APRIL 2014
SEMI-ANNUAL MONITORING OF GROUNDWATER, SURFACE WATER, AND METHANE

OWL'S DEN LANDFILL
LINCOLN COUNTY
LINCOLNTON, NORTH CAROLINA

S&ME Project No. 1356-07-006

Prepared for:

Lincoln County
5291 Crouse Road
Crouse, North Carolina 28033

Prepared by:

S&ME

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May 21, 2014

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)
Owl's Den Landfill	Owl's Den Road, Lincolnton, NC	55-02 (closed)		April 17-18, 2014

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.	Senior Geologist	704-523-4726
Facility Representative Name (Print)	Title	(Area Code) Telephone Number

Courtney W. Murphy 05-21-14
Signature Date

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

NORTH CAROLINA LICENSED SEAL 2253 GEOLOGIST COURTNEY WITHERS MURPHY 5/21/14

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 water supply well monitoring services at the Owl's Den Landfill (the Site) located off Owl's Den Road in Lincolnton, North Carolina. This semi-annual monitoring event was conducted on April 17 and 18, 2014.

This report presents the results of the first semi-annual sampling event for the year 2014 at the facility, which included the sampling of one (1) background well (MW-1), ten (10) compliance wells (MW-2, MW-4, MW-5, MW-6, MW-6A, MW-7, MW-7A, MW-8, MW-9, and MW-10), and three (3) surface water locations (SW-1, SW-2 and SW-3).

Surface water location SW-1 represents the background surface water sample for the Site.

Please note that compliance well MW-3 has been removed from the Site's monitoring plan due to expansion of the property boundary currently monitored by compliance wells MW-8 and MW-9. Compliance monitoring well MW-3 remains on-site for water level measurement purposes.

Lincoln County personnel collect monthly landfill gas readings at seven (7) methane monitoring wells (MMW-2, MMW-4, MMW-5, MMW-6, MMW-7, MMW-8, and MMW-9). Please note that methane monitoring wells MMW-1 and MMW-3 have been removed from the Site's monitoring plan. MMW-1 was replaced with MMW-7, and MMW-3 was replaced with MMW-5 and MMW-6. This report includes the results (both current and historical) of the Site's landfill gas monitoring.

The next sampling event is scheduled for October 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 north-northwest toward the drainage features bordering the site on the west, north and east of the property. Groundwater levels for the monitoring wells obtained during the April 2014 monitoring event are presented in ***Table 1***.

The hydraulic gradient (i) in the vicinity of each well was determined by calculating the vertical difference between the groundwater elevation at each well and one or more nearby contour lines from the Groundwater Elevation Map. This value was then divided by the distance measured from the well to the selected groundwater elevation contour line. Groundwater velocity was calculated by multiplying the gradient (i) by the hydraulic conductivity (k) and dividing by the estimated effective porosity (n_e) of the aquifer. ***Table 2*** summarizes the groundwater flow velocities for the monitoring wells.

3.0 ANALYTICAL DATA

Analytical results for the landfill monitoring wells and surface water locations are summarized in ***Tables 3*** and ***4***. Well sampling logs containing field measurements of pH, conductivity, temperature, and water levels are included in ***Appendix I***. The monitoring wells and surface water locations were sampled for volatile organics by EPA Method 8260B and for RCRA metals.

3.1 Monitoring Well Sampling

3.1.1 Volatile Organic Compounds (VOCs)

No volatile organic compounds (VOCs) were detected in the background monitoring well, MW-1, or monitoring wells MW-5, MW-6, or MW-10.

Nine (9) VOCs were detected in monitoring well MW-2, none of which were detected at a level at or above their respective NCAC 2L .0202 Groundwater Quality Standard (2L Standard) and/or respective North Carolina Department of Environment and Natural Resources - Solid Waste Section - Groundwater Protection Standard (SW GWP Standard).

Twelve (12) VOCs were detected in monitoring well MW-4, three (3) of which were detected at levels at or above their respective 2L Standard and/or respective SW GWP Standard (1,2-Dichloroethane, 1,4-Dichlorobenzene, and Benzene).

Six (6) VOCs were detected in monitoring well MW-6A, two (2) of which were detected at or above their respective 2L Standard and/or respective SW GWP Standard (1,2-Dichloroethane and 1,4-Dichlorobenzene).

Nine (9) VOCs were detected in monitoring well MW-7, none of which were detected at or above their respective 2L Standard and/or respective SW GWP Standard.

Six (6) VOCs were detected in monitoring well MW-7A, none of which were detected at or above their respective 2L Standard and/or respective SW GWP Standard.

Six (6) VOCs were detected in monitoring well MW-8, none of which were detected at or above their respective 2L Standard and/or respective SW GWP Standard.

One (1) VOC was detected in monitoring well MW-9 at a concentration at/or above its respective 2L Standard and/or respective SW GWP Standard (Tetrachloroethene).

3.1.2 Metals

Barium was detected in each of the eleven monitoring wells, including the background monitoring well MW-1. Barium was detected at a concentration of 702 micrograms per liter (µg/L) in monitoring well MW-2 and 798 µg/L in monitoring well MW-4, which are above its 2L Standard of 700 µg/L.

Cadmium was detected in monitoring wells MW-2 and MW-7. Cadmium was detected above its 2L Standard of 2 µg/L in monitoring well MW-7 at a concentration of 3.97 µg/L.

Chromium was detected in monitoring well MW-10 at a concentration of 3.77 J µg/L, which is below its 2L Standard of 10 µg/L.

Lead was detected in monitoring wells MW-2 and MW-4 at concentrations of 2.78 J and 3.14 J µg/L, respectively, which are below its 2L Standard of 15 µg/L.

Mercury was detected in monitoring well MW-9 at a concentration of 4.47 µg/L, which is above its 2L Standard of 1 µg/L.

Silver was detected in monitoring wells MW-2, and MW-7 at concentrations of 3.82 J and 5.06 J µg/L, respectively, which are below its 2L Standard of 20 µg/L.

Please note that the concentrations of metals in the monitoring wells fluctuate with time and may be due to suspended solids rather than actual dissolved metals.

No other metals were detected in the monitoring wells.

3.2 Surface Water Sampling

3.2.1 Volatile Organic Compounds (VOCs)

The volatile organic compound cis-1,2-Dichloroethene was detected at surface water sampling location SW-3 at a concentration of 1.1 µg/L. The NCAC 2B Freshwater Standard for cis-1,2-Dichloroethene is 4,900 µg/L.

The volatile organic compound 1,4-Dichlorobenzene was detected at surface water sampling location SW-2 at a concentration of 0.85 J µg/L. The NCAC 2B Freshwater Standard for 1,4-Dichorobenzene is 100 µg/L.

The volatile organic compound Chlorobenzene was detected at surface water sampling location SW-2 at a concentration of 0.57 J µg/L. The NCAC 2B Freshwater Standard for Chlorobenzene is 140 µg/L.

No other volatile organic compounds were detected in the surface water samples.

3.2.2 Metals

