		1.0	ug/L	20.0		92	71-118			
Trichloroethene	19		1.0	ug/L	20.0		97	74-119			

Matrix Spike (3J15025-MS1) Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 02:43

Source: C313524-03

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	105	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	91	81-134			
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	97	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	96	74-119			

Matrix Spike Dup (3J15025-MSD1) Prepared: 10/15/2013 14:51 Analyzed: 10/16/2013 03:13

Source: C313524-03

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	103	75-133	2	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	91	81-134	0.3	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	94	83-117	3	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	91	71-118	1	17	
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	97	74-119	1	22	

Batch 3J16031 - EPA 5030B_MS

Blank (3J16031-BLK1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:19

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							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J16031 - EPA 5030B_MS

Blank (3J16031-BLK1) Continued Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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							
Surrogate: 4-Bromofluorobenzene	*39*			*ug/L*	*50.0*		*78*	*51-122*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*88*	*67-127*			

LCS (3J16031-BS1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	21		1.0	ug/L	20.0		103	75-133			
Benzene	19		1.0	ug/L	20.0		94	81-134			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J16031 - EPA 5030B_MS

LCS (3J16031-BS1) Continued Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorobenzene	19		1.0	ug/L	20.0		95	83-117			
Toluene	18		1.0	ug/L	20.0		92	71-118			
Trichloroethene	20		1.0	ug/L	20.0		98	74-119			

Matrix Spike (3J16031-MS1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 16:18

Source: C313131-10

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	105	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	93	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	98	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	99	74-119			

Matrix Spike Dup (3J16031-MSD1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 16:48

Source: C313131-10

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	4	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	90	81-134	2	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	96	83-117	3	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	91	71-118	3	17	
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	99	74-119	0.3	22	

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3J10033 - EPA 7470A

Blank (3J10033-BLK1) Prepared: 10/10/2013 12:58 Analyzed: 10/11/2013 15:21

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 (3J10033-BS1) Prepared: 10/10/2013 12:58 Analyzed: 10/11/2013 15:23

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.03		0.200	ug/L	5.00		101	80-120			

Matrix Spike (3J10033-MS1) Prepared: 10/10/2013 12:58 Analyzed: 10/11/2013 15:27

Source: C312788-02

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	0.170 U	94	75-125			

Matrix Spike Dup (3J10033-MSD1) Prepared: 10/10/2013 12:58 Analyzed: 10/11/2013 15:29

Source: C312788-02

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3J10033 - EPA 7470A

Matrix Spike Dup (3J10033-MSD1) Continued Prepared: 10/10/2013 12:58 Analyzed: 10/11/2013 15:29

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.59		0.200	ug/L	5.00	0.170 U	92	75-125	2	25	

Post Spike (3J10033-PS1) Prepared: 10/10/2013 12:58 Analyzed: 10/11/2013 15:31

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.04		0.200	ug/L	5.00	-0.163	84	75-125			

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

Batch 3J14016 - EPA 3005A

Blank (3J14016-BLK1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 10:56

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							
Manganese	1.10	U	10.0	ug/L							
Nickel	1.80	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 (3J14016-BS1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 10:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	209		10.0	ug/L	200		104	80-120			
Barium	215		10.0	ug/L	200		107	80-120			
Beryllium	20.7		1.00	ug/L	20.0		103	80-120			
Cadmium	21.7		1.00	ug/L	20.0		109	80-120			
Chromium	207		10.0	ug/L	200		104	80-120			
Cobalt	213		10.0	ug/L	200		107	80-120			
Copper	205		10.0	ug/L	200		102	80-120			
Iron	1110		50.0	ug/L	1000		111	80-120			
Lead	209		10.0	ug/L	200		105	80-120			
Manganese	203		10.0	ug/L	200		102	80-120			
Nickel	215		10.0	ug/L	200		108	80-120			
Silver	215		10.0	ug/L	200		107	80-120			
Vanadium	210		10.0	ug/L	200		105	80-120			
Zinc	215		10.0	ug/L	200		108	80-120			

QUALITY CONTROL

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

Batch 3J14016 - EPA 3005A

Matrix Spike (3J14016-MS1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 11:07

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	228		10.0	ug/L	200	38.2	95	75-125			
Barium	292		10.0	ug/L	200	92.1	100	75-125			
Beryllium	19.0		1.00	ug/L	20.0	0.100 U	95	75-125			
Cadmium	19.4		1.00	ug/L	20.0	0.360 U	97	75-125			
Chromium	193		10.0	ug/L	200	2.31	95	75-125			
Cobalt	586		10.0	ug/L	200	397	94	75-125			
Copper	191		10.0	ug/L	200	1.60 U	96	75-125			
Iron	88000		50.0	ug/L	1000	93800	NR	75-125			QM-05
Lead	203		10.0	ug/L	200	3.93	100	75-125			
Manganese	19900		10.0	ug/L	200	20800	NR	75-125			QM-05
Nickel	205		10.0	ug/L	200	2.51	101	75-125			
Silver	205		10.0	ug/L	200	7.10	99	75-125			
Vanadium	189		10.0	ug/L	200	1.40 U	94	75-125			
Zinc	206		10.0	ug/L	200	5.84	100	75-125			

Matrix Spike Dup (3J14016-MSD1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 11:10

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	223		10.0	ug/L	200	38.2	92	75-125	2	20	
Barium	282		10.0	ug/L	200	92.1	95	75-125	4	20	
Beryllium	18.8		1.00	ug/L	20.0	0.100 U	94	75-125	1	20	
Cadmium	18.1		1.00	ug/L	20.0	0.360 U	90	75-125	7	20	
Chromium	190		10.0	ug/L	200	2.31	94	75-125	1	20	
Cobalt	566		10.0	ug/L	200	397	84	75-125	3	20	
Copper	189		10.0	ug/L	200	1.60 U	95	75-125	1	20	
Iron	87300		50.0	ug/L	1000	93800	NR	75-125	0.7	20	QM-05
Lead	196		10.0	ug/L	200	3.93	96	75-125	4	20	
Manganese	20300		10.0	ug/L	200	20800	NR	75-125	2	20	QM-05
Nickel	198		10.0	ug/L	200	2.51	98	75-125	4	20	
Silver	202		10.0	ug/L	200	7.10	97	75-125	2	20	
Vanadium	186		10.0	ug/L	200	1.40 U	93	75-125	1	20	
Zinc	197		10.0	ug/L	200	5.84	95	75-125	4	20	

Post Spike (3J14016-PS1) Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 11:12

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.230		0.0100	mg/L	0.200	0.0382	96	80-120			
Barium	0.294		0.0100	mg/L	0.200	0.0921	101	80-120			
Beryllium	0.0198		0.00100	mg/L	0.0200	-4.13E-5	99	80-120			
Cadmium	0.0194		0.00100	mg/L	0.0200	-0.000811	101	80-120			
Chromium	0.200		0.0100	mg/L	0.200	0.00231	99	80-120			
Cobalt	0.587		0.0100	mg/L	0.200	0.397	95	80-120			
Copper	0.198		0.0100	mg/L	0.200	0.00159	98	80-120			
Iron	89.8		0.0500	mg/L	1.00	93.8	NR	80-120			QM-08

QUALITY CONTROL

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

Batch 3J14016 - EPA 3005A

Post Spike (3J14016-PS1) Continued Prepared: 10/14/2013 11:13 Analyzed: 10/15/2013 11:12

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Lead	0.205		0.0100	mg/L	0.200	0.00393	101	80-120			
Manganese	19.9		0.0100	mg/L	0.200	20.8	NR	80-120			QM-08
Nickel	0.207		0.0100	mg/L	0.200	0.00251	102	80-120			
Silver	0.218		0.0100	mg/L	0.200	0.00710	106	80-120			
Vanadium	0.196		0.0100	mg/L	0.200	-0.00687	102	80-120			
Zinc	0.207		0.0100	mg/L	0.200	0.00584	101	80-120			

Batch 3J14018 - EPA 3005A

Blank (3J14018-BLK1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.910	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (3J14018-BS1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:38

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			
Selenium	211		1.00	ug/L	200		106	80-120			
Thallium	198		1.00	ug/L	200		99	80-120			

Matrix Spike (3J14018-MS1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:46

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	210		2.00	ug/L	200	0.220 U	105	75-125			
Selenium	207		1.00	ug/L	200	0.910 U	104	75-125			
Thallium	194		1.00	ug/L	200	0.110 U	97	75-125			

Matrix Spike Dup (3J14018-MSD1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:50

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	208		2.00	ug/L	200	0.220 U	104	75-125	0.9	20	
Selenium	199		1.00	ug/L	200	0.910 U	100	75-125	4	20	
Thallium	195		1.00	ug/L	200	0.110 U	97	75-125	0.3	20	

Post Spike (3J14018-PS1) Prepared: 10/14/2013 11:20 Analyzed: 10/18/2013 10:54

Source: C312788-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	213		2.00	ug/L	200	-0.488	107	80-120			
Selenium	205		1.00	ug/L	200	0.269	103	80-120			
Thallium	198		1.00	ug/L	200	0.0393	99	80-120			

QUALITY CONTROL

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

Batch 3J14018 - EPA 3005A

Classical Chemistry Parameters - Quality Control

Batch 3J10029 - NO PREP

Blank (3J10029-BLK1) Prepared: 10/10/2013 12:36 Analyzed: 10/10/2013 17:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	2200	U	5000	ug/L							
Sulfate as SO4	2900	U	5000	ug/L							

LCS (3J10029-BS1) Prepared: 10/10/2013 12:36 Analyzed: 10/10/2013 18:21

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	49000		5000	ug/L	50000		99	90-110			
Sulfate as SO4	48000		5000	ug/L	50000		96	90-110			

Matrix Spike (3J10029-MS1) Prepared: 10/10/2013 12:36 Analyzed: 10/10/2013 18:38

Source: C312338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	21000		5000	ug/L	20000	3000	91	90-110			
Sulfate as SO4	21000		5000	ug/L	20000	3600	88	90-110			QM-05

Matrix Spike Dup (3J10029-MSD1) Prepared: 10/10/2013 12:36 Analyzed: 10/10/2013 18:55

Source: C312338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	21000		5000	ug/L	20000	3000	91	90-110	0.3	10	
Sulfate as SO4	21000		5000	ug/L	20000	3600	88	90-110	0.5	10	QM-05

Batch 3J10035 - NO PREP

Blank (3J10035-BLK1) Prepared & Analyzed: 10/14/2013 08:39

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	10000	U	10000	ug/L							

LCS (3J10035-BS1) Prepared & Analyzed: 10/14/2013 08:39

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	990		10	mg/L	1000		99	90-110			

Duplicate (3J10035-DUP1) Prepared & Analyzed: 10/14/2013 08:39

Source: C312070-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	150000		10000	ug/L		140000			4	10	

Batch 3J14027 - NO PREP

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Blank (3J14027-BLK1) Prepared & Analyzed: 10/15/2013 11:35

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	10000	U	10000	ug/L							

LCS (3J14027-BS1) Prepared & Analyzed: 10/15/2013 11:35

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	980		10	mg/L	1000		98	90-110			

Duplicate (3J14027-DUP1) Prepared & Analyzed: 10/15/2013 11:35

Source: C308492-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	350000		10000	ug/L		350000			2	10	

Batch 3J16008 - NO PREP

Blank (3J16008-BLK1) Prepared & Analyzed: 10/16/2013 13:33

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	10000	U	10000	ug/L							

LCS (3J16008-BS1) Prepared & Analyzed: 10/16/2013 13:33

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	980		10	mg/L	1000		98	90-110			

Duplicate (3J16008-DUP1) Prepared & Analyzed: 10/16/2013 13:33

Source: C312211-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	1700000		10000	ug/L		1800000			4	10	

Batch 3J16009 - NO PREP

Blank (3J16009-BLK1) Prepared: 10/16/2013 08:51 Analyzed: 10/16/2013 10:09

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	14000	U	15000	ug/L							

LCS (3J16009-BS1) Prepared: 10/16/2013 08:51 Analyzed: 10/16/2013 10:09

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		105	80-120			

Matrix Spike (3J16009-MS1) Prepared: 10/16/2013 08:51 Analyzed: 10/16/2013 10:11

Source: C312338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	64000		15000	ug/L	37800	28000	95	80-120			

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3J16009 - NO PREP

Matrix Spike Dup (3J16009-MSD1) Prepared: 10/16/2013 08:51 Analyzed: 10/16/2013 10:12

Source: C312338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	62000		15000	ug/L	37800	28000	91	80-120	2	25	

Batch 3J16033 - NO PREP

Blank (3J16033-BLK1) Prepared & Analyzed: 10/16/2013 15:25

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	10000	U	10000	ug/L							

LCS (3J16033-BS1) Prepared & Analyzed: 10/16/2013 15:25

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	990		10	mg/L	1000		99	90-110			

Duplicate (3J16033-DUP1) Prepared & Analyzed: 10/16/2013 15:25

Source: C312338-07

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	10000		10000	ug/L		10000 U				10	

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
QM-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-08	Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

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

www.encolabs.com

Client Name: S&ME, Inc. (SM002)	Project Number: 1356-07-004
Address: 9751 Southern Pine Blvd	Project Name/Desc: Lincoln County LF - C&D
City/ST/Zip: Charlotte, NC 28273	PO # / Billing Info: ~~59301~~ 59302
Tel: (704) 523-4726 Fax: (704) 525-3953	Reporting Contact: Courtney Murphy
Sampler(s) Name, Affiliation (Print): Courtney Murphy, S&ME	Billing Contact: Barbara Ellington
Sampler(s) Signature: [signature]	Site Location / Time Zone: Crouse, NC

Requested Analyses: 8260B Appendix 1, 8260B Extended; Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Mn,Ni,Pb,Sb,Se,Tl,V,Zn; Alkalinity 310.2, Chloride 300, TDS SM2540C; Hg; Sulfate 300

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

Lab Workorder: C312338

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,Mn,Ni,Pb,Sb,Se,Tl,V,Zn	Alkalinity 310.2, Chloride 300, TDS SM2540C	Hg	Sulfate 300						Sample Comments
	5503-MW26	10/9/13	10:45	G	GW	5	X	X	X	X	X						
	5503-MW27	10/9/13	10:55	G	GW	5	X	X	X	X	X						
	5503-MW28	10/9/13	09:55	G	GW	5	X	X	X	X	X						
	5503-MW29	10/9/13	10:10	G	GW	5	X	X	X	X	X						
	5503-MW30	10/9/13	10:30	G	GW	5	X	X	X	X	X						
	5503-MW31	10/9/13	10:40	G	GW	5	X	X	X	X	X						
	5503-MW36	10/9/13	10:20	G	GW	5	X	X	X	X	X						
	5503-TripBlank				WA	2	X										

<-- Total # of Containers

Sample Set Prepared By: CS	Date/Time: 9/23/13	Relinquished By: [signature]	Date/Time: 10-9-13 1700	Received By: [signature]	Date/Time: 10/10/13 7:50
Comments/Special Reporting Requirements:		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Cooler #'s & Temps on Receipt: 1.0°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, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515
www.encolabs.com

Tuesday, October 22, 2013

S&ME, Inc. (SM002)

Attn: Courtney Murphy

9751 Southern Pine Blvd.

Charlotte, NC 28273

RE: Laboratory Results for
Project Number: 1356-07-004, Project Name/Desc: Lincoln County LF - Surface Waters
ENCO Workorder(s): C312340

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, October 10, 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,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 35.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 5503-SW1 **Lab ID: C312340-01** **Sampled: 10/09/13 13:50** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/14/13 11:17	10/15/2013 13:40
EPA 6010C	04/07/14	10/17/13 10:19	10/18/2013 13:57
EPA 6020A	04/07/14	10/14/13 11:22	10/17/2013 13:22
EPA 7470A	11/06/13	10/15/13 09:59	10/16/2013 15:20
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 20:44

Client ID: 5503-SW2 **Lab ID: C312340-02** **Sampled: 10/09/13 12:40** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/14/13 11:17	10/15/2013 13:42
EPA 6010C	04/07/14	10/17/13 10:19	10/18/2013 14:00
EPA 6020A	04/07/14	10/14/13 11:22	10/17/2013 13:26
EPA 7470A	11/06/13	10/15/13 09:59	10/16/2013 15:22
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 21:14

Client ID: 5503-SW3 **Lab ID: C312340-03** **Sampled: 10/09/13 14:15** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/14/13 11:17	10/15/2013 13:44
EPA 6010C	04/07/14	10/17/13 10:19	10/18/2013 14:02
EPA 6020A	04/07/14	10/14/13 11:22	10/17/2013 13:30
EPA 7470A	11/06/13	10/15/13 09:59	10/16/2013 15:24
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 21:43

Client ID: 5503-SW4 **Lab ID: C312340-04** **Sampled: 10/09/13 15:10** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/14/13 11:17	10/15/2013 13:47
EPA 6010C	04/07/14	10/17/13 10:19	10/18/2013 14:05
EPA 6020A	04/07/14	10/14/13 11:22	10/17/2013 13:34
EPA 7470A	11/06/13	10/15/13 09:59	10/16/2013 15:26
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 22:13

Client ID: 5503-SW5 **Lab ID: C312340-05** **Sampled: 10/09/13 14:40** **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/14/13 11:17	10/15/2013 13:49
EPA 6010C	04/07/14	10/17/13 10:19	10/18/2013 14:08
EPA 6020A	04/07/14	10/14/13 11:22	10/17/2013 13:38
EPA 7470A	11/06/13	10/15/13 09:59	10/16/2013 15:28
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 22:42

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Client ID: 5503-TripBlank	Lab ID: C312340-06	Sampled: 10/09/13 12:40	Received: 10/10/13 07:50

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 23:11

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 5503-SW1 **Lab ID: C312340-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	22.0	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chloroform	0.84	J	1	0.18	1.0	5	ug/L	EPA 8260B	
Cobalt - Total	1.41	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Iron - Total	879		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	89.4		1	1.10	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	1.81	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	653		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-SW2 **Lab ID: C312340-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	22.7	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Iron - Total	214	J	1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	37.6	J	1	1.10	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	1.40	J	1	1.40	10.0	25	ug/L	EPA 6010C	

Client ID: 5503-SW3 **Lab ID: C312340-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	79.8	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	2.08	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	6.56	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	1.90	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	17300		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	573		1	1.10	10.0	50	ug/L	EPA 6010C	
Toluene	3.0		1	0.14	1.0	1	ug/L	EPA 8260B	
Vanadium - Total	4.83	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	13.6		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-SW4 **Lab ID: C312340-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	25.5	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Iron - Total	462		1	22.0	50.0	300	ug/L	EPA 6010C	
Manganese - Total	50.4		1	1.10	10.0	50	ug/L	EPA 6010C	
Zinc - Total	3.90	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-SW5 **Lab ID: C312340-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	5.73	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	76.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.219	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	3.40	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	20.7		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	2.10	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Iron - Total	35500		1	22.0	50.0	300	ug/L	EPA 6010C	
Lead - Total	2.75	J	1	2.10	10.0	10	ug/L	EPA 6010C	
Manganese - Total	1070		1	1.10	10.0	50	ug/L	EPA 6010C	
Nickel - Total	2.57	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total	0.158	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Vanadium - Total	4.67	J	1	1.40	10.0	25	ug/L	EPA 6010C	

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Client ID:	5503-SW5				Lab ID:	C312340-05			
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Zinc - Total	15.1		1	3.80	10.0	10	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 5503-SW1 **Lab Sample ID:** C312340-01 **Received:** 10/10/13 07:50
Matrix: Surface Water **Sampled:** 10/09/13 13:50 **Work Order:** C312340
Project: Lincoln County LF - Surface Waters **Sampled By:** Courtney Murphy

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	10/16/13 20:44	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 20:44	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 20:44	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 20:44	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 20:44	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 20:44	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 20:44	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 20:44	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 20:44	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 20:44	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 20:44	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 20:44	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 20:44	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 20:44	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 20:44	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 20:44	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 20:44	MSZ	
Chloroform [67-66-3] ^	**0.84**	J	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 20:44	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 20:44	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 20:44	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 20:44	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 20:44	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 20:44	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 20:44	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	

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Description: 5503-SW1 | **Lab Sample ID:** C312340-01 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 13:50 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 20:44	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 20:44	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	10/16/13 20:44	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 20:44*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 20:44*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 20:44*	*MSZ*	

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Description:	5503-SW1	**Lab Sample ID:**	C312340-01	**Received:**	10/10/13 07:50
Matrix:	Surface Water	**Sampled:**	10/09/13 13:50	**Work Order:**	C312340
Project:	Lincoln County LF - Surface Waters	**Sampled By:**	Courtney Murphy		

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	10/16/13 15:20	T1D	

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Description: 5503-SW1 | **Lab Sample ID:** C312340-01 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 13:50 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/17/13 13:22	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 13:40	JDH	
Barium [7440-39-3] ^	**22.0**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 13:40	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 13:40	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 13:40	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 13:40	JDH	
Cobalt [7440-48-4] ^	**1.41**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 13:40	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 13:40	JDH	
Iron [7439-89-6] ^	**879**		ug/L	1	22.0	50.0	300	EPA 6010C	10/18/13 13:57	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 13:40	JDH	
Manganese [7439-96-5] ^	**89.4**		ug/L	1	1.10	10.0	50	EPA 6010C	10/18/13 13:57	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 13:40	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 13:22	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 13:40	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 13:22	VLO	
Vanadium [7440-62-2] ^	**1.81**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 13:40	JDH	
Zinc [7440-66-6] ^	**653**		ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 13:40	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: 5503-SW2 | **Lab Sample ID:** C312340-02 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 12:40 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/16/13 21:14	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 21:14	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 21:14	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 21:14	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 21:14	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 21:14	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 21:14	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 21:14	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 21:14	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 21:14	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 21:14	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 21:14	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 21:14	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 21:14	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 21:14	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 21:14	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 21:14	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 21:14	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 21:14	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 21:14	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 21:14	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 21:14	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 21:14	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 21:14	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 21:14	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 21:14	MSZ	

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Description: 5503-SW2 | **Lab Sample ID:** C312340-02 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 12:40 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/16/13 21:14	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*79 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 21:14*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 21:14*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*90 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 21:14*	*MSZ*	

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Description:	5503-SW2	**Lab Sample ID:**	C312340-02	**Received:**	10/10/13 07:50
Matrix:	Surface Water	**Sampled:**	10/09/13 12:40	**Work Order:**	C312340
Project:	Lincoln County LF - Surface Waters	**Sampled By:**	Courtney Murphy		

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	10/16/13 15:22	T1D	

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Description: 5503-SW2 | **Lab Sample ID:** C312340-02 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 12:40 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/17/13 13:26	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 13:42	JDH	
Barium [7440-39-3] ^	**22.7**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 13:42	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 13:42	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 13:42	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 13:42	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 13:42	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 13:42	JDH	
Iron [7439-89-6] ^	**214**	J	ug/L	1	22.0	50.0	300	EPA 6010C	10/18/13 14:00	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 13:42	JDH	
Manganese [7439-96-5] ^	**37.6**	J	ug/L	1	1.10	10.0	50	EPA 6010C	10/18/13 14:00	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 13:42	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 13:26	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 13:42	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 13:26	VLO	
Vanadium [7440-62-2] ^	**1.40**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 13:42	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 13:42	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: 5503-SW3 | **Lab Sample ID:** C312340-03 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 14:15 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/16/13 21:43	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 21:43	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 21:43	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 21:43	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 21:43	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 21:43	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 21:43	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 21:43	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 21:43	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 21:43	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 21:43	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 21:43	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 21:43	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 21:43	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 21:43	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 21:43	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 21:43	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 21:43	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 21:43	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 21:43	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 21:43	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 21:43	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Toluene [108-88-3] ^	**3.0**		ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 21:43	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 21:43	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 21:43	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 21:43	MSZ	

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Description: 5503-SW3 | **Lab Sample ID:** C312340-03 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 14:15 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/16/13 21:43	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 21:43*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 21:43*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 21:43*	*MSZ*	

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Description:	5503-SW3	**Lab Sample ID:**	C312340-03	**Received:**	10/10/13 07:50
Matrix:	Surface Water	**Sampled:**	10/09/13 14:15	**Work Order:**	C312340
Project:	Lincoln County LF - Surface Waters	**Sampled By:**	Courtney Murphy		

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	10/16/13 15:24	T1D	

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Description: 5503-SW3 | **Lab Sample ID:** C312340-03 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 14:15 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/17/13 13:30	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 13:44	JDH	
Barium [7440-39-3] ^	**79.8**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 13:44	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 13:44	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 13:44	JDH	
Chromium [7440-47-3] ^	**2.08**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 13:44	JDH	
Cobalt [7440-48-4] ^	**6.56**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 13:44	JDH	
Copper [7440-50-8] ^	**1.90**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 13:44	JDH	
Iron [7439-89-6] ^	**17300**		ug/L	1	22.0	50.0	300	EPA 6010C	10/18/13 14:02	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 13:44	JDH	
Manganese [7439-96-5] ^	**573**		ug/L	1	1.10	10.0	50	EPA 6010C	10/18/13 14:02	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 13:44	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 13:30	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 13:44	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 13:30	VLO	
Vanadium [7440-62-2] ^	**4.83**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 13:44	JDH	
Zinc [7440-66-6] ^	**13.6**		ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 13:44	JDH	

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Description: 5503-SW4 | **Lab Sample ID:** C312340-04 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 15:10 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/16/13 22:13	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 22:13	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 22:13	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 22:13	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 22:13	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 22:13	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 22:13	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 22:13	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 22:13	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 22:13	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 22:13	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 22:13	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 22:13	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 22:13	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 22:13	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 22:13	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 22:13	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 22:13	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 22:13	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 22:13	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 22:13	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 22:13	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 22:13	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 22:13	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 22:13	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 22:13	MSZ	

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Description: 5503-SW4 | **Lab Sample ID:** C312340-04 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 15:10 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/16/13 22:13	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 22:13*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 22:13*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 22:13*	*MSZ*	

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Description:	5503-SW4	**Lab Sample ID:**	C312340-04	**Received:**	10/10/13 07:50
Matrix:	Surface Water	**Sampled:**	10/09/13 15:10	**Work Order:**	C312340
Project:	Lincoln County LF - Surface Waters	**Sampled By:**	Courtney Murphy		

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	10/16/13 15:26	T1D	

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Description: 5503-SW4 | **Lab Sample ID:** C312340-04 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 15:10 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/17/13 13:34	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 13:47	JDH	
Barium [7440-39-3] ^	**25.5**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 13:47	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 13:47	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 13:47	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 13:47	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 13:47	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 13:47	JDH	
Iron [7439-89-6] ^	**462**		ug/L	1	22.0	50.0	300	EPA 6010C	10/18/13 14:05	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 13:47	JDH	
Manganese [7439-96-5] ^	**50.4**		ug/L	1	1.10	10.0	50	EPA 6010C	10/18/13 14:05	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 13:47	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 13:34	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 13:47	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 13:34	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 13:47	JDH	
Zinc [7440-66-6] ^	**3.90**	J	ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 13:47	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: 5503-SW5 | **Lab Sample ID:** C312340-05 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 14:40 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/16/13 22:42	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 22:42	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 22:42	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 22:42	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 22:42	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 22:42	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 22:42	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 22:42	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 22:42	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 22:42	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 22:42	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 22:42	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 22:42	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 22:42	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 22:42	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 22:42	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 22:42	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 22:42	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 22:42	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 22:42	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 22:42	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 22:42	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 22:42	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 22:42	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 22:42	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 22:42	MSZ	

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Description: 5503-SW5 | **Lab Sample ID:** C312340-05 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 14:40 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/16/13 22:42	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*77 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 22:42*	*MSZ*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 22:42*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 22:42*	*MSZ*	

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Description:	5503-SW5	**Lab Sample ID:**	C312340-05	**Received:**	10/10/13 07:50
Matrix:	Surface Water	**Sampled:**	10/09/13 14:40	**Work Order:**	C312340
Project:	Lincoln County LF - Surface Waters	**Sampled By:**	Courtney Murphy		

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	10/16/13 15:28	T1D	

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Description: 5503-SW5 | **Lab Sample ID:** C312340-05 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 14:40 | **Work Order:** C312340

Project: Lincoln County LF - Surface Waters | **Sampled By:** Courtney Murphy

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	10/17/13 13:38	VLO	
Arsenic [7440-38-2] ^	**5.73**	J	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 13:49	JDH	
Barium [7440-39-3] ^	**76.2**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 13:49	JDH	
Beryllium [7440-41-7] ^	**0.219**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 13:49	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 13:49	JDH	
Chromium [7440-47-3] ^	**3.40**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 13:49	JDH	
Cobalt [7440-48-4] ^	**20.7**		ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 13:49	JDH	
Copper [7440-50-8] ^	**2.10**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 13:49	JDH	
Iron [7439-89-6] ^	**35500**		ug/L	1	22.0	50.0	300	EPA 6010C	10/18/13 14:08	JDH	
Lead [7439-92-1] ^	**2.75**	J	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 13:49	JDH	
Manganese [7439-96-5] ^	**1070**		ug/L	1	1.10	10.0	50	EPA 6010C	10/18/13 14:08	JDH	
Nickel [7440-02-0] ^	**2.57**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 13:49	JDH	
Selenium [7782-49-2] ^	0.910	U	ug/L	1	0.910	1.00	10	EPA 6020A	10/17/13 13:38	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 13:49	JDH	
Thallium [7440-28-0] ^	**0.158**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	10/17/13 13:38	VLO	
Vanadium [7440-62-2] ^	**4.67**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 13:49	JDH	
Zinc [7440-66-6] ^	**15.1**		ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 13:49	JDH	

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Description: 5503-TripBlank
Matrix: Water
Project: Lincoln County LF - Surface Waters

Lab Sample ID: C312340-06
Sampled: 10/09/13 12:40
Sampled By: ENCO

Received: 10/10/13 07:50
Work Order: C312340

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	10/16/13 23:11	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 23:11	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 23:11	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 23:11	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 23:11	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 23:11	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 23:11	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 23:11	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 23:11	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 23:11	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 23:11	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 23:11	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 23:11	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 23:11	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 23:11	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 23:11	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 23:11	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 23:11	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 23:11	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 23:11	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 23:11	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 23:11	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 23:11	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 23:11	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 23:11	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 23:11	MSZ	

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Description: 5503-TripBlank
Matrix: Water
Project: Lincoln County LF - Surface Waters

Lab Sample ID: C312340-06
Sampled: 10/09/13 12:40
Sampled By: ENCO

Received: 10/10/13 07:50
Work Order: C312340

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	10/16/13 23:11	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*40*	*1*	*50.0*	*79 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 23:11*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 23:11*	*MSZ*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 23:11*	*MSZ*	

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 3J16031 - EPA 5030B_MS

Blank (3J16031-BLK1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:19

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							
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	*39*			*ug/L*	*50.0*		*78*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J16031 - EPA 5030B_MS

Blank (3J16031-BLK1) Continued Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*88*	*67-127*			

LCS (3J16031-BS1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	21		1.0	ug/L	20.0		103	75-133			
Benzene	19		1.0	ug/L	20.0		94	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		95	83-117			
Toluene	18		1.0	ug/L	20.0		92	71-118			
Trichloroethene	20		1.0	ug/L	20.0		98	74-119			

Matrix Spike (3J16031-MS1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 16:18

Source: C313131-10

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	105	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	93	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	98	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	99	74-119			

Matrix Spike Dup (3J16031-MSD1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 16:48

Source: C313131-10

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	4	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	90	81-134	2	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	96	83-117	3	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	91	71-118	3	17	
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	99	74-119	0.3	22	

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3J15007 - EPA 7470A

Blank (3J15007-BLK1) Prepared: 10/15/2013 09:59 Analyzed: 10/16/2013 14:43

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 (3J15007-BS1) Prepared: 10/15/2013 09:59 Analyzed: 10/16/2013 14:45

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.34		0.200	ug/L	5.00		107	80-120			

Matrix Spike (3J15007-MS1) Prepared: 10/15/2013 09:59 Analyzed: 10/16/2013 14:49

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 3J15007 - EPA 7470A

Matrix Spike (3J15007-MS1) Continued Prepared: 10/15/2013 09:59 Analyzed: 10/16/2013 14:49

Source: C312342-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.08		0.200	ug/L	5.00	0.170 U	102	75-125			

Matrix Spike Dup (3J15007-MSD1) Prepared: 10/15/2013 09:59 Analyzed: 10/16/2013 14:51

Source: C312342-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.18		0.200	ug/L	5.00	0.170 U	104	75-125	2	25	

Post Spike (3J15007-PS1) Prepared: 10/15/2013 09:59 Analyzed: 10/16/2013 14:54

Source: C312342-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.33		0.200	ug/L	5.00	-0.147	90	75-125			

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

Batch 3J14017 - EPA 3005A

Blank (3J14017-BLK1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 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							
Lead	2.10	U	10.0	ug/L							
Nickel	1.80	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 (3J14017-BS1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:09

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200		103	80-120			
Barium	200		10.0	ug/L	200		100	80-120			
Beryllium	19.9		1.00	ug/L	20.0		100	80-120			
Cadmium	20.2		1.00	ug/L	20.0		101	80-120			
Chromium	200		10.0	ug/L	200		100	80-120			
Cobalt	209		10.0	ug/L	200		104	80-120			
Copper	197		10.0	ug/L	200		99	80-120			
Lead	204		10.0	ug/L	200		102	80-120			
Nickel	200		10.0	ug/L	200		100	80-120			
Silver	208		10.0	ug/L	200		104	80-120			

QUALITY CONTROL

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

Batch 3J14017 - EPA 3005A

LCS (3J14017-BS1) Continued Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:09

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vanadium	204		10.0	ug/L	200		102	80-120			
Zinc	198		10.0	ug/L	200		99	80-120			

Matrix Spike (3J14017-MS1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:16

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	570		10.0	ug/L	200	371	99	75-125			
Barium	2980		10.0	ug/L	200	2860	60	75-125			QM-05
Beryllium	19.9		1.00	ug/L	20.0	0.444	97	75-125			
Cadmium	21.8		1.00	ug/L	20.0	1.09	103	75-125			
Chromium	268		10.0	ug/L	200	81.2	93	75-125			
Cobalt	249		10.0	ug/L	200	52.1	98	75-125			
Copper	239		10.0	ug/L	200	33.1	103	75-125			
Lead	226		10.0	ug/L	200	30.0	98	75-125			
Nickel	286		10.0	ug/L	200	93.0	97	75-125			
Silver	225		10.0	ug/L	200	12.5	106	75-125			
Vanadium	283		10.0	ug/L	200	87.1	98	75-125			
Zinc	1850		10.0	ug/L	200	1700	75	75-125			

Matrix Spike Dup (3J14017-MSD1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:29

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	540		10.0	ug/L	200	371	84	75-125	5	20	
Barium	2970		10.0	ug/L	200	2860	59	75-125	0.1	20	QM-05
Beryllium	19.8		1.00	ug/L	20.0	0.444	97	75-125	0.2	20	
Cadmium	20.5		1.00	ug/L	20.0	1.09	97	75-125	6	20	
Chromium	274		10.0	ug/L	200	81.2	96	75-125	2	20	
Cobalt	236		10.0	ug/L	200	52.1	92	75-125	5	20	
Copper	242		10.0	ug/L	200	33.1	104	75-125	1	20	
Lead	215		10.0	ug/L	200	30.0	93	75-125	5	20	
Nickel	275		10.0	ug/L	200	93.0	91	75-125	4	20	
Silver	224		10.0	ug/L	200	12.5	106	75-125	0.6	20	
Vanadium	290		10.0	ug/L	200	87.1	101	75-125	3	20	
Zinc	1840		10.0	ug/L	200	1700	68	75-125	0.8	20	QM-05

Post Spike (3J14017-PS1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:32

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.575		0.0100	mg/L	0.200	0.371	102	80-120			
Barium	2.99		0.0100	mg/L	0.200	2.86	66	80-120			QM-08
Beryllium	0.0199		0.00100	mg/L	0.0200	0.000444	97	80-120			
Cadmium	0.0206		0.00100	mg/L	0.0200	0.00109	98	80-120			
Chromium	0.275		0.0100	mg/L	0.200	0.0812	97	80-120			
Cobalt	0.249		0.0100	mg/L	0.200	0.0521	99	80-120			

QUALITY CONTROL

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

Batch 3J14017 - EPA 3005A

Post Spike (3J14017-PS1) Continued Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:32

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Copper	0.242		0.0100	mg/L	0.200	0.0331	105	80-120			
Lead	0.227		0.0100	mg/L	0.200	0.0300	99	80-120			
Nickel	0.286		0.0100	mg/L	0.200	0.0930	97	80-120			
Silver	0.234		0.0100	mg/L	0.200	0.0125	111	80-120			
Vanadium	0.291		0.0100	mg/L	0.200	0.0871	102	80-120			
Zinc	1.86		0.0100	mg/L	0.200	1.70	77	80-120			QM-08

Batch 3J14019 - EPA 3005A

Blank (3J14019-BLK1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 12:42

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.910	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (3J14019-BS1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 12:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	210		2.00	ug/L	200		105	80-120			
Selenium	220		1.00	ug/L	200		110	80-120			
Thallium	207		1.00	ug/L	200		103	80-120			

Matrix Spike (3J14019-MS1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 12:54

Source: C312339-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	202	D	20.0	ug/L	200	2.20 U	101	75-125			R-01
Selenium	278	D	10.0	ug/L	200	9.10 U	139	75-125			QM-07, R-01
Thallium	218	D	10.0	ug/L	200	1.10 U	109	75-125			R-01

Matrix Spike Dup (3J14019-MSD1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 13:06

Source: C312339-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	204	D	20.0	ug/L	200	2.20 U	102	75-125	0.9	20	R-01
Selenium	277	D	10.0	ug/L	200	9.10 U	138	75-125	0.3	20	QM-07, R-01
Thallium	218	D	10.0	ug/L	200	1.10 U	109	75-125	0.4	20	R-01

Post Spike (3J14019-PS1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 13:10

Source: C312339-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	212	D	2.00	ug/L	200	-4.10	108	80-120			R-01
Selenium	279	D	1.00	ug/L	200	4.11	137	80-120			QM-08, R-01
Thallium	220	D	1.00	ug/L	200	0.607	110	80-120			R-01

QUALITY CONTROL

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

Batch 3J14019 - EPA 3005A

Batch 3J17010 - EPA 3005A

Blank (3J17010-BLK1) Prepared: 10/17/2013 10:19 Analyzed: 10/18/2013 13:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Iron	22.0	U	50.0	ug/L							
Manganese	1.10	U	10.0	ug/L							

LCS (3J17010-BS1) Prepared: 10/17/2013 10:19 Analyzed: 10/18/2013 13:32

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Iron	1020		50.0	ug/L	1000		102	80-120			
Manganese	193		10.0	ug/L	200		96	80-120			

Matrix Spike (3J17010-MS1) Prepared: 10/17/2013 10:19 Analyzed: 10/18/2013 13:38

Source: C312290-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Iron	1060		50.0	ug/L	1000	22.0 U	106	75-125			
Manganese	476		10.0	ug/L	200	283	96	75-125			

Matrix Spike Dup (3J17010-MSD1) Prepared: 10/17/2013 10:19 Analyzed: 10/18/2013 13:40

Source: C312290-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Iron	1070		50.0	ug/L	1000	22.0 U	107	75-125	0.1	20	
Manganese	484		10.0	ug/L	200	283	101	75-125	2	20	

Post Spike (3J17010-PS1) Prepared: 10/17/2013 10:19 Analyzed: 10/18/2013 13:42

Source: C312290-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Iron	1.00		0.0500	mg/L	1.00	0.00760	100	80-120			
Manganese	0.444		0.0100	mg/L	0.200	0.283	81	80-120			

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
QM-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-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-08	Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

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

www.encolabs.com

Client Name: S&ME, Inc. (SM002)	Project Number: 1356-07-004
Address: 9751 Southern Pine Blvd.	Project Name/Desc: Lincoln County LF - Surface Waters
City/ST/Zip: Charlotte, NC 28273	PO # / Billing Info: ~~50311~~ 59302
Tel: (704) 523-4726 Fax: (704) 525-3953	Reporting Contact: Courtney Murphy
Sampler(s) Name, Affiliation (Print): Courtney Murphy, S&ME	Billing Contact: Barbara Ellington
Sampler(s) Signature: Courtney Murphy	Site Location / Time Zone: Crouse, NC

Requested Analyses: 8260B Appendix 1; Ag, As, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Sb, Se, Tl, V, Zn; Hg

Requested Turnaround Times

Note: Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C312340

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	Ag, As, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Sb, Se, Tl, V, Zn	Hg	Sample Comments
	6503-SW1	10/9/13	13:50	G	SW	4	X	X	X	
	6503-SW2	10/9/13	12:40	G	SW	4	X	X	X	
	6503-SW3	10/9/13	14:15	G	SW	4	X	X	X	
	6503-SW4	10/9/13	15:10	G	SW	4	X	X	X	
	6503-SW5	10/9/13	14:40	G	SW	4	X	X	X	
	6503-Trip Blank				WA	2	X			

<-- Total # of Containers

Sample Kit Prepared By: CS	Date/Time: 9/23/13	Relinquished By: Courtney Murphy	Date/Time: 10/9/13 1700
Comments/Special Reporting Requirements:		Relinquished By:	Date/Time:
		Relinquished By:	Date/Time:

Received By: [illegible]	Date/Time: 10/10/13 7:50	Received By:	Date/Time:
Received By:	Date/Time:		

Cooler #'s & Temps on Receipt: 3 1c

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

Thursday, October 24, 2013

S&ME, Inc. (SM002)

Attn: Courtney Murphy

9751 Southern Pine Blvd.

Charlotte, NC 28273

RE: Laboratory Results for
Project Number: 1356-07-004, Project Name/Desc: Lincoln County LF - Leachate
ENCO Workorder(s): C312339

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, October 10, 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,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 24.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 5503-Lift Station | **Lab ID: C312339-01** | **Sampled: 10/09/13 12:05** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/10/2013 23:31
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:20
EPA 353.2	10/11/13 12:05	10/11/13 08:29	10/11/2013 08:29
EPA 353.2	11/06/13	10/17/13 08:00	10/17/2013 10:37
EPA 353.2	07/04/16	10/21/13 09:39	10/24/2013 12:07
EPA 365.4	11/06/13	10/11/13 10:38	10/14/2013 12:43
EPA 6010C	04/07/14	10/14/13 11:17	10/15/2013 13:12
EPA 6020A	04/07/14	10/14/13 11:22	10/17/2013 13:18
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 19:15
SM 2540D-1997	10/16/13	10/15/13 12:32	10/15/2013 12:32
SM 5210B-2001	10/11/13 12:05	10/10/13 15:19	10/10/2013 15:19
SM 5220D-1997	11/06/13	10/10/13 11:07	10/10/2013 17:27

Client ID: 5503-Lift Station | **Lab ID: C312339-01RE1** | **Sampled: 10/09/13 12:05** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/07/14	10/14/13 11:17	10/15/2013 13:35

Client ID: 5503-SW6 | **Lab ID: C312339-02** | **Sampled: 10/09/13 12:25** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	11/06/13	10/10/13 14:41	10/11/2013 09:32
EPA 310.2	10/23/13	10/16/13 08:51	10/16/2013 10:21
EPA 353.2	10/11/13 12:25	10/11/13 08:34	10/11/2013 08:34
EPA 353.2	11/06/13	10/17/13 08:00	10/17/2013 10:39
EPA 353.2	07/04/16	10/21/13 09:39	10/24/2013 12:07
EPA 365.4	11/06/13	10/11/13 10:38	10/14/2013 12:44
EPA 6010C	04/07/14	10/14/13 11:17	10/15/2013 13:37
EPA 6020A	04/07/14	10/14/13 11:22	10/17/2013 12:50
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 19:45
SM 2540D-1997	10/16/13	10/15/13 12:32	10/15/2013 12:32
SM 5210B-2001	10/11/13 12:25	10/10/13 15:19	10/10/2013 15:19
SM 5220D-1997	11/06/13	10/10/13 11:07	10/10/2013 17:27

Client ID: 5503-Trip Blank | **Lab ID: C312339-03** | **Sampled: 10/09/13 12:05** | **Received: 10/10/13 07:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	10/23/13	10/16/13 14:13	10/16/2013 20:14

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 5503-Lift Station **Lab ID: C312339-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	371		1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	2860		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.444	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Biochemical Oxygen Demand	57000		1	2000	2000	NE	ug/L	SM 5210B-2001	
Chemical Oxygen Demand	700000		1	20000	20000	NE	ug/L	SM 5220D-1997	
Chromium - Total	81.2		1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	52.1		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	33.1		1	1.60	10.0	10	ug/L	EPA 6010C	
Lead - Total	30.0		1	2.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	93.0		1	1.80	10.0	50	ug/L	EPA 6010C	
Nitrate as N	110	J	1	25	100	10000	ug/L	EPA 353.2	
Nitrate/Nitrite as N	180		1	41	100	NE	ug/L	EPA 353.2	
Nitrite as N	73	J	1	17	100	1000	ug/L	EPA 353.2	
Phosphorus	7700	BD	5	120	500	NE	ug/L	EPA 365.4	QB-01
Silver - Total	12.5		1	1.90	10.0	10	ug/L	EPA 6010C	
Sulfate as SO4	4600	J	1	2900	5000	250000	ug/L	EPA 300.0	
Total Alkalinity as CaCO3	1900000	D	20	280000	300000	NE	ug/L	EPA 310.2	
Total Suspended Solids	2300000		1	1000	1000	NE	ug/L	SM 2540D-1997	
Vanadium - Total	87.1		1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	1700		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 5503-SW6 **Lab ID: C312339-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Acetone	1.2	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Barium - Total	61.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Biochemical Oxygen Demand	11000		1	2000	2000	NE	ug/L	SM 5210B-2001	
Chemical Oxygen Demand	53000		1	10000	10000	NE	ug/L	SM 5220D-1997	
Chromium - Total	2.42	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	6.29	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	3.19	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	3.19	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Phosphorus	120	B	1	25	100	NE	ug/L	EPA 365.4	J-01
Total Suspended Solids	46000		1	1000	1000	NE	ug/L	SM 2540D-1997	
Vanadium - Total	3.14	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	53.2		1	3.80	10.0	10	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 5503-Lift Station
Matrix: Ground Water
Project: Lincoln County LF - Leachate

Lab Sample ID: C312339-01
Sampled: 10/09/13 12:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312339

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] ^	1.7	UD	ug/L	10	1.7	10	5	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,1,1-Trichloroethane [71-55-6] ^	1.2	UD	ug/L	10	1.2	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,1,2,2-Tetrachloroethane [79-34-5] ^	2.8	UD	ug/L	10	2.8	10	3	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,1,2-Trichloroethane [79-00-5] ^	1.4	UD	ug/L	10	1.4	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,1-Dichloroethane [75-34-3] ^	1.3	UD	ug/L	10	1.3	10	5	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,1-Dichloroethene [75-35-4] ^	2.1	UD	ug/L	10	2.1	10	5	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,2,3-Trichloropropane [96-18-4] ^	2.3	UD	ug/L	10	2.3	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,2-Dibromo-3-chloropropane [96-12-8] ^	4.8	UD	ug/L	10	4.8	10	13	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,2-Dibromoethane [106-93-4] ^	6.6	UD	ug/L	10	6.6	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,2-Dichlorobenzene [95-50-1] ^	1.9	UD	ug/L	10	1.9	10	5	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,2-Dichloroethane [107-06-2] ^	2.1	UD	ug/L	10	2.1	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,2-Dichloropropane [78-87-5] ^	1.0	UD	ug/L	10	1.0	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
1,4-Dichlorobenzene [106-46-7] ^	1.9	UD	ug/L	10	1.9	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
2-Butanone [78-93-3] ^	13	UD	ug/L	10	13	50	100	EPA 8260B	10/16/13 19:15	MSZ	R-04
2-Hexanone [591-78-6] ^	8.8	UD	ug/L	10	8.8	50	50	EPA 8260B	10/16/13 19:15	MSZ	R-04
4-Methyl-2-pentanone [108-10-1] ^	11	UD	ug/L	10	11	50	100	EPA 8260B	10/16/13 19:15	MSZ	R-04
Acetone [67-64-1] ^	12	UD	ug/L	10	12	50	100	EPA 8260B	10/16/13 19:15	MSZ	R-04
Acrylonitrile [107-13-1] ^	35	UD	ug/L	10	35	100	200	EPA 8260B	10/16/13 19:15	MSZ	R-04
Benzene [71-43-2] ^	1.5	UD	ug/L	10	1.5	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Bromochloromethane [74-97-5] ^	4.8	UD	ug/L	10	4.8	10	3	EPA 8260B	10/16/13 19:15	MSZ	R-04
Bromodichloromethane [75-27-4] ^	1.7	UD	ug/L	10	1.7	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Bromoform [75-25-2] ^	2.2	UD	ug/L	10	2.2	10	3	EPA 8260B	10/16/13 19:15	MSZ	R-04
Bromomethane [74-83-9] ^	1.4	UD	ug/L	10	1.4	10	10	EPA 8260B	10/16/13 19:15	MSZ	R-04
Carbon disulfide [75-15-0] ^	15	UD	ug/L	10	15	50	100	EPA 8260B	10/16/13 19:15	MSZ	R-04
Carbon tetrachloride [56-23-5] ^	1.7	UD	ug/L	10	1.7	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Chlorobenzene [108-90-7] ^	1.7	UD	ug/L	10	1.7	10	3	EPA 8260B	10/16/13 19:15	MSZ	R-04
Chloroethane [75-00-3] ^	2.3	UD	ug/L	10	2.3	10	10	EPA 8260B	10/16/13 19:15	MSZ	R-04
Chloroform [67-66-3] ^	1.8	UD	ug/L	10	1.8	10	5	EPA 8260B	10/16/13 19:15	MSZ	R-04
Chloromethane [74-87-3] ^	1.3	UD	ug/L	10	1.3	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
cis-1,2-Dichloroethene [156-59-2] ^	1.5	UD	ug/L	10	1.5	10	5	EPA 8260B	10/16/13 19:15	MSZ	R-04
cis-1,3-Dichloropropene [10061-01-5] ^	2.0	UD	ug/L	10	2.0	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Dibromochloromethane [124-48-1] ^	1.7	UD	ug/L	10	1.7	10	3	EPA 8260B	10/16/13 19:15	MSZ	R-04
Dibromomethane [74-95-3] ^	2.7	UD	ug/L	10	2.7	10	10	EPA 8260B	10/16/13 19:15	MSZ	R-04
Ethylbenzene [100-41-4] ^	1.3	UD	ug/L	10	1.3	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Iodomethane [74-88-4] ^	17	UD	ug/L	10	17	50	10	EPA 8260B	10/16/13 19:15	MSZ	R-04
Methylene chloride [75-09-2] ^	2.3	UD	ug/L	10	2.3	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Styrene [100-42-5] ^	1.1	UD	ug/L	10	1.1	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Tetrachloroethene [127-18-4] ^	1.7	UD	ug/L	10	1.7	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Toluene [108-88-3] ^	1.4	UD	ug/L	10	1.4	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
trans-1,2-Dichloroethene [156-60-5] ^	2.1	UD	ug/L	10	2.1	10	5	EPA 8260B	10/16/13 19:15	MSZ	R-04
trans-1,3-Dichloropropene [10061-02-6] ^	1.5	UD	ug/L	10	1.5	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
trans-1,4-Dichloro-2-butene [110-57-6] ^	7.0	UD	ug/L	10	7.0	10	100	EPA 8260B	10/16/13 19:15	MSZ	R-04
Trichloroethene [79-01-6] ^	1.5	UD	ug/L	10	1.5	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04

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Description: 5503-Lift Station
Matrix: Ground Water
Project: Lincoln County LF - Leachate

Lab Sample ID: C312339-01
Sampled: 10/09/13 12:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312339

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] ^	2.4	UD	ug/L	10	2.4	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Vinyl acetate [108-05-4] ^	9.5	UD	ug/L	10	9.5	50	50	EPA 8260B	10/16/13 19:15	MSZ	R-04
Vinyl chloride [75-01-4] ^	3.2	UD	ug/L	10	3.2	10	1	EPA 8260B	10/16/13 19:15	MSZ	R-04
Xylenes (Total) [1330-20-7] ^	4.5	UD	ug/L	10	4.5	30	5	EPA 8260B	10/16/13 19:15	MSZ	R-04

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*38*	*1*	*50.0*	*77 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 19:15*	*MSZ*	*R-04*
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 19:15*	*MSZ*	*R-04*
Toluene-d8	*42*	*1*	*50.0*	*84 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 19:15*	*MSZ*	*R-04*

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Description: 5503-Lift Station
Matrix: Ground Water
Project: Lincoln County LF - Leachate

Lab Sample ID: C312339-01
Sampled: 10/09/13 12:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312339

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] ^	2.20	UD	ug/L	10	2.20	20.0	6	EPA 6020A	10/17/13 13:18	VLO	R-01
Arsenic [7440-38-2] ^	**371**		ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 13:12	JDH	
Barium [7440-39-3] ^	**2860**		ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 13:12	JDH	
Beryllium [7440-41-7] ^	**0.444**	J	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 13:12	JDH	
Cadmium [7440-43-9] ^	1.80	UD	ug/L	5	1.80	5.00	1	EPA 6010C	10/15/13 13:35	JDH	R-05
Chromium [7440-47-3] ^	**81.2**		ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 13:12	JDH	
Cobalt [7440-48-4] ^	**52.1**		ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 13:12	JDH	
Copper [7440-50-8] ^	**33.1**		ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 13:12	JDH	
Lead [7439-92-1] ^	**30.0**		ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 13:12	JDH	
Nickel [7440-02-0] ^	**93.0**		ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 13:12	JDH	
Selenium [7782-49-2] ^	9.10	UD	ug/L	10	9.10	10.0	10	EPA 6020A	10/17/13 13:18	VLO	R-01
Silver [7440-22-4] ^	**12.5**		ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 13:12	JDH	
Thallium [7440-28-0] ^	1.10	UD	ug/L	10	1.10	10.0	5.5	EPA 6020A	10/17/13 13:18	VLO	R-01
Vanadium [7440-62-2] ^	**87.1**		ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 13:12	JDH	
Zinc [7440-66-6] ^	**1700**		ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 13:12	JDH	

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Description: 5503-Lift Station
Matrix: Ground Water
Project: Lincoln County LF - Leachate

Lab Sample ID: C312339-01
Sampled: 10/09/13 12:05
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312339

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Biochemical Oxygen Demand [ECL-0017] ^	**57000**		ug/L	1	2000	2000	NE	SM 5210B-2001	10/10/13 15:19	JOC	
Chemical Oxygen Demand [ECL-0035] ^	**700000**		ug/L	1	20000	20000	NE	SM 5220D-1997	10/10/13 17:27	JOC	
Nitrate as N [14797-55-8] ^	**110**	J	ug/L	1	25	100	10000	EPA 353.2	10/24/13 12:07	CV	
Nitrate/Nitrite as N [ECL-0010] ^	**180**		ug/L	1	41	100	NE	EPA 353.2	10/17/13 10:37	C1V	
Nitrite as N [14797-65-0] ^	**73**	J	ug/L	1	17	100	1000	EPA 353.2	10/11/13 08:29	c1v	
Phosphorus [7723-14-0] ^	**7700**	BD	ug/L	5	120	500	NE	EPA 365.4	10/14/13 12:43	c1v	QB-01
Sulfate as SO4 [14808-79-8] ^	**4600**	J	ug/L	1	2900	5000	250000	EPA 300.0	10/10/13 23:31	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	**1900000**	D	ug/L	20	280000	300000	NE	EPA 310.2	10/16/13 10:20	c1v	
Total Suspended Solids [ECL-0169] ^	**2300000**		ug/L	1	1000	1000	NE	SM 2540D-1997	10/15/13 12:32	MMR	

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

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Description: 5503-SW6 | **Lab Sample ID:** C312339-02 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 12:25 | **Work Order:** C312339

Project: Lincoln County LF - Leachate | **Sampled By:** Courtney Murphy

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	10/16/13 19:45	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 19:45	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 19:45	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 19:45	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 19:45	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 19:45	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 19:45	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 19:45	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 19:45	MSZ	
Acetone [67-64-1] ^	**1.2**	J	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 19:45	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 19:45	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 19:45	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 19:45	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 19:45	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 19:45	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 19:45	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 19:45	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 19:45	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 19:45	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 19:45	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 19:45	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 19:45	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 19:45	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 19:45	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 19:45	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 19:45	MSZ	

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Description:	5503-SW6	**Lab Sample ID:**	C312339-02	**Received:**	10/10/13 07:50
Matrix:	Surface Water	**Sampled:**	10/09/13 12:25	**Work Order:**	C312339
Project:	Lincoln County LF - Leachate	**Sampled By:**	Courtney Murphy		

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	10/16/13 19:45	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 19:45*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 19:45*	*MSZ*	
Toluene-d8	*45*	*1*	*50.0*	*89 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 19:45*	*MSZ*	

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Description: 5503-SW6 | **Lab Sample ID:** C312339-02 | **Received:** 10/10/13 07:50

Matrix: Surface Water | **Sampled:** 10/09/13 12:25 | **Work Order:** C312339

Project: Lincoln County LF - Leachate | **Sampled By:** Courtney Murphy

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] ^	2.20	UD	ug/L	10	2.20	20.0	6	EPA 6020A	10/17/13 12:50	VLO	R-01
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	10/15/13 13:37	JDH	
Barium [7440-39-3] ^	**61.6**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/15/13 13:37	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	10/15/13 13:37	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/15/13 13:37	JDH	
Chromium [7440-47-3] ^	**2.42**	J	ug/L	1	1.40	10.0	10	EPA 6010C	10/15/13 13:37	JDH	
Cobalt [7440-48-4] ^	**6.29**	J	ug/L	1	1.10	10.0	10	EPA 6010C	10/15/13 13:37	JDH	
Copper [7440-50-8] ^	**3.19**	J	ug/L	1	1.60	10.0	10	EPA 6010C	10/15/13 13:37	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	10/15/13 13:37	JDH	
Nickel [7440-02-0] ^	**3.19**	J	ug/L	1	1.80	10.0	50	EPA 6010C	10/15/13 13:37	JDH	
Selenium [7782-49-2] ^	9.10	UD	ug/L	10	9.10	10.0	10	EPA 6020A	10/17/13 12:50	VLO	R-01
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/15/13 13:37	JDH	
Thallium [7440-28-0] ^	1.10	UD	ug/L	10	1.10	10.0	5.5	EPA 6020A	10/17/13 12:50	VLO	R-01
Vanadium [7440-62-2] ^	**3.14**	J	ug/L	1	1.40	10.0	25	EPA 6010C	10/15/13 13:37	JDH	
Zinc [7440-66-6] ^	**53.2**		ug/L	1	3.80	10.0	10	EPA 6010C	10/15/13 13:37	JDH	

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Description: 5503-SW6
Matrix: Surface Water
Project: Lincoln County LF - Leachate

Lab Sample ID: C312339-02
Sampled: 10/09/13 12:25
Sampled By: Courtney Murphy

Received: 10/10/13 07:50
Work Order: C312339

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Biochemical Oxygen Demand [ECL-0017] ^	**11000**		ug/L	1	2000	2000	NE	SM 5210B-2001	10/10/13 15:19	JOC	
Chemical Oxygen Demand [ECL-0035] ^	**53000**		ug/L	1	10000	10000	NE	SM 5220D-1997	10/10/13 17:27	JOC	
Nitrate as N [14797-55-8] ^	25	U	ug/L	1	25	100	10000	EPA 353.2	10/24/13 12:07	CV	
Nitrate/Nitrite as N [ECL-0010] ^	41	U	ug/L	1	41	100	NE	EPA 353.2	10/17/13 10:39	C1V	
Nitrite as N [14797-65-0] ^	17	U	ug/L	1	17	100	1000	EPA 353.2	10/11/13 08:34	c1v	
Phosphorus [7723-14-0] ^	**120**	B	ug/L	1	25	100	NE	EPA 365.4	10/14/13 12:44	c1v	J-01
Sulfate as SO4 [14808-79-8] ^	2900	U	ug/L	1	2900	5000	250000	EPA 300.0	10/11/13 09:32	AJB	
Total Alkalinity as CaCO3 [471-34-1] ^	14000	U	ug/L	1	14000	15000	NE	EPA 310.2	10/16/13 10:21	c1v	
Total Suspended Solids [ECL-0169] ^	**46000**		ug/L	1	1000	1000	NE	SM 2540D-1997	10/15/13 12:32	MMR	

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

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Description: 5503-Trip Blank | **Lab Sample ID:** C312339-03 | **Received:** 10/10/13 07:50

Matrix: Water | **Sampled:** 10/09/13 12:05 | **Work Order:** C312339

Project: Lincoln County LF - Leachate | **Sampled By:** ENCO

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	10/16/13 20:14	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	10/16/13 20:14	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	10/16/13 20:14	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 20:14	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/16/13 20:14	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	10/16/13 20:14	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/16/13 20:14	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/16/13 20:14	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/16/13 20:14	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/16/13 20:14	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/16/13 20:14	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	10/16/13 20:14	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	10/16/13 20:14	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/16/13 20:14	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/16/13 20:14	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 20:14	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	10/16/13 20:14	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	10/16/13 20:14	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	10/16/13 20:14	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	10/16/13 20:14	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	10/16/13 20:14	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/16/13 20:14	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/16/13 20:14	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/16/13 20:14	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/16/13 20:14	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/16/13 20:14	MSZ	

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Description: 5503-Trip Blank
Matrix: Water
Project: Lincoln County LF - Leachate

Lab Sample ID: C312339-03
Sampled: 10/09/13 12:05
Sampled By: ENCO

Received: 10/10/13 07:50
Work Order: C312339

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	10/16/13 20:14	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*39*	*1*	*50.0*	*78 %*	*51-122*	*3J16031*	*EPA 8260B*	*10/16/13 20:14*	*MSZ*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*68-117*	*3J16031*	*EPA 8260B*	*10/16/13 20:14*	*MSZ*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*67-127*	*3J16031*	*EPA 8260B*	*10/16/13 20:14*	*MSZ*	

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 3J16031 - EPA 5030B_MS

Blank (3J16031-BLK1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:19

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							
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	*39*			*ug/L*	*50.0*		*78*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 3J16031 - EPA 5030B_MS

Blank (3J16031-BLK1) Continued Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*88*	*67-127*			

LCS (3J16031-BS1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 15:49

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	21		1.0	ug/L	20.0		103	75-133			
Benzene	19		1.0	ug/L	20.0		94	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		95	83-117			
Toluene	18		1.0	ug/L	20.0		92	71-118			
Trichloroethene	20		1.0	ug/L	20.0		98	74-119			

Matrix Spike (3J16031-MS1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 16:18

Source: C313131-10

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	105	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	93	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	98	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	99	74-119			

Matrix Spike Dup (3J16031-MSD1) Prepared: 10/16/2013 14:13 Analyzed: 10/16/2013 16:48

Source: C313131-10

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	4	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	90	81-134	2	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	96	83-117	3	16	
Toluene	18		1.0	ug/L	20.0	0.14 U	91	71-118	3	17	
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	99	74-119	0.3	22	

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

Batch 3J14017 - EPA 3005A

Blank (3J14017-BLK1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 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							
Lead	2.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							

QUALITY CONTROL

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

Batch 3J14017 - EPA 3005A

Blank (3J14017-BLK1) Continued Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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 (3J14017-BS1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:09

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	206		10.0	ug/L	200		103	80-120			
Barium	200		10.0	ug/L	200		100	80-120			
Beryllium	19.9		1.00	ug/L	20.0		100	80-120			
Cadmium	20.2		1.00	ug/L	20.0		101	80-120			
Chromium	200		10.0	ug/L	200		100	80-120			
Cobalt	209		10.0	ug/L	200		104	80-120			
Copper	197		10.0	ug/L	200		99	80-120			
Lead	204		10.0	ug/L	200		102	80-120			
Nickel	200		10.0	ug/L	200		100	80-120			
Silver	208		10.0	ug/L	200		104	80-120			
Vanadium	204		10.0	ug/L	200		102	80-120			
Zinc	198		10.0	ug/L	200		99	80-120			

Matrix Spike (3J14017-MS1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:16

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	570		10.0	ug/L	200	371	99	75-125			
Barium	2980		10.0	ug/L	200	2860	60	75-125			QM-05
Beryllium	19.9		1.00	ug/L	20.0	0.444	97	75-125			
Cadmium	21.8		1.00	ug/L	20.0	1.09	103	75-125			
Chromium	268		10.0	ug/L	200	81.2	93	75-125			
Cobalt	249		10.0	ug/L	200	52.1	98	75-125			
Copper	239		10.0	ug/L	200	33.1	103	75-125			
Lead	226		10.0	ug/L	200	30.0	98	75-125			
Nickel	286		10.0	ug/L	200	93.0	97	75-125			
Silver	225		10.0	ug/L	200	12.5	106	75-125			
Vanadium	283		10.0	ug/L	200	87.1	98	75-125			
Zinc	1850		10.0	ug/L	200	1700	75	75-125			

Matrix Spike Dup (3J14017-MSD1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:29

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	540		10.0	ug/L	200	371	84	75-125	5	20	
Barium	2970		10.0	ug/L	200	2860	59	75-125	0.1	20	QM-05
Beryllium	19.8		1.00	ug/L	20.0	0.444	97	75-125	0.2	20	
Cadmium	20.5		1.00	ug/L	20.0	1.09	97	75-125	6	20	
Chromium	274		10.0	ug/L	200	81.2	96	75-125	2	20	
Cobalt	236		10.0	ug/L	200	52.1	92	75-125	5	20	

QUALITY CONTROL

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

Batch 3J14017 - EPA 3005A

Matrix Spike Dup (3J14017-MSD1) Continued Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:29

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Copper	242		10.0	ug/L	200	33.1	104	75-125	1	20	
Lead	215		10.0	ug/L	200	30.0	93	75-125	5	20	
Nickel	275		10.0	ug/L	200	93.0	91	75-125	4	20	
Silver	224		10.0	ug/L	200	12.5	106	75-125	0.6	20	
Vanadium	290		10.0	ug/L	200	87.1	101	75-125	3	20	
Zinc	1840		10.0	ug/L	200	1700	68	75-125	0.8	20	QM-05

Post Spike (3J14017-PS1) Prepared: 10/14/2013 11:17 Analyzed: 10/15/2013 13:32

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.575		0.0100	mg/L	0.200	0.371	102	80-120			
Barium	2.99		0.0100	mg/L	0.200	2.86	66	80-120			QM-08
Beryllium	0.0199		0.00100	mg/L	0.0200	0.000444	97	80-120			
Cadmium	0.0206		0.00100	mg/L	0.0200	0.00109	98	80-120			
Chromium	0.275		0.0100	mg/L	0.200	0.0812	97	80-120			
Cobalt	0.249		0.0100	mg/L	0.200	0.0521	99	80-120			
Copper	0.242		0.0100	mg/L	0.200	0.0331	105	80-120			
Lead	0.227		0.0100	mg/L	0.200	0.0300	99	80-120			
Nickel	0.286		0.0100	mg/L	0.200	0.0930	97	80-120			
Silver	0.234		0.0100	mg/L	0.200	0.0125	111	80-120			
Vanadium	0.291		0.0100	mg/L	0.200	0.0871	102	80-120			
Zinc	1.86		0.0100	mg/L	0.200	1.70	77	80-120			QM-08

Batch 3J14019 - EPA 3005A

Blank (3J14019-BLK1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 12:42

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.910	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (3J14019-BS1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 12:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	210		2.00	ug/L	200		105	80-120			
Selenium	220		1.00	ug/L	200		110	80-120			
Thallium	207		1.00	ug/L	200		103	80-120			

Matrix Spike (3J14019-MS1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 12:54

Source: C312339-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	202	D	20.0	ug/L	200	2.20 U	101	75-125			R-01
Selenium	278	D	10.0	ug/L	200	9.10 U	139	75-125			QM-07, R-01

QUALITY CONTROL

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

Batch 3J14019 - EPA 3005A

Matrix Spike (3J14019-MS1) Continued Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 12:54

Source: C312339-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Thallium	218	D	10.0	ug/L	200	1.10 U	109	75-125			R-01

Matrix Spike Dup (3J14019-MSD1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 13:06

Source: C312339-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	204	D	20.0	ug/L	200	2.20 U	102	75-125	0.9	20	R-01
Selenium	277	D	10.0	ug/L	200	9.10 U	138	75-125	0.3	20	QM-07, R-01
Thallium	218	D	10.0	ug/L	200	1.10 U	109	75-125	0.4	20	R-01

Post Spike (3J14019-PS1) Prepared: 10/14/2013 11:22 Analyzed: 10/17/2013 13:10

Source: C312339-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	212	D	2.00	ug/L	200	-4.10	108	80-120			R-01
Selenium	279	D	1.00	ug/L	200	4.11	137	80-120			QM-08, R-01
Thallium	220	D	1.00	ug/L	200	0.607	110	80-120			R-01

Classical Chemistry Parameters - Quality Control

Batch 3J10005 - Same

Blank (3J10005-BLK1) Prepared: 10/10/2013 11:07 Analyzed: 10/10/2013 17:27

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 (3J10005-BS1) Prepared: 10/10/2013 11:07 Analyzed: 10/10/2013 17:27

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	500000		10000	ug/L	500000		101	90-110			

Matrix Spike (3J10005-MS1) Prepared: 10/10/2013 11:07 Analyzed: 10/10/2013 17:27

Source: C307380-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	3100000		50000	ug/L	2500000	740000	96	90-110			

Matrix Spike Dup (3J10005-MSD1) Prepared: 10/10/2013 11:07 Analyzed: 10/10/2013 17:27

Source: C307380-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	3200000		50000	ug/L	2500000	740000	97	90-110	0.7	10	

Batch 3J10020 - NO PREP

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QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3J10020 - NO PREP

Blank (3J10020-BLK1) Prepared & Analyzed: 10/10/2013 15:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	2000	U	2000	ug/L							

LCS (3J10020-BS1) Prepared & Analyzed: 10/10/2013 15:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	180000		2000	ug/L	198000		91	85-115			

Duplicate (3J10020-DUP1) Prepared & Analyzed: 10/10/2013 15:19

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	59000		2000	ug/L		57000			3	30	

Batch 3J10029 - NO PREP

Blank (3J10029-BLK1) Prepared: 10/10/2013 12:36 Analyzed: 10/10/2013 17:29

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	2900	U	5000	ug/L							

LCS (3J10029-BS1) Prepared: 10/10/2013 12:36 Analyzed: 10/10/2013 18:21

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	48000		5000	ug/L	50000		96	90-110			

Matrix Spike (3J10029-MS1) Prepared: 10/10/2013 12:36 Analyzed: 10/10/2013 18:38

Source: C312338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	21000		5000	ug/L	20000	3600	88	90-110			QM-05

Matrix Spike Dup (3J10029-MSD1) Prepared: 10/10/2013 12:36 Analyzed: 10/10/2013 18:55

Source: C312338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	21000		5000	ug/L	20000	3600	88	90-110	0.5	10	QM-05

Batch 3J11001 - NO PREP

Blank (3J11001-BLK1) Prepared: 10/11/2013 08:27 Analyzed: 10/11/2013 08:27

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 (3J11001-BS1) Prepared: 10/11/2013 08:26 Analyzed: 10/11/2013 08:26

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3J11001 - NO PREP

LCS (3J11001-BS1) Continued Prepared: 10/11/2013 08:26 Analyzed: 10/11/2013 08:26

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1.0		0.10	mg/L	1.00		101	90-110			

Matrix Spike (3J11001-MS1) Prepared: 10/11/2013 08:30 Analyzed: 10/11/2013 08:30

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1100		100	ug/L	1000	73	101	90-110			

Matrix Spike Dup (3J11001-MSD1) Prepared: 10/11/2013 08:31 Analyzed: 10/11/2013 08:31

Source: C312339-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1100		100	ug/L	1000	73	100	90-110	0.4	10	

Batch 3J11004 - Same

Blank (3J11004-BLK1) Prepared: 10/11/2013 10:38 Analyzed: 10/14/2013 11:57

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	**39**	**J**	100	ug/L							

LCS (3J11004-BS1) Prepared: 10/11/2013 10:38 Analyzed: 10/14/2013 11:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	1600	B	100	ug/L	1600		97	80-120			

Matrix Spike (3J11004-MS1) Prepared: 10/11/2013 10:38 Analyzed: 10/14/2013 12:02

Source: C312070-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	740	B	100	ug/L	640	190	85	80-120			

Matrix Spike Dup (3J11004-MSD1) Prepared: 10/11/2013 10:38 Analyzed: 10/14/2013 12:04

Source: C312070-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	750	B	100	ug/L	640	190	87	80-120	1	25	

Batch 3J15005 - NO PREP

Blank (3J15005-BLK1) Prepared & Analyzed: 10/15/2013 12:32

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	1000	U	1000	ug/L							

LCS (3J15005-BS1) Prepared & Analyzed: 10/15/2013 12:32

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3J15005 - NO PREP

LCS (3J15005-BS1) Continued Prepared & Analyzed: 10/15/2013 12:32

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	95		1.0	mg/L	100		95	80-120			

Duplicate (3J15005-DUP1) Prepared & Analyzed: 10/15/2013 12:32

Source: C312290-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	1000	U	1000	ug/L		1000 U				10	

Duplicate (3J15005-DUP2) Prepared & Analyzed: 10/15/2013 12:32

Source: C312292-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	1000	U	1000	ug/L		1000 U				10	

Batch 3J16009 - NO PREP

Blank (3J16009-BLK1) Prepared: 10/16/2013 08:51 Analyzed: 10/16/2013 10:09

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	14000	U	15000	ug/L							

LCS (3J16009-BS1) Prepared: 10/16/2013 08:51 Analyzed: 10/16/2013 10:09

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		105	80-120			

Matrix Spike (3J16009-MS1) Prepared: 10/16/2013 08:51 Analyzed: 10/16/2013 10:11

Source: C312338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	64000		15000	ug/L	37800	28000	95	80-120			

Matrix Spike Dup (3J16009-MSD1) Prepared: 10/16/2013 08:51 Analyzed: 10/16/2013 10:12

Source: C312338-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity as CaCO3	62000		15000	ug/L	37800	28000	91	80-120	2	25	

Batch 3J17001 - NO PREP

Blank (3J17001-BLK1) Prepared: 10/17/2013 08:00 Analyzed: 10/17/2013 10:21

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 (3J17001-BS1) Prepared: 10/17/2013 08:00 Analyzed: 10/17/2013 10:24

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 3J17001 - NO PREP

LCS (3J17001-BS1) Continued Prepared: 10/17/2013 08:00 Analyzed: 10/17/2013 10:24

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		101	90-110			

Matrix Spike (3J17001-MS1) Prepared: 10/17/2013 08:00 Analyzed: 10/17/2013 10:28

Source: C312070-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	510		100	ug/L	513	41 U	99	90-110			

Matrix Spike Dup (3J17001-MSD1) Prepared: 10/17/2013 08:00 Analyzed: 10/17/2013 10:30

Source: C312070-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	480		100	ug/L	513	41 U	94	90-110	5	10	

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.
QB-01	The method blank had a positive result for the analyte; however, the concentration in the method blank is less than 10% of the sample result, which minimizes the impact of the deviation.
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-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-08	Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
R-04	The Reporting Limits for this analysis are elevated due to sample foaming.
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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Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page 1 of 1

Client Name: S&ME, Inc. (SM002)	Project Number: 1255-17-004
Address: 9751 Southern Pine Blvd.	Project Name/Desc: Lincoln County LF - Leachate
City/ST/Zip: Charlotte, NC 28273	PO # / Billing Info: ~~56344~~ 59302
Tel: (704) 523-4726 Fax: (704) 525-3953	Reporting Contact: Courtney Murphy
Sampler(s) Name, Affiliation (Print): Courtney Murphy, S&ME	Billing Contact: Barbara Ellington
Sampler(s) Signature: Courtney Murphy	Sp. Location / Time Zone: Crouse, NC

Requested Analyses: 8260B Appendix 1; Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn; Alkalinity 310.2,Nitrite as N 353.2; BOD SM5210B; COD SM5220D; Nitrate Calc 353.2; NOX 353.2,P; Sulfate 300; TSS SM2540D

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

Lab Workorder: C312339

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	Ag,As,Ba,Be,Cd,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Alkalinity 310.2,Nitrite as N 353.2	BOD SM5210B	COD SM5220D	Nitrate Calc 353.2	NOX 353.2,P	Sulfate 300	TSS SM2540D	Sample Comments
	5503-Lift Station	10/9/13	12:05	G	GW	8	X	X	X	X	X	X	X	X	X	
	5503-SW5	10/9/13	12:25	G	SW	8	X	X	X	X	X	X	X	X	X	
	5503-Trip Blank				WA	2	X									

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By: Courtney Murphy	Date/Time: 10-9-13 1700	Received By: [illegible]	Date/Time: 10/10/13 9:50
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: 1.3c		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

APPENDIX II

STATISTICAL ANALYSIS PROCEDURE SHEETS

Parametric ANOVA

See Also:
Parametric t-test
Satterthwaite t-test

Description:

The one-way parametric Analysis of Variance (Parametric ANOVA) is useful for compliance to background (inter-well) comparisons.

The 1989 guidance recommends that for p wells (where p >= 2), there be at least 3 observations for each well and that the total sample size N is large enough that N-p >= 5. With fewer samples, the ability to detect contamination will be reduced.

The 1992 guidance recommends that there be fewer than 15% non-detects for the parametric ANOVA.

ChemStat performs the parametric ANOVA on all background and compliance well data for a parameter. Individual comparisons for each well are then performed.

Use:

For inter-well comparisons.

Remarks:

The 1992 USEPA Statistical Guidance incorrectly states, and many authors have incorrectly stated, that data must be normally distributed and have equal well variance for the parametric ANOVA to be appropriate. The USEPA 1989 Statistical Guidance correctly states that the *residuals* must be normally distributed for the parametric ANOVA to be appropriate. Shapiro-Wilks method, Shapiro-Francia method, D'Agostino's method, and probability plots are methods included in ChemStat to test the normality of the residuals. The USEPA 1992 Statistical Guidance correctly states that normality is required for the parametric prediction limit and the parametric tolerance limit.

Kruskal-Wallis Non-Parametric Analysis

Other Non-Parametric Tests:
Wilcoxon Intra-Well Comparison
Wilcoxon Inter-Well Comparison
Non-Parametric Prediction Limits
Non-Parametric Tolerance Limits

Description:

The Kruskal-Wallis test is a non-parametric Analysis of variance that compares each compliance well to a group of background wells. It is recommended in the 1992 guidance document for data that do not follow a normal distribution, or have 15% to 90% non-detects.

ChemStat compares each compliance well to the background wells. Two comparisons are provided. The first comparison is performed at a minimum of 1% individual well comparison error level. The second comparison is performed at an experimentwise 5% error level, however the minimum error level may fall below the USEPA required value of 1%. The first comparison is compliant with USEPA guidance. The second comparison is less likely to produce false positives, but is more statistically accurate.

All wells should have at least 4 samples. The test will work with fewer samples, but it is not likely to show statistical significance.

Use:

For comparison of compliance wells to background wells when data do not follow a normal distribution, or there are 15% to 90% non-detects.

Remarks:

The Kruskal-Wallis test can only determine which compliance well is elevated with respect to background, but can not determine which specific samples cause the statistical trigger.

The 1992 guidance example problem for the Kruskal-Wallis method has an error. On page 43, the rank sum and rank mean for Well 3 are given as 51 and 10 respectively. The rank sum and rank mean should be 61 and 12.2 respectively.

Non-Parametric Prediction Limit

See Also:
Recent Dates
Verification Resampling
Well List View
Parametric Prediction Limit
Poisson Prediction Limit
Non-Parametric Tolerance Limit

The Non-Parametric Prediction Limit can be used as an inter-well comparison, where the prediction limit is calculated from samples from background wells, or an intra-well comparison where the prediction limit is calculated from the historical samples from the selected well.

Intra-well or Inter-well comparisons are selected from **Select | Comparison**, or from the Prediction Limit right-click menu.

Inter-Well Comparison:

Verification Resampling

To support verification resampling, ChemStat allows you to vary the number of samples compared to the prediction limit for each well. The default number of recent sampling dates is specified from Options | Default Options | Comparison or the prediction limit right-click menu. In most cases, a value of 1 is appropriate. However, you can specify different "recent date" values for each individual well. When the prediction interval report is displayed, the bottom portion of the window will display a list of all compliance wells included in the analysis. Select a well or wells. Click the right mouse button to display the context menu, and select the desired number of recent dates for the selected well(s).

Description:

The inter-well non-parametric prediction limit is recommended in the 1992 guidance for data where the assumptions of normality or transformed-normality can not be justified, or when a significant portion of the samples are non-detects. A very basic test, the non-parametric prediction limit simply compares each individual down-gradient concentration for the selected dates, to the maximum concentration in background samples. The prediction limit does not produce an actual limit, but simply a maximum value of the parameter concentration above which contamination is assumed.

The only mathematical calculation is to determine the coverage or level of significance of the test. The level of coverage is dependent on the number of background samples and the selected number of recent dates to compare to the limit.

The inter-well non-parametric prediction limit compares samples from background wells to a selected number of recent sampling dates from compliance wells. If there are more than one sample per date, the samples for that date are averaged. The number of recent sampling dates is specified in the list of wells in the lower pane of the prediction limit menu. In most cases, a value of 1 is appropriate.

Use:

As an inter-well comparison, the non parametric prediction limit is useful for comparison of individual compliance well samples to pooled background data where data do not follow a normal or transformed-normal distribution, and/or there is an abundance of non-detects.

The test is performed on all compliance wells for the specified parameter.

Remarks:

This method will tend to have a high rate of false negatives unless there is a sufficient number of samples available from background wells. The method is not well documented for use on actual data in the 1992 guidance. For this reason, and because of the lack of power of the method, it should be used only when other methods are not available.

Intra-Well Comparison:

Description:

Although not described in the USEPA guidance documents, non-parametric prediction intervals can be used for an intra-well comparison. The Intra-Well Non-Parametric Prediction Limit compares a selected number of recent samples to a specified number of historical baseline samples from the same well.

The only significant calculation is to determine the coverage or level of significance of the test. The level of coverage is dependent on the number of historical samples and the selected number of recent dates.

Use:

As an intra-well comparison, the non parametric prediction limit is useful for assessing potential contamination in a well without the possibility of false positives resulting from natural variability of the ground water quality.

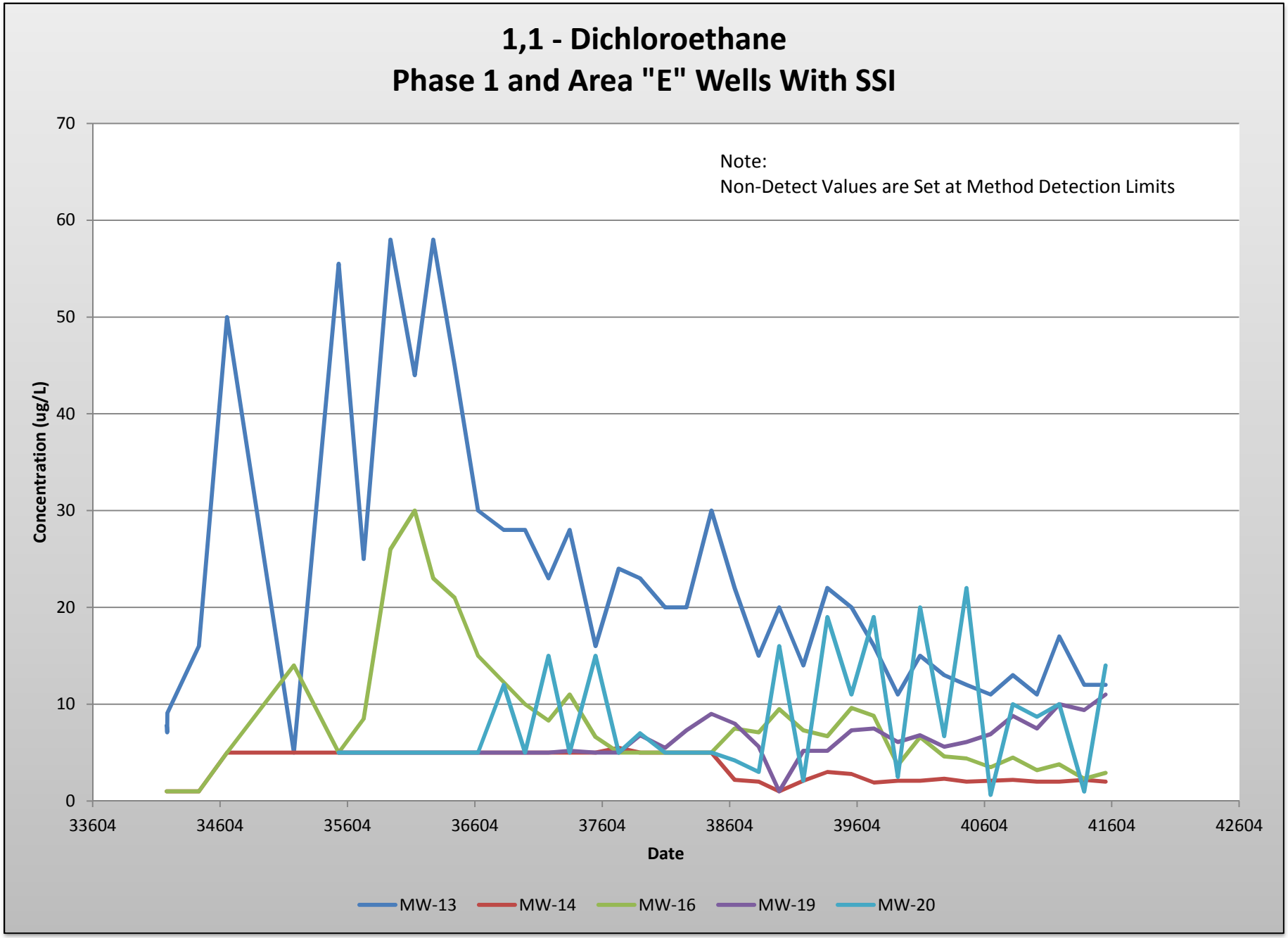
Remarks:

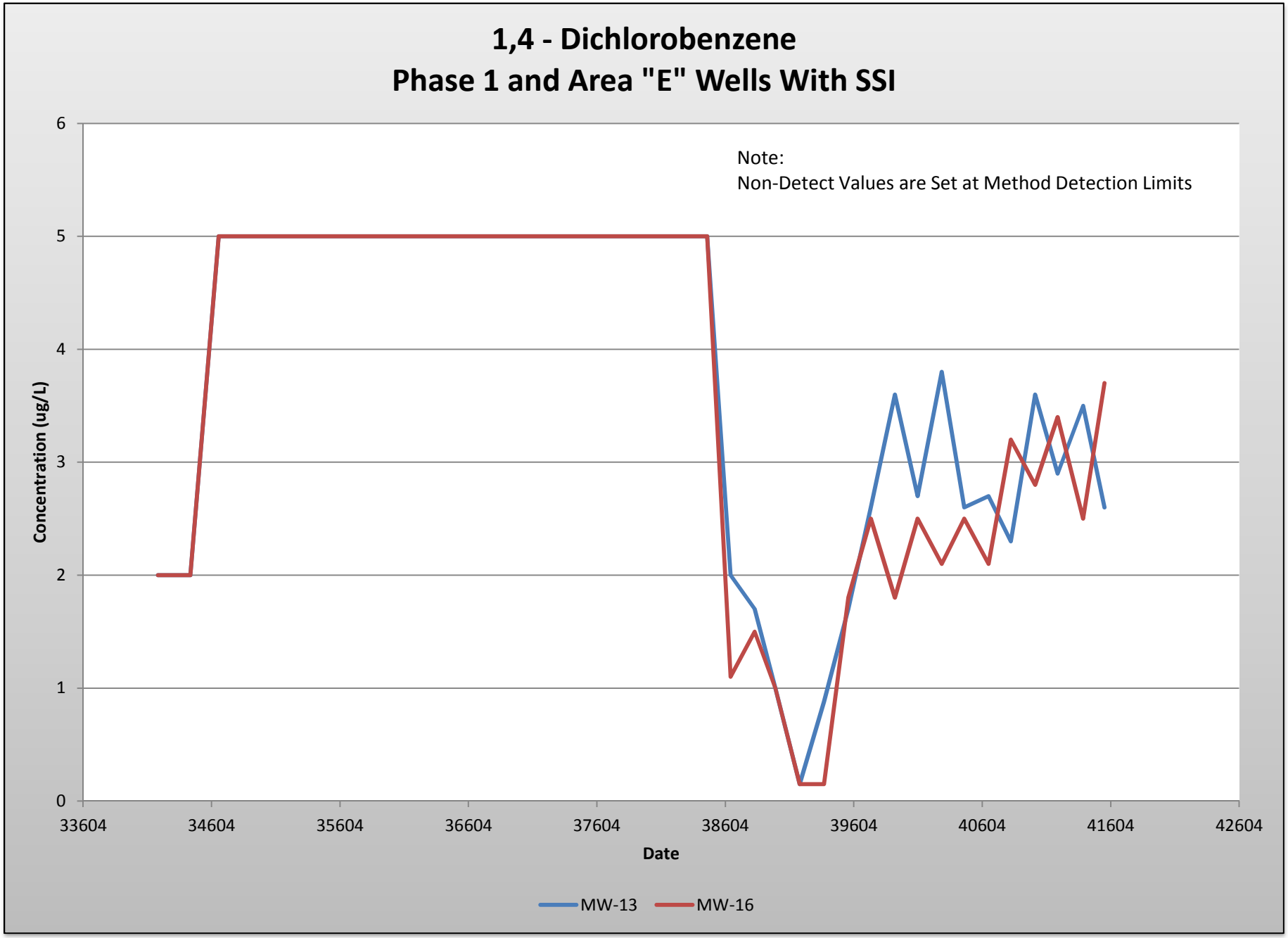
Although easy to implement, as an intra-well comparison, this method requires a large number of historical samples to achieve a reasonable statistical power. To achieve a 95% confidence level, approximately 20 historical samples (known not to be impacted by the facility) are required for each future sample to be compared. It would be unusual to have a facility with this large number of samples, and not be able to apply some other analysis method.

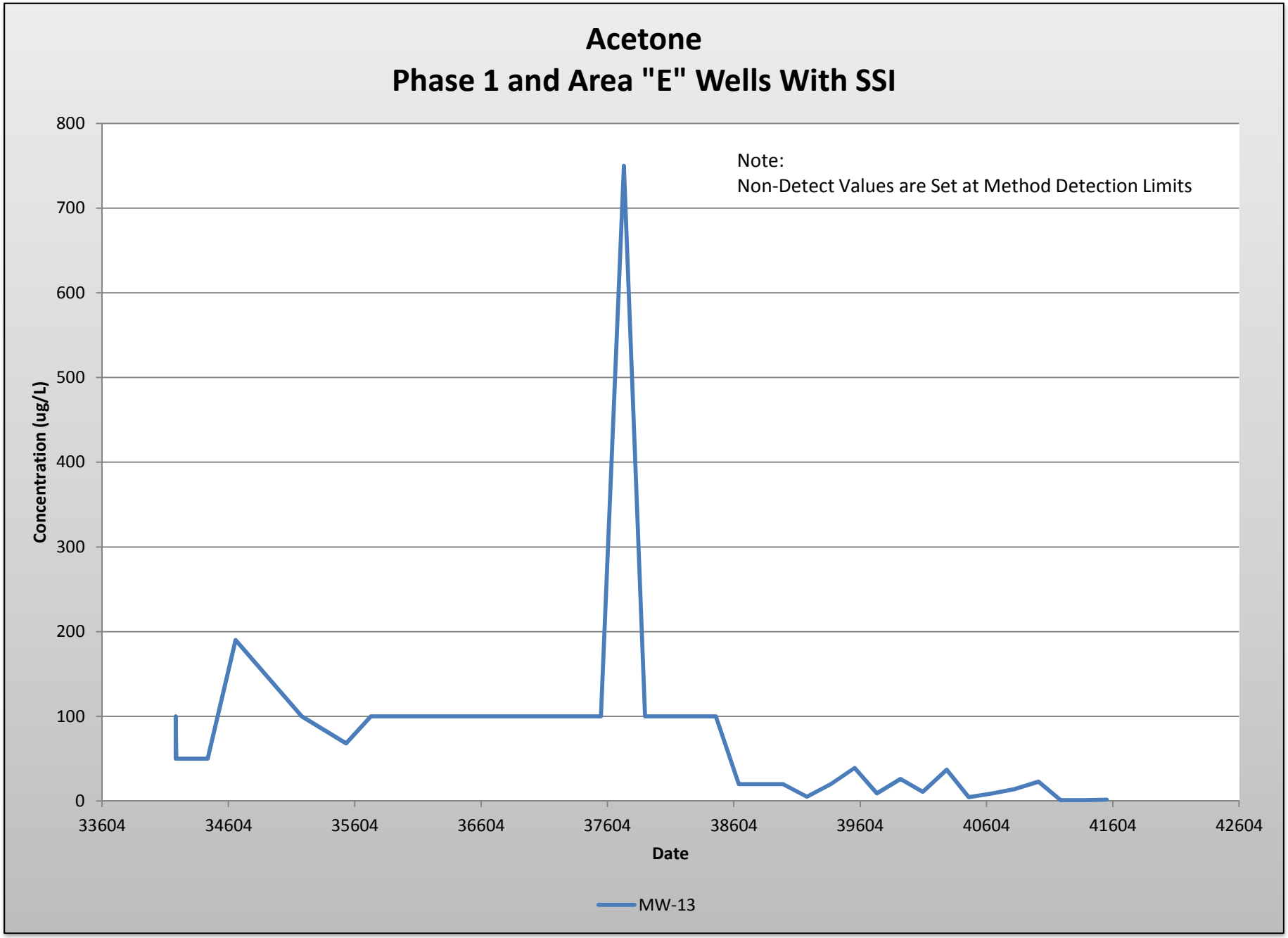
The method is not well documented for use on actual data in the 1992 guidance. For this reason, and because of the lack of power of the method, it should be used only when other methods are not available.

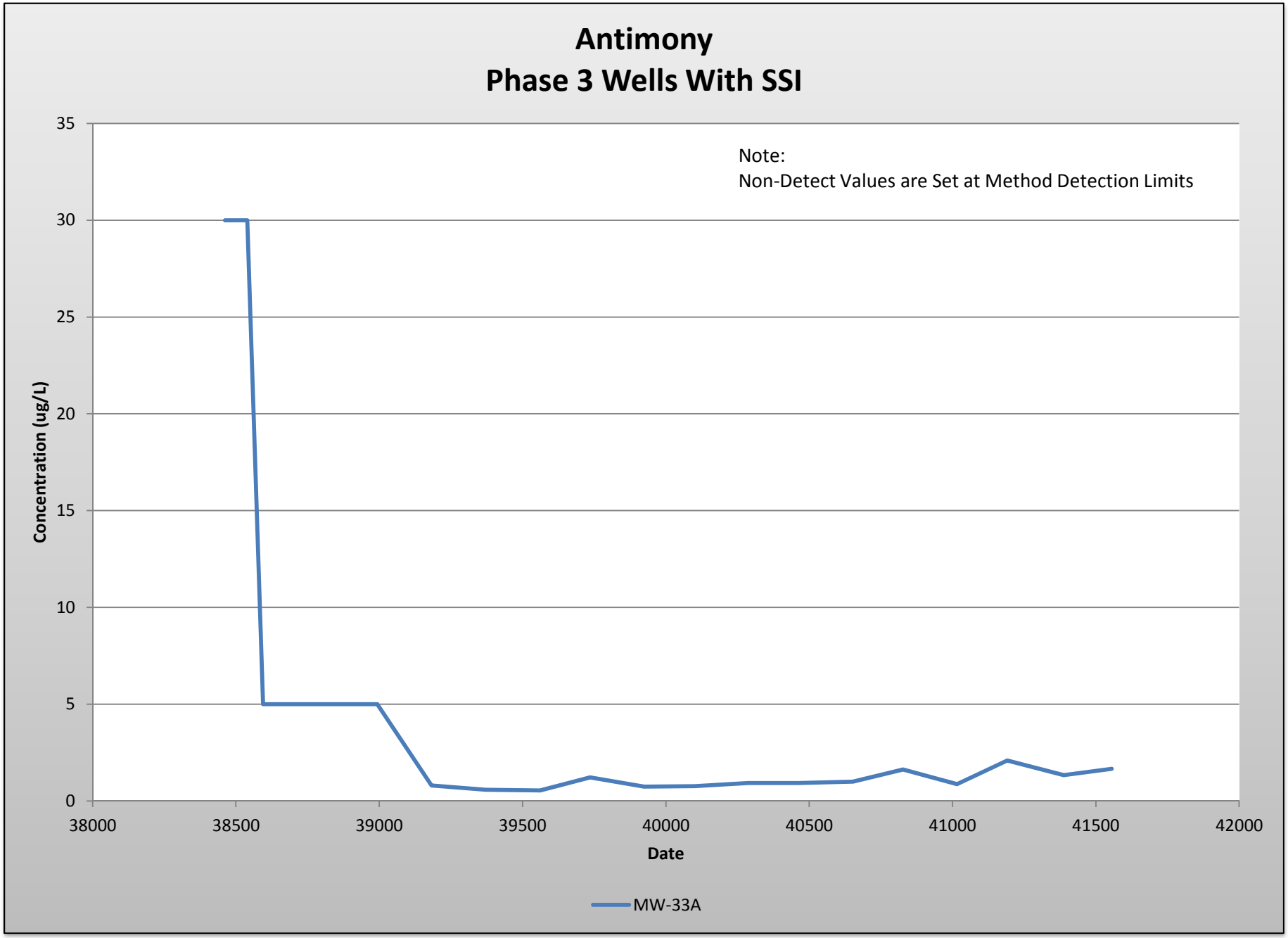
APPENDIX III

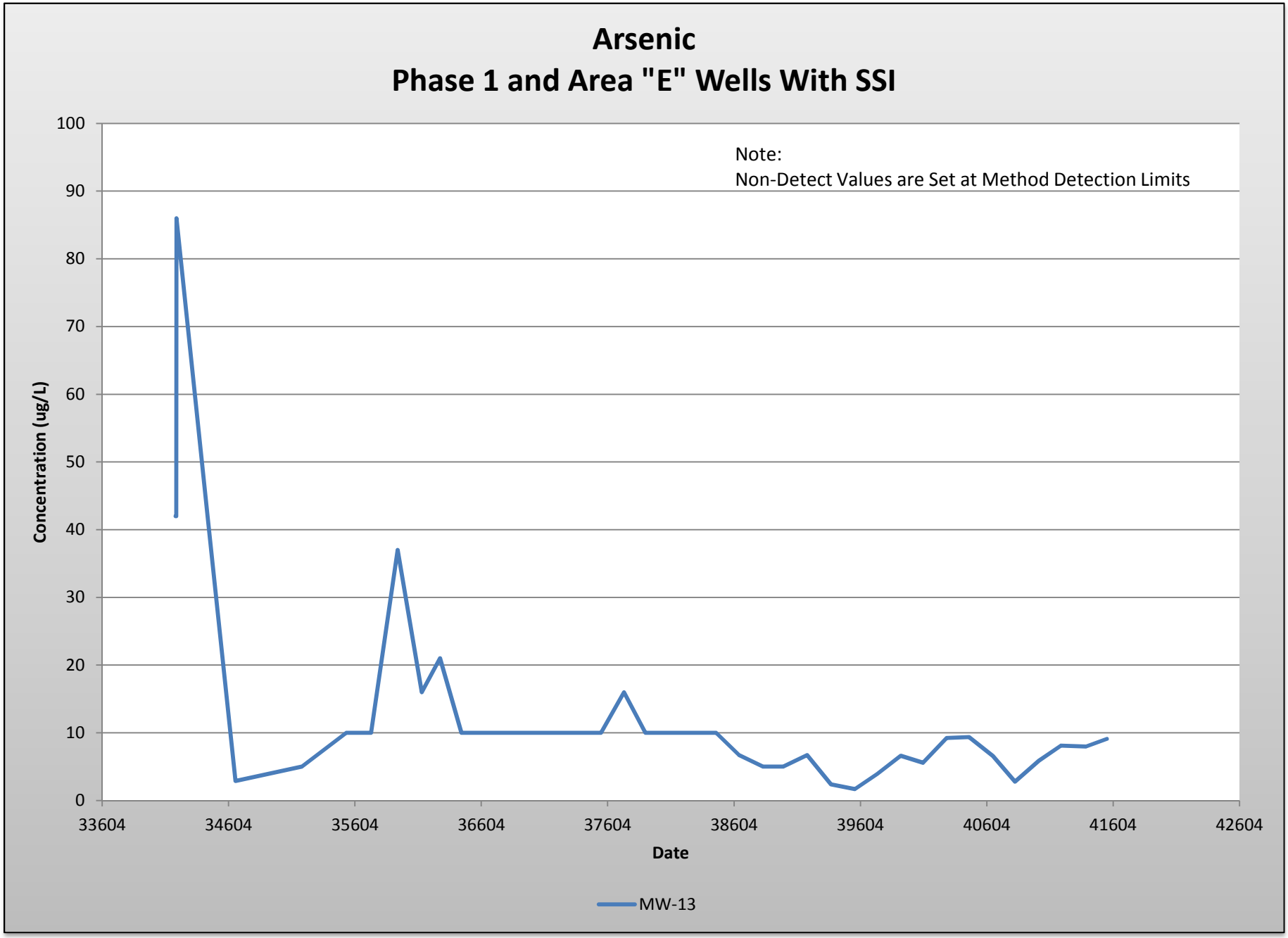
GRAPHS DEPICTING CONCENTRATIONS OVER TIME FOR WELLS WITH AN SSI

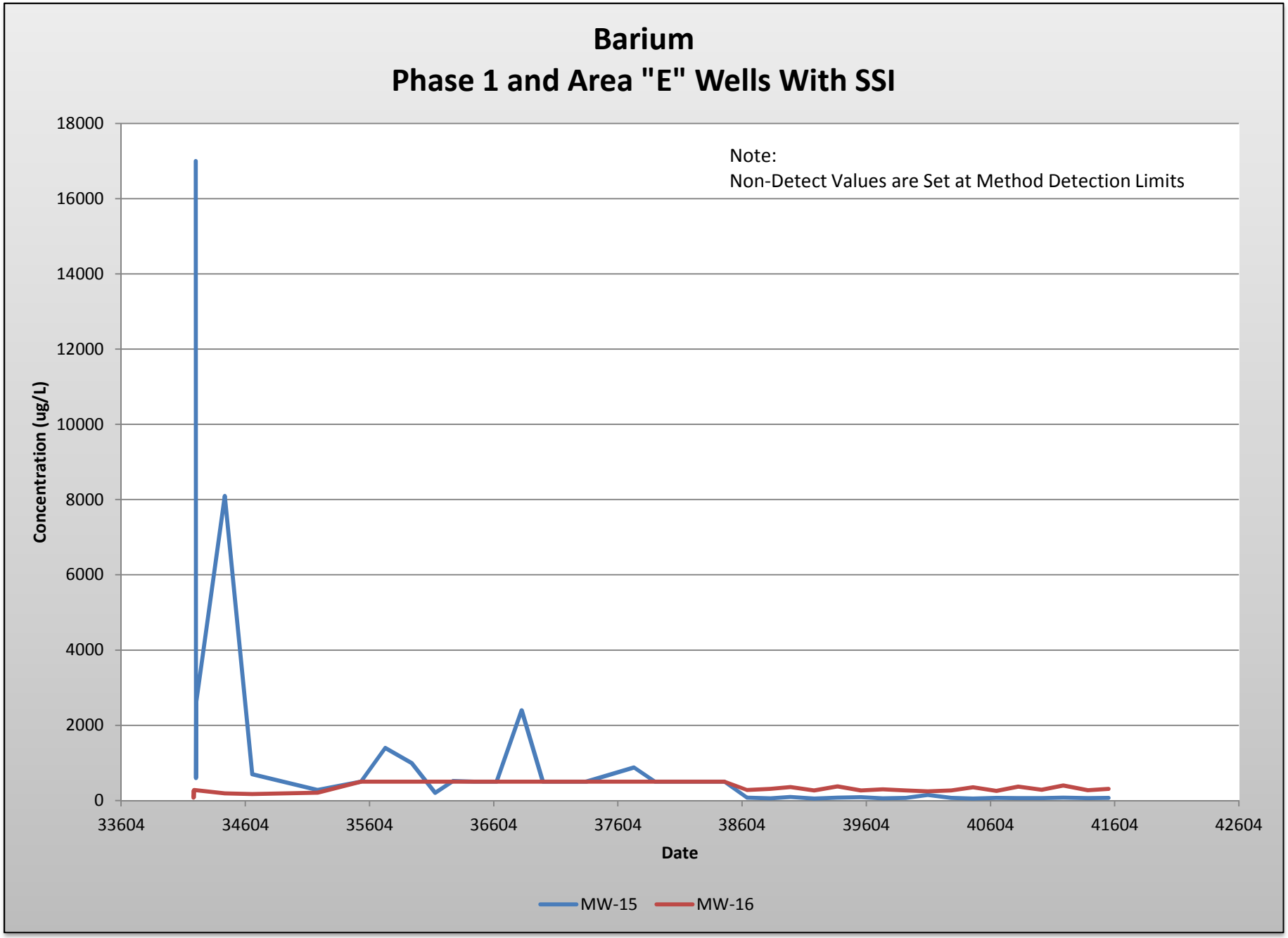

1,1 - Dichloroethane
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
70
60
50
40
30
20
10
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-14
MW-16
MW-19
MW-20

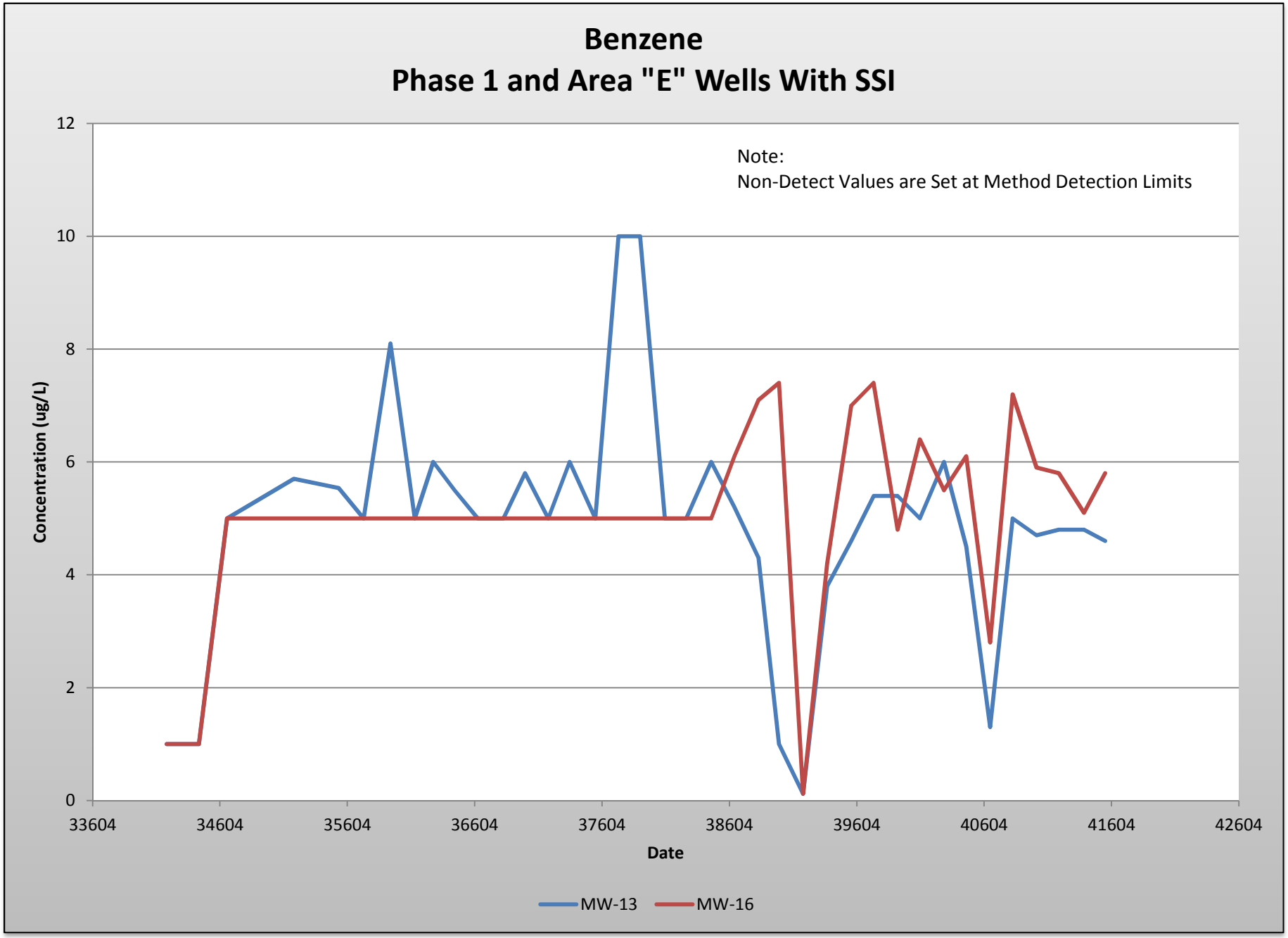

1,4 - Dichlorobenzene
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
0
1
2
3
4
5
6
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-16

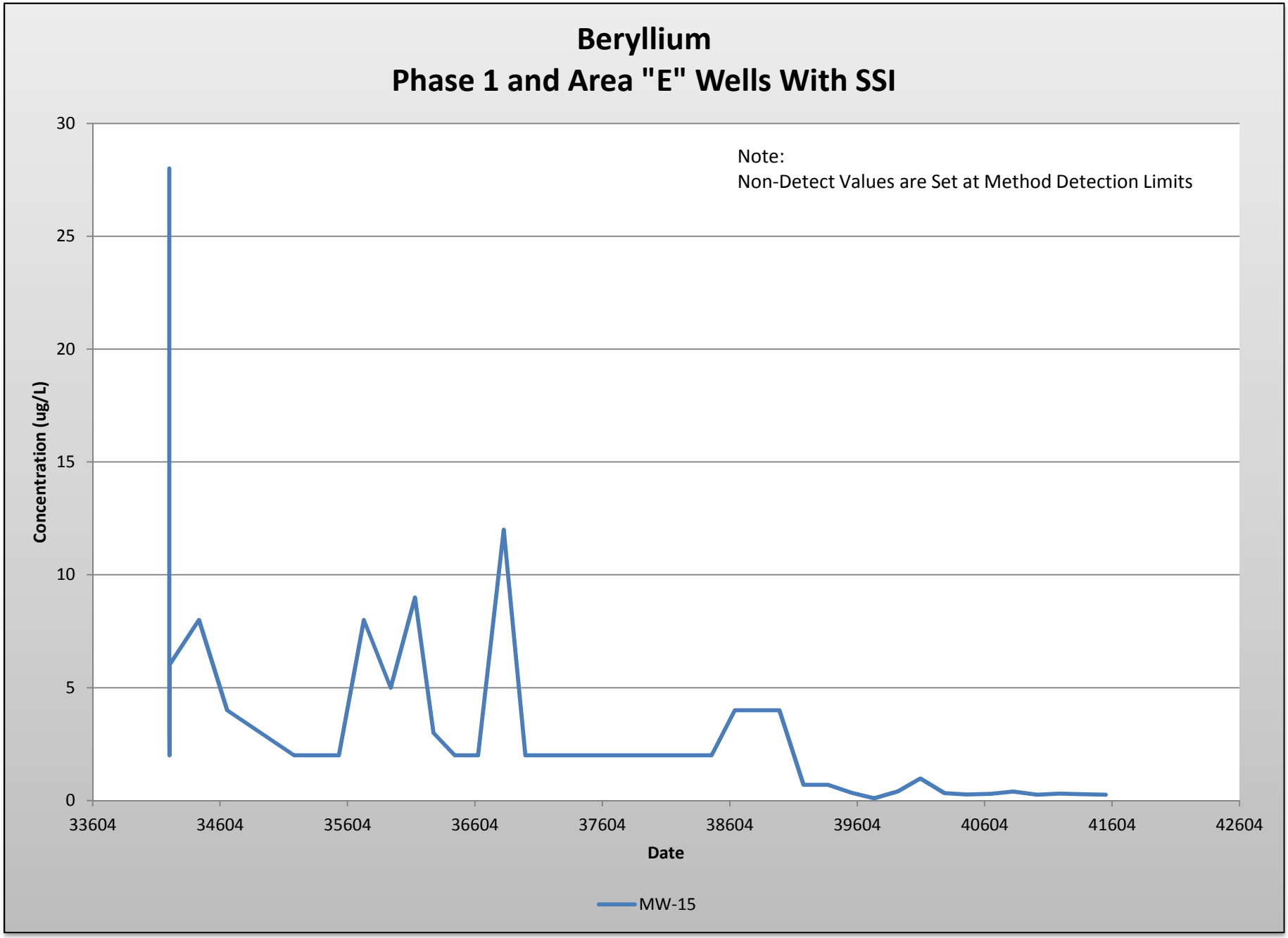

Acetone
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
800
700
600
500
400
300
200
100
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13

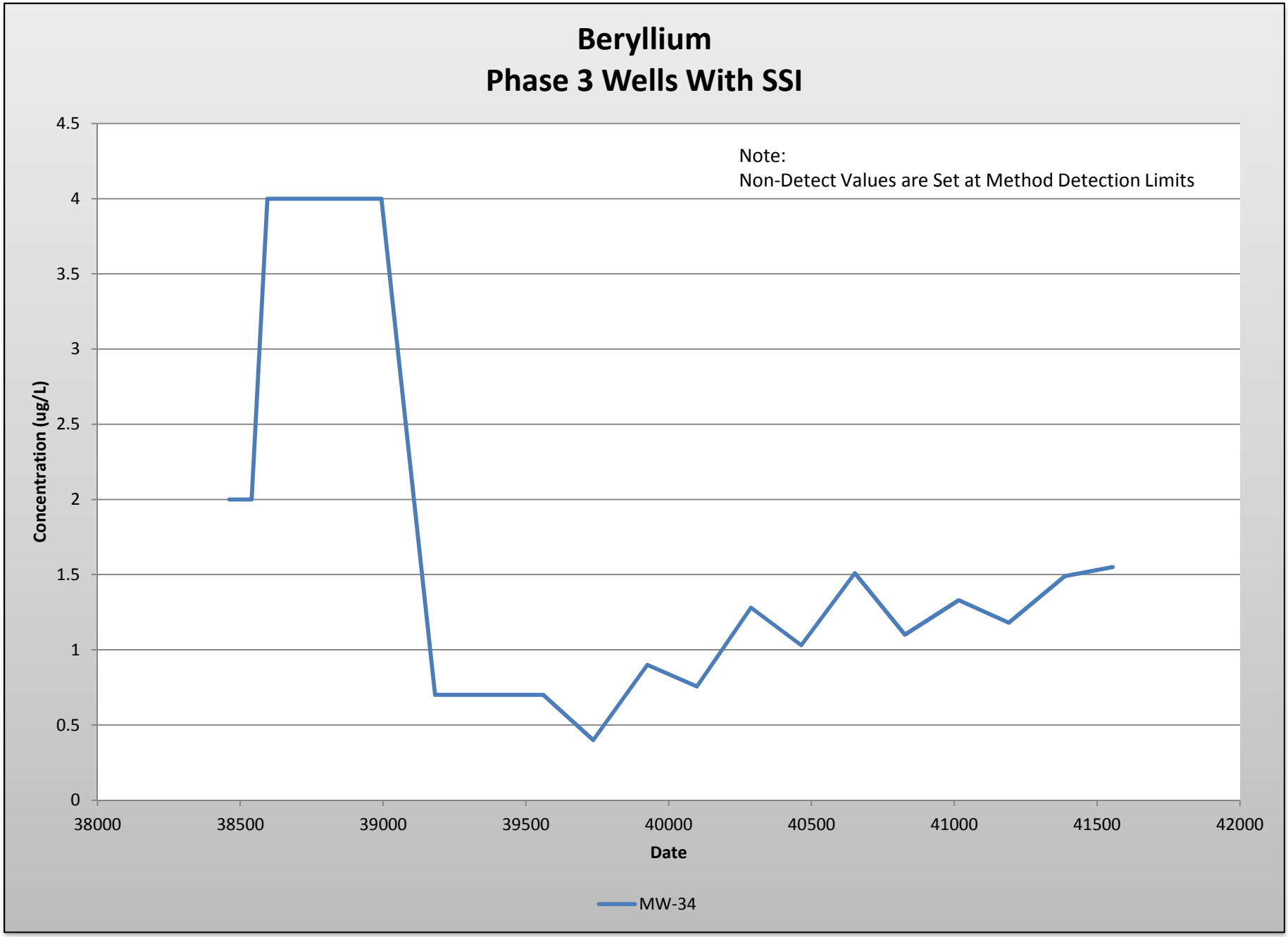

Antimony
Phase 3 Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
35
30
25
20
15
10
5
0
38000
38500
39000
39500
40000
40500
41000
41500
42000
Date
MW-33A

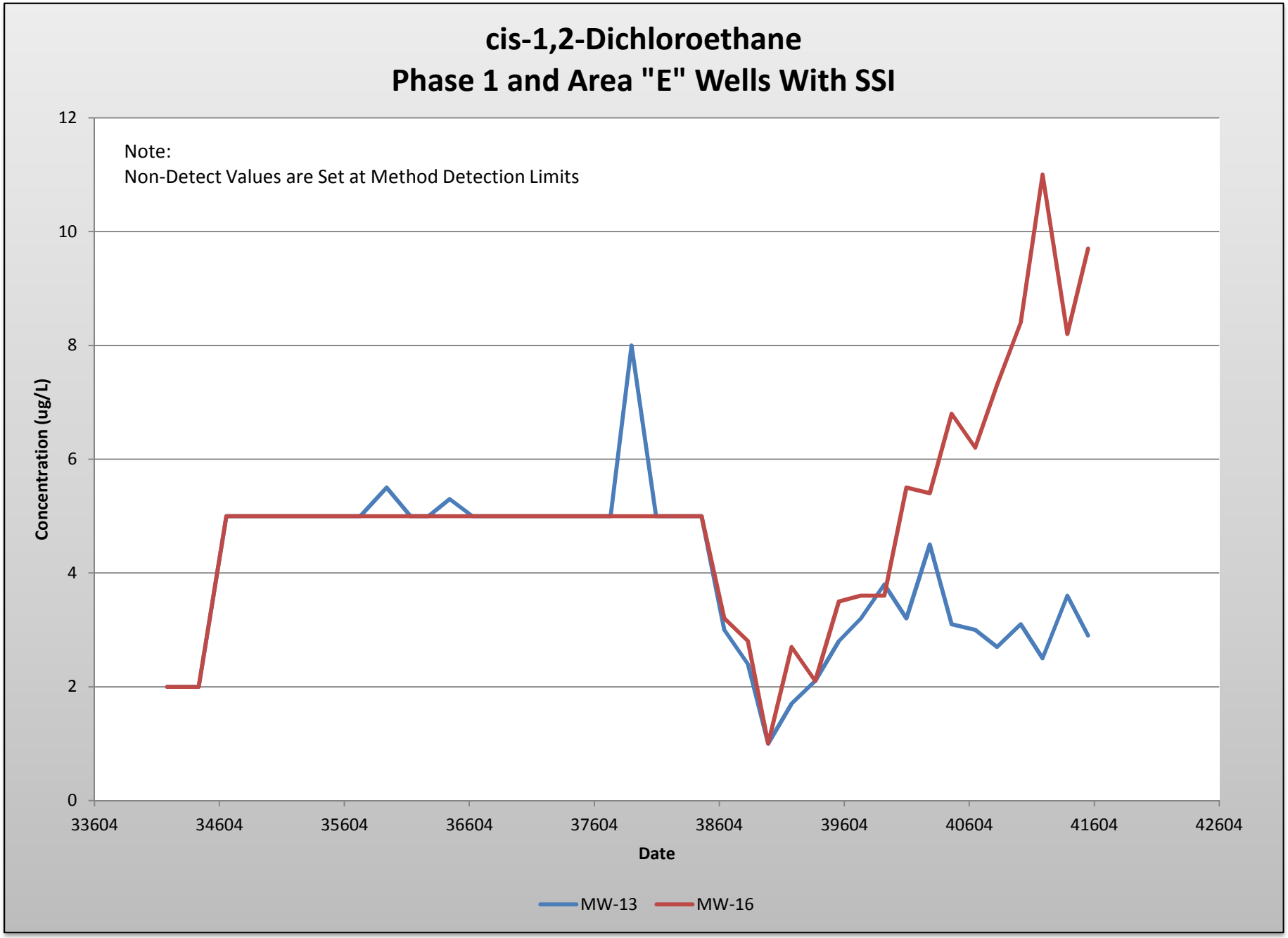

Arsenic
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13

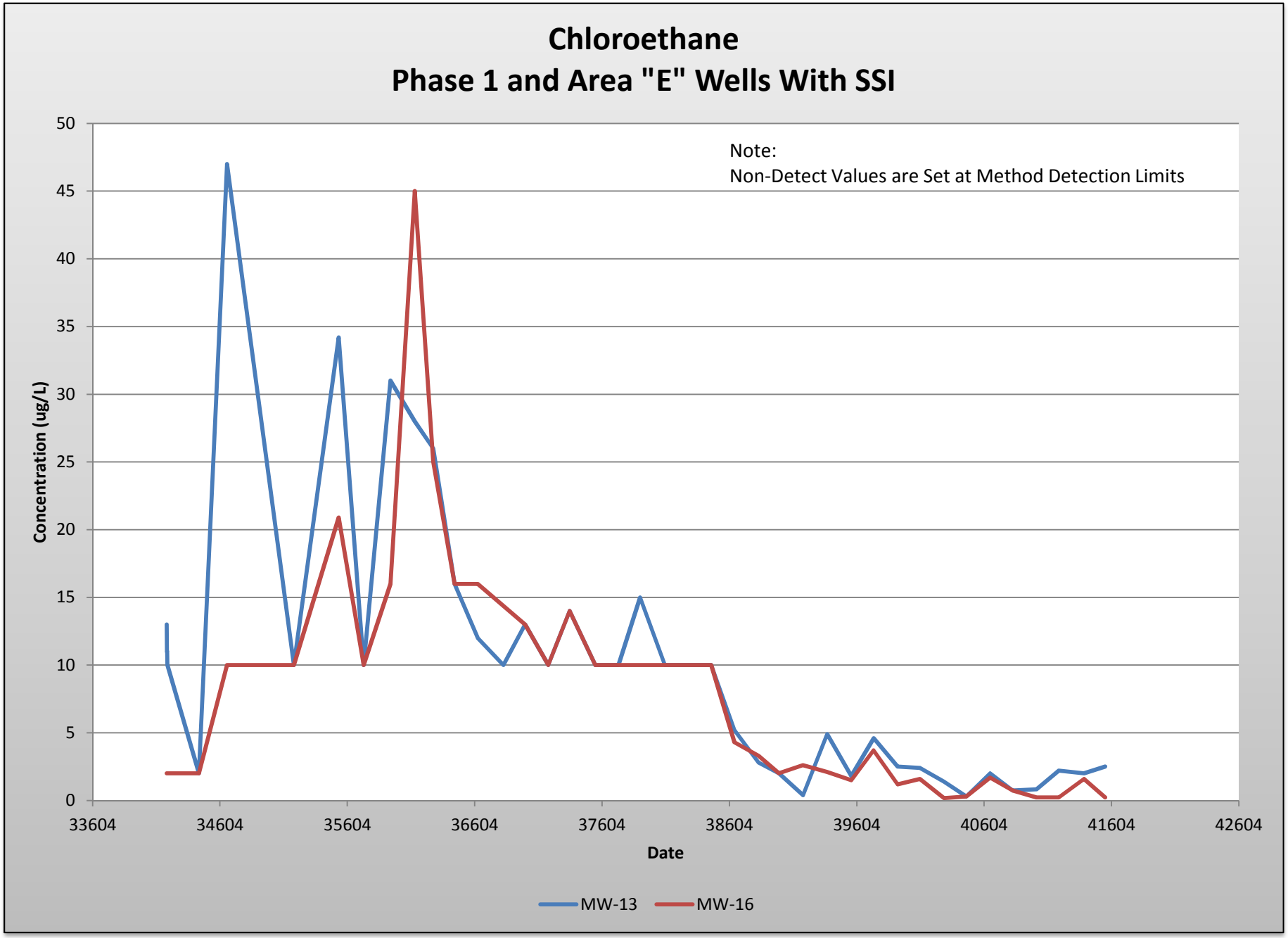

Barium
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-15
MW-16

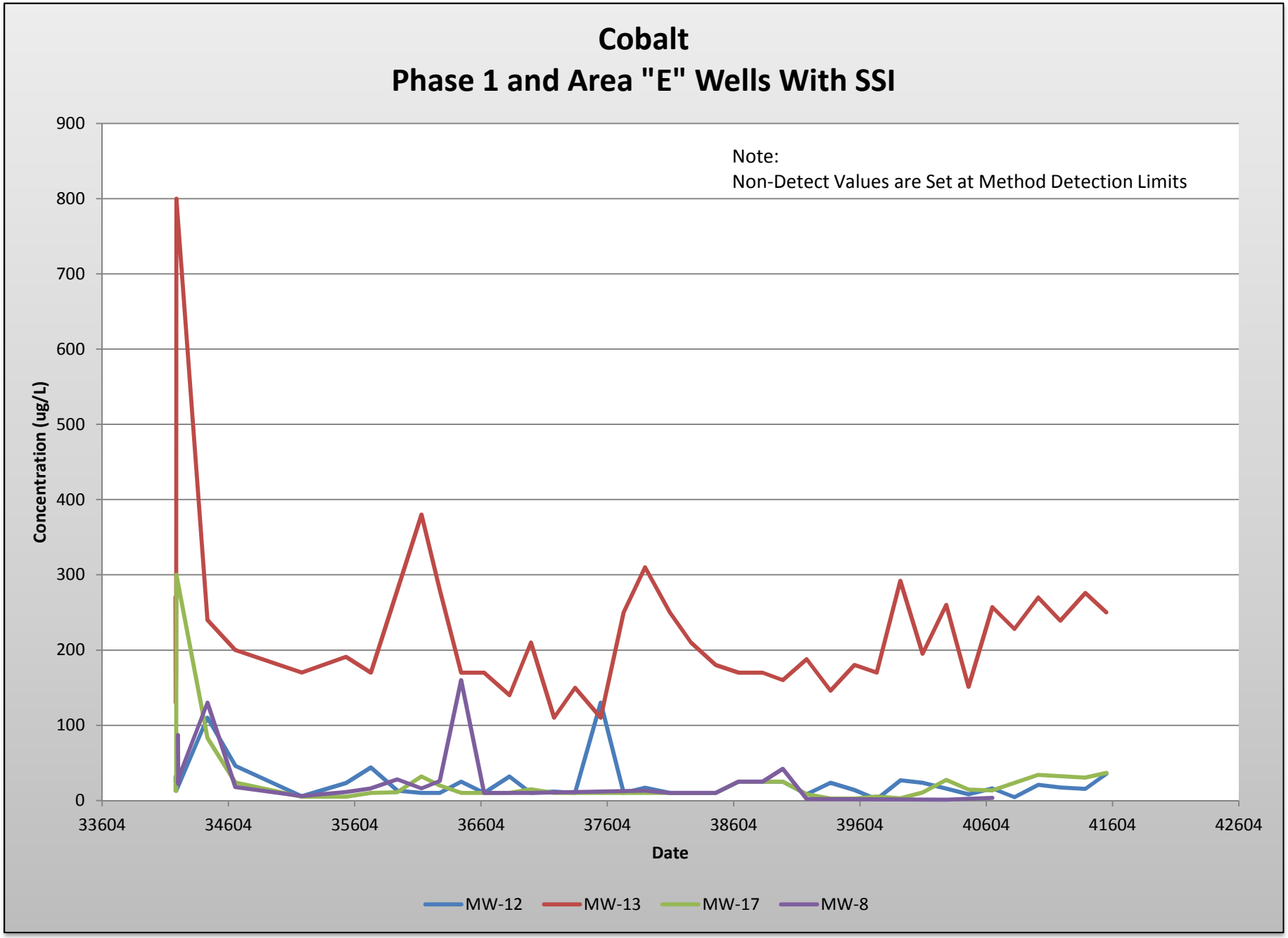

Benzene
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
0
2
4
6
8
10
12
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-16

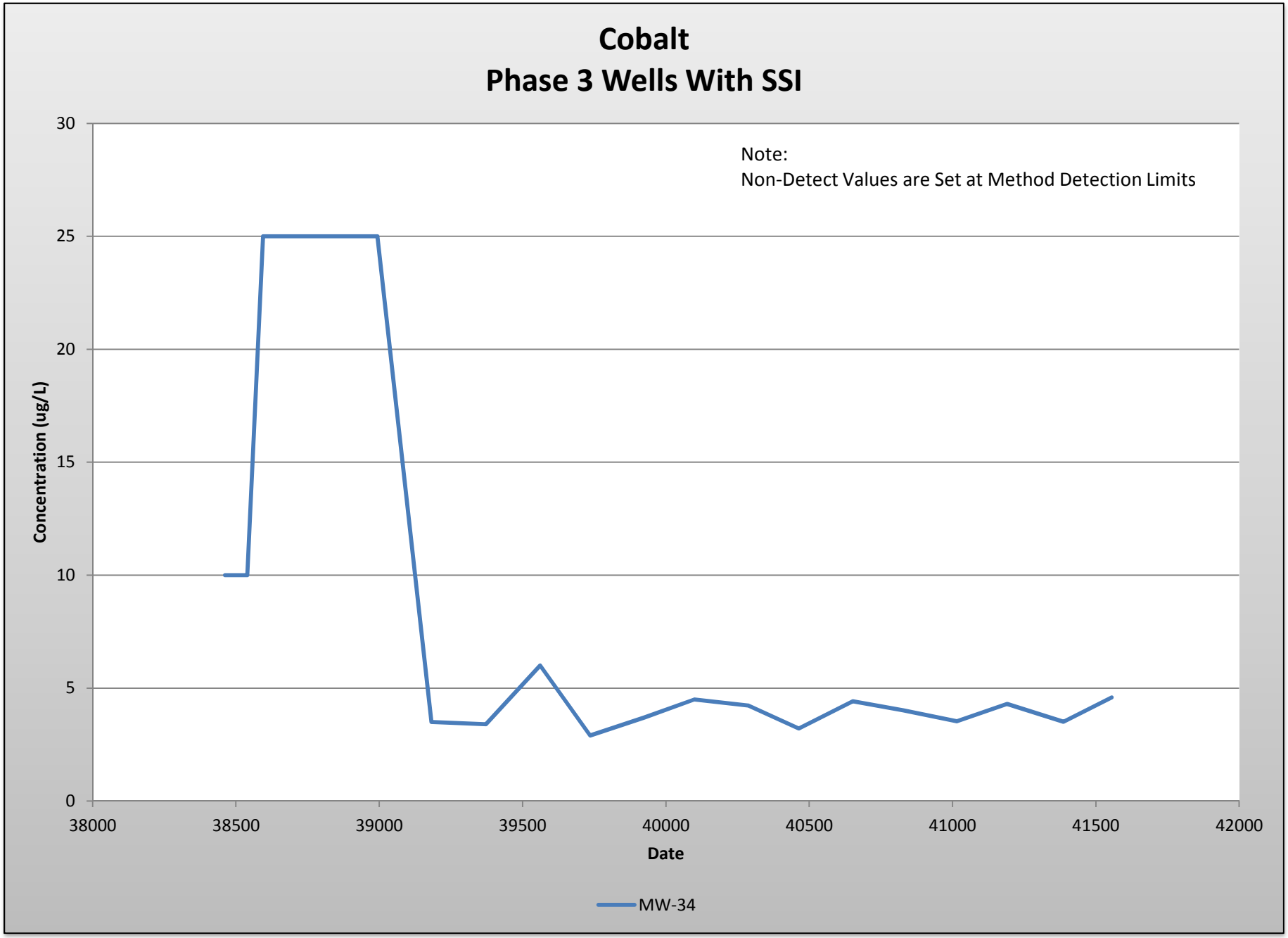

Beryllium
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
30
25
20
15
10
5
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-15

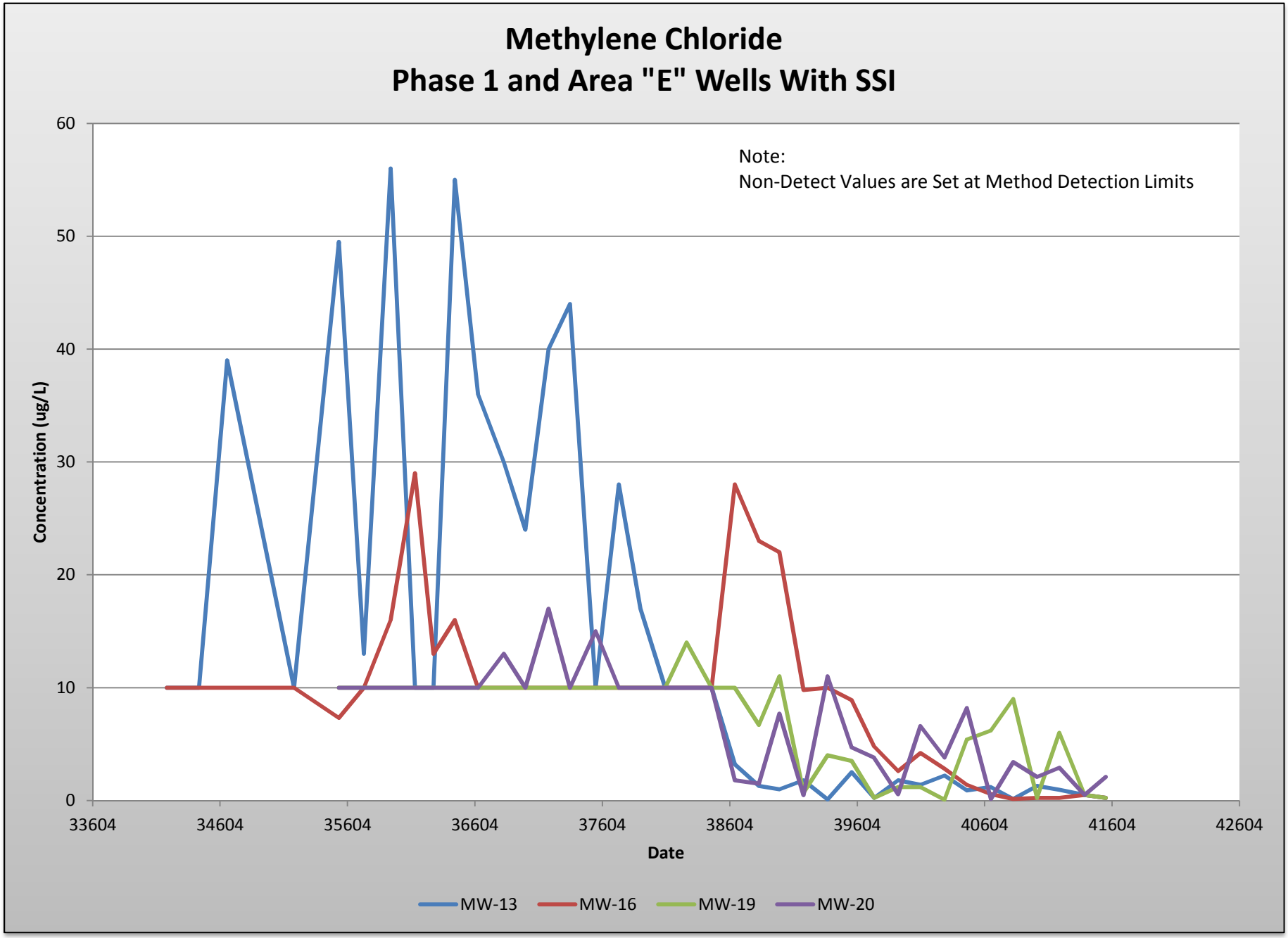

Beryllium
Phase 3 Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
38000
38500
39000
39500
40000
40500
41000
41500
42000
Date
MW-34

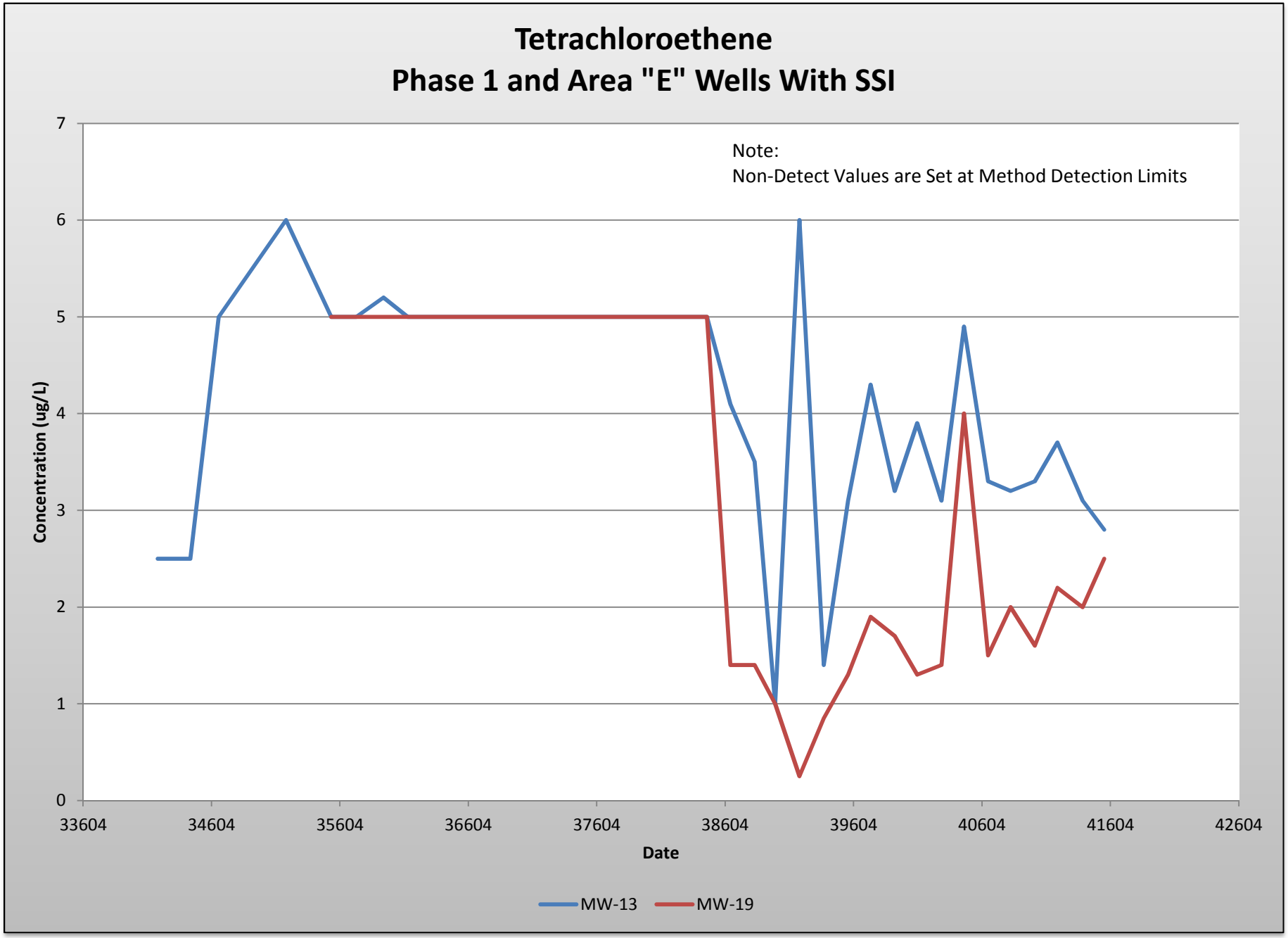

cis-1,2-Dichloroethane
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
0
2
4
6
8
10
12
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-16

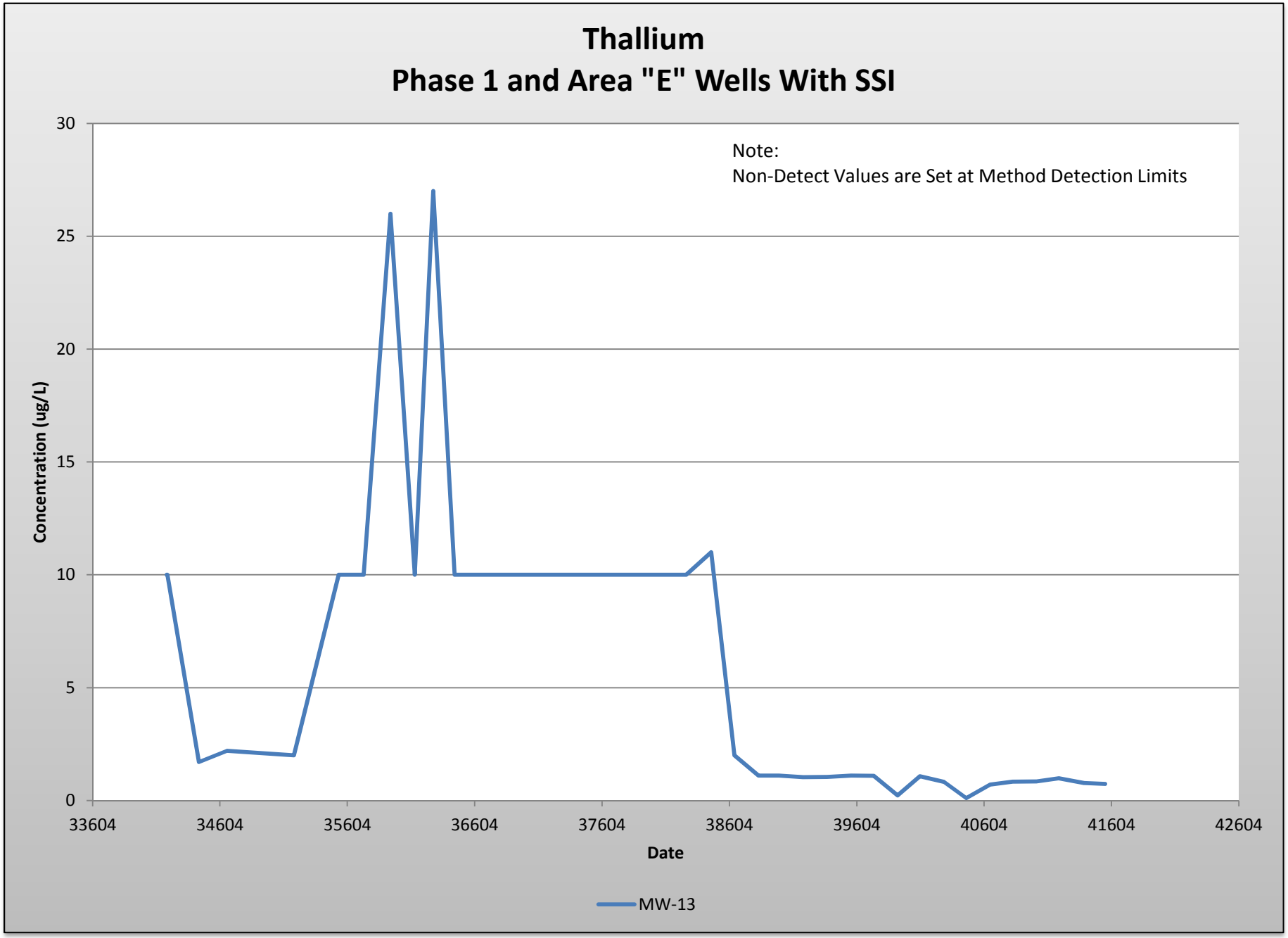

Chloroethane
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-16

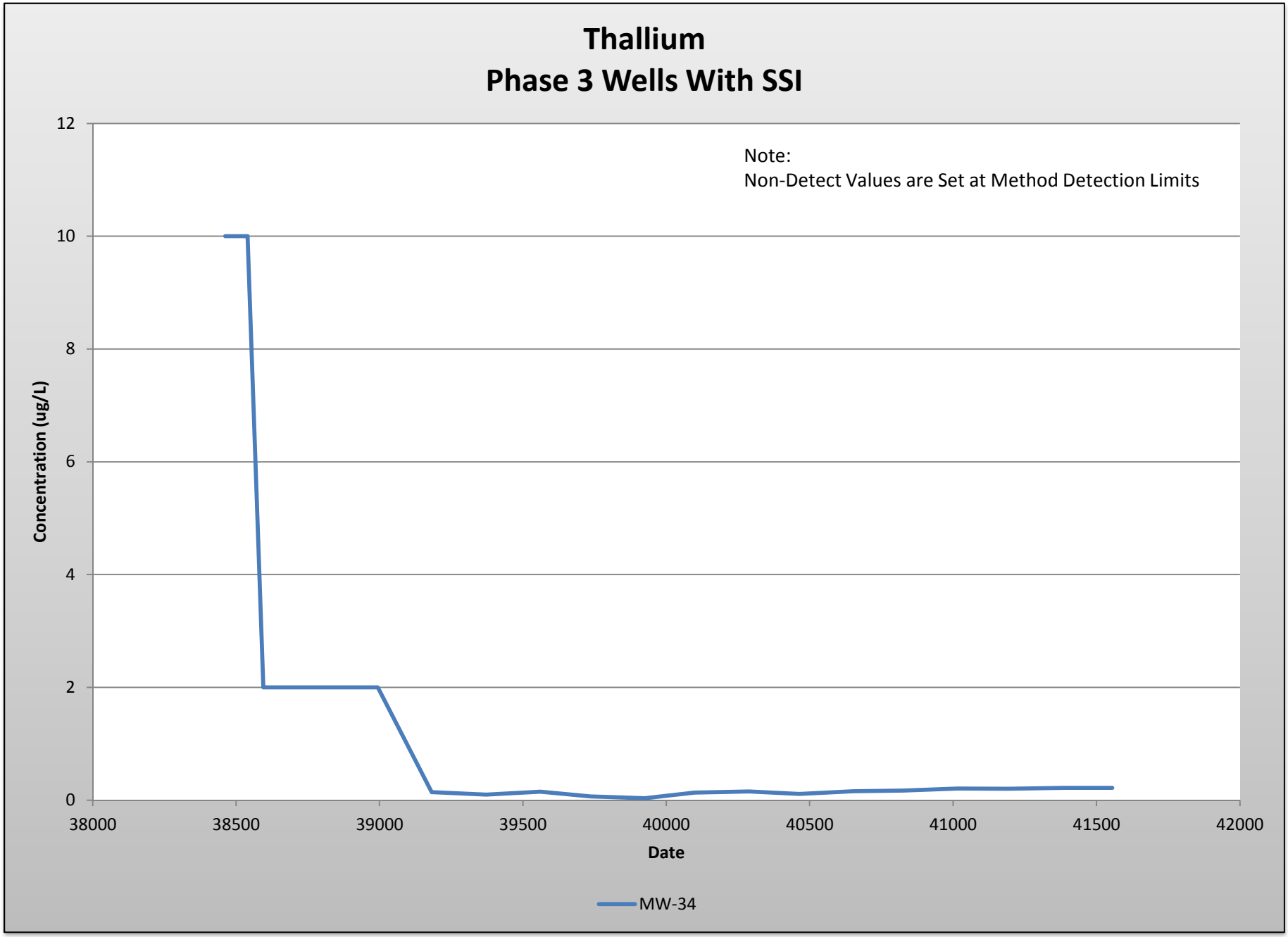

Cobalt
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
900
800
700
600
500
400
300
200
100
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-12
MW-13
MW-17
MW-8

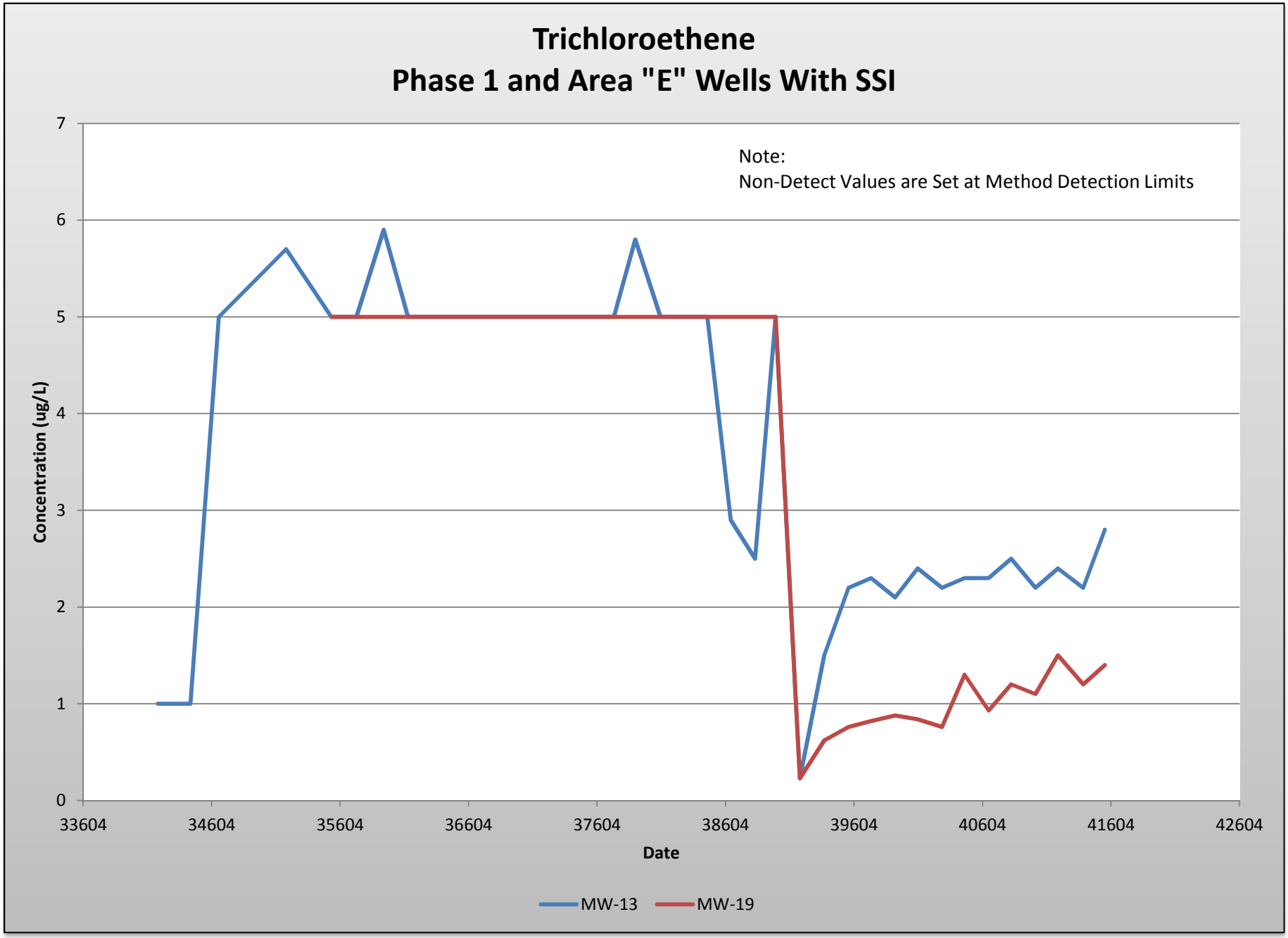

Cobalt
Phase 3 Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
30
25
20
15
10
5
0
38000
38500
39000
39500
40000
40500
41000
41500
42000
Date
MW-34

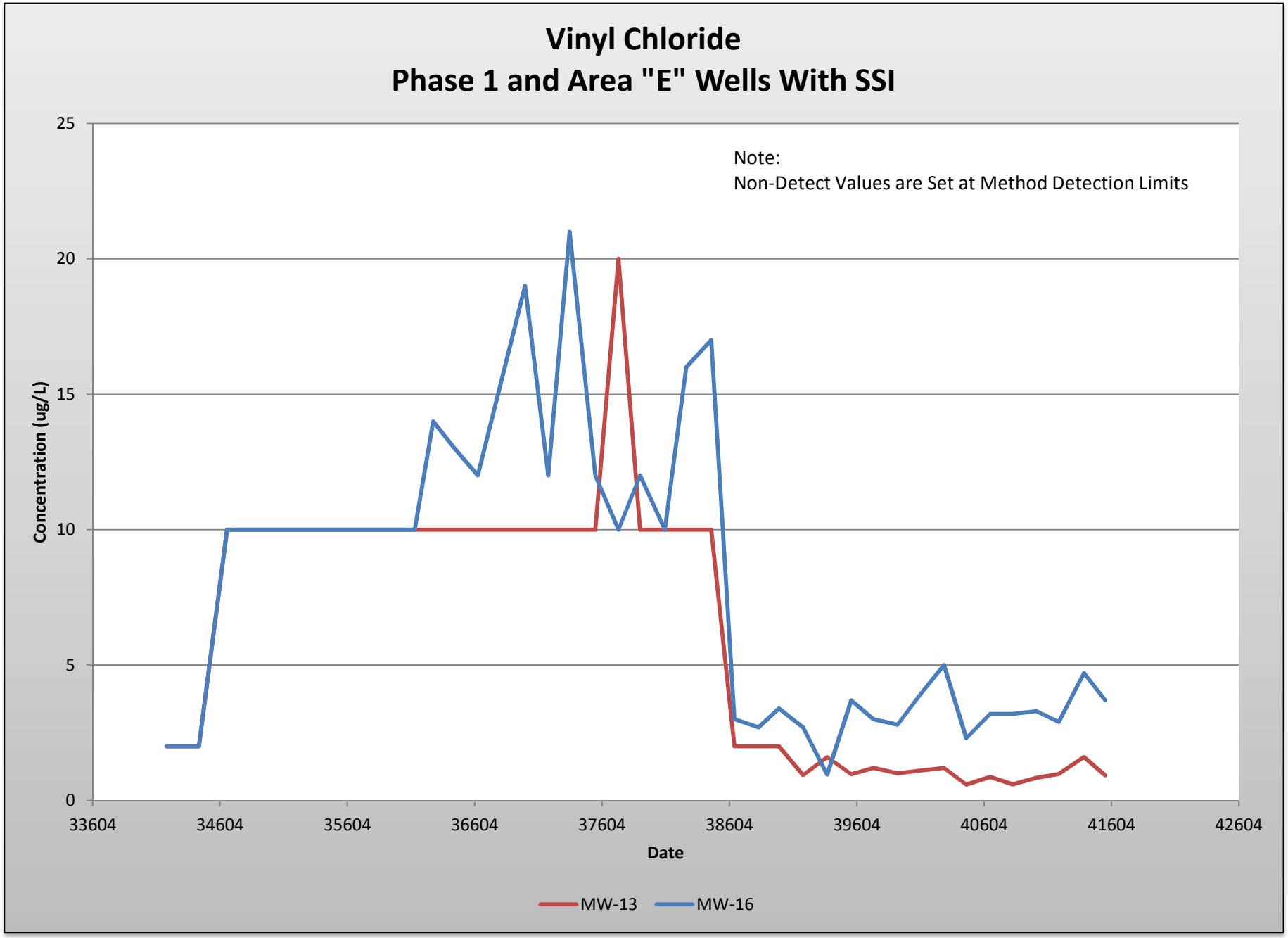

Methylene Chloride
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
60
50
40
30
20
10
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-16
MW-19
MW-20

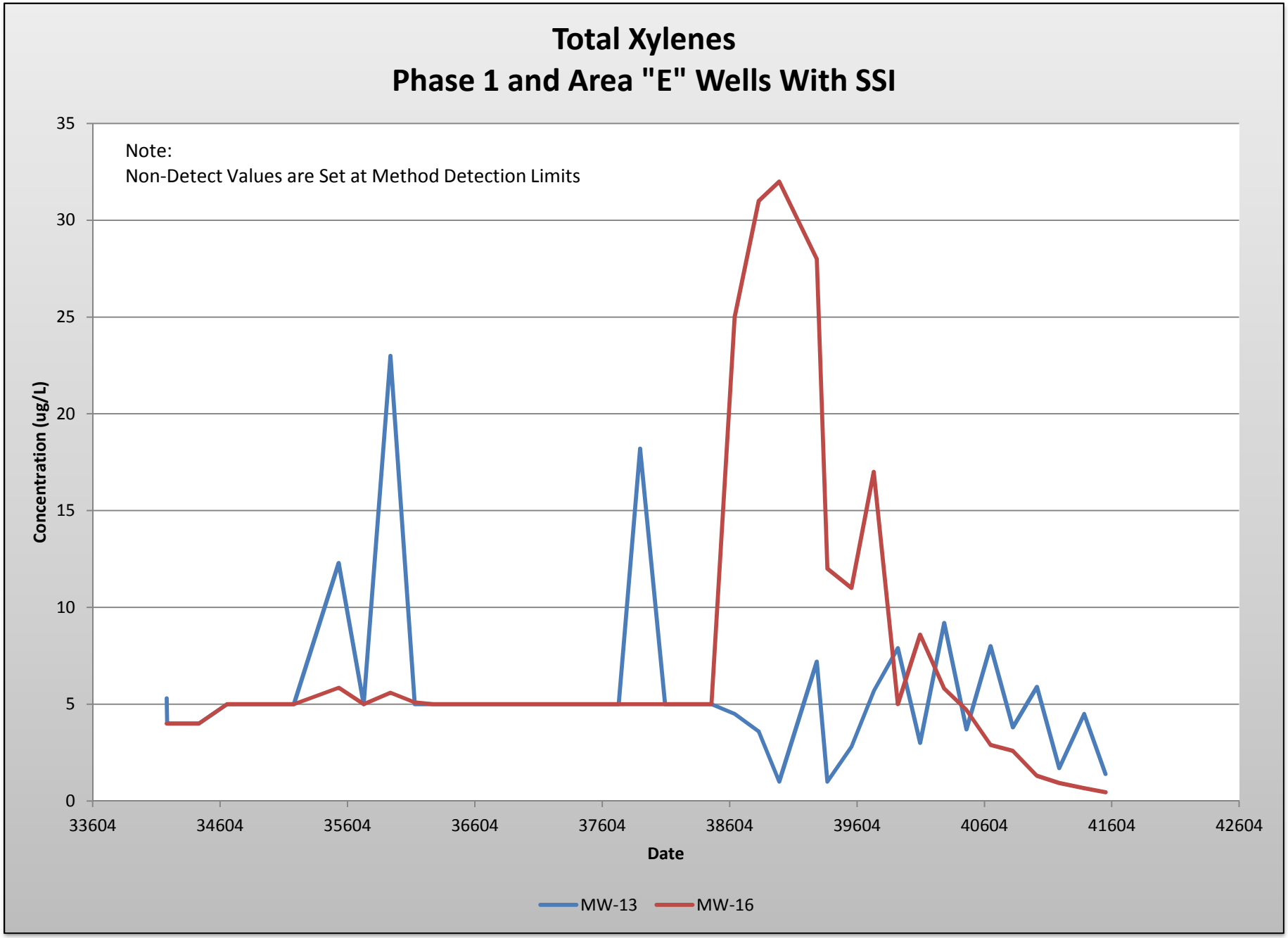

Tetrachloroethene
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
0
1
2
3
4
5
6
7
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-19

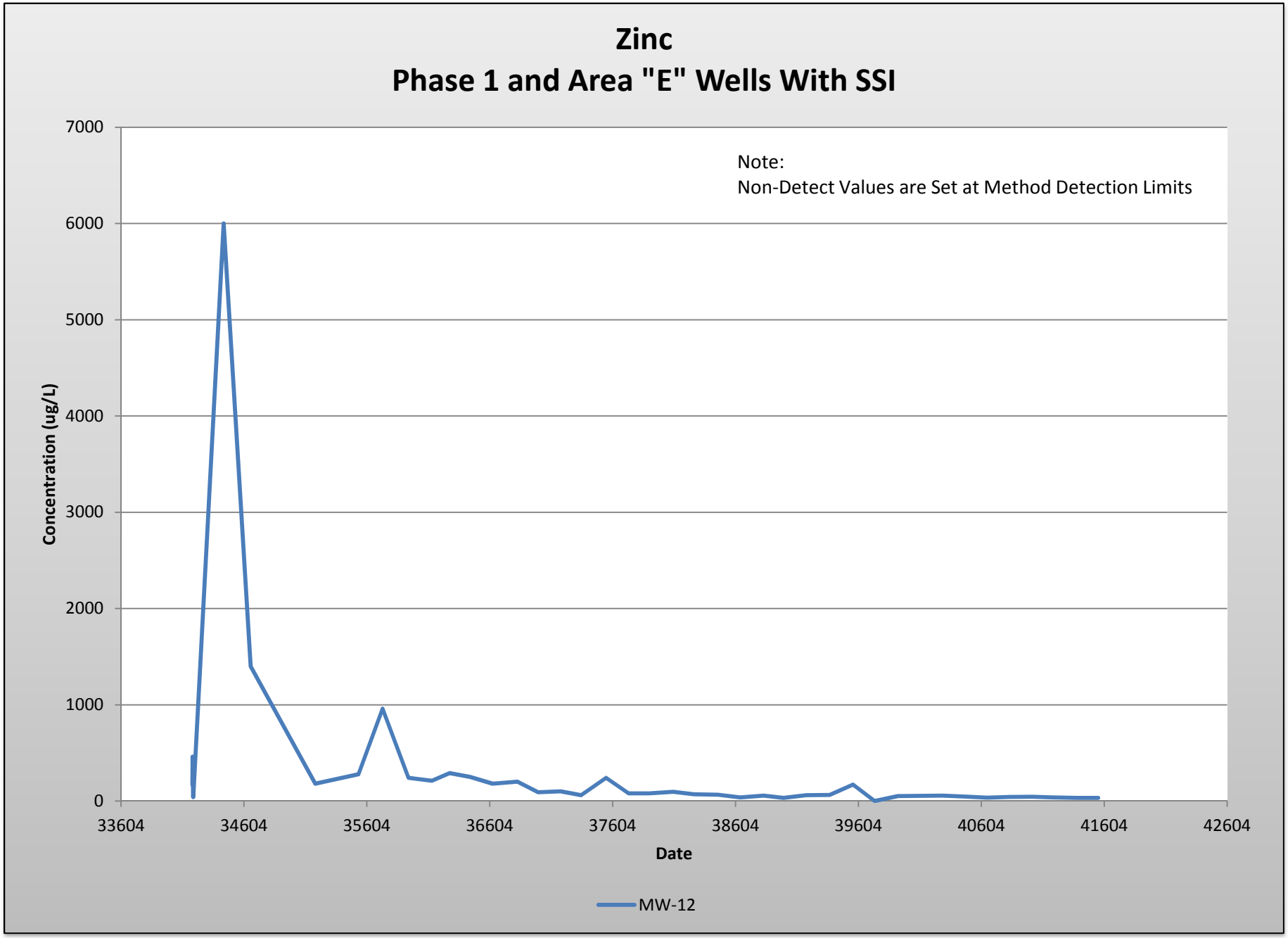

Thallium
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
30
25
20
15
10
5
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13


Thallium
Phase 3 Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
12
10
8
6
4
2
0
38000
38500
39000
39500
40000
40500
41000
41500
42000
Date
MW-34


Trichloroethene
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
0
1
2
3
4
5
6
7
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-19


Vinyl Chloride
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
25
20
15
10
5
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-16


Total Xylenes
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
35
30
25
20
15
10
5
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-13
MW-16


Zinc
Phase 1 and Area "E" Wells With SSI
Note:
Non-Detect Values are Set at Method Detection Limits
Concentration (ug/L)
7000
6000
5000
4000
3000
2000
1000
0
33604
34604
35604
36604
37604
38604
39604
40604
41604
42604
Date
MW-12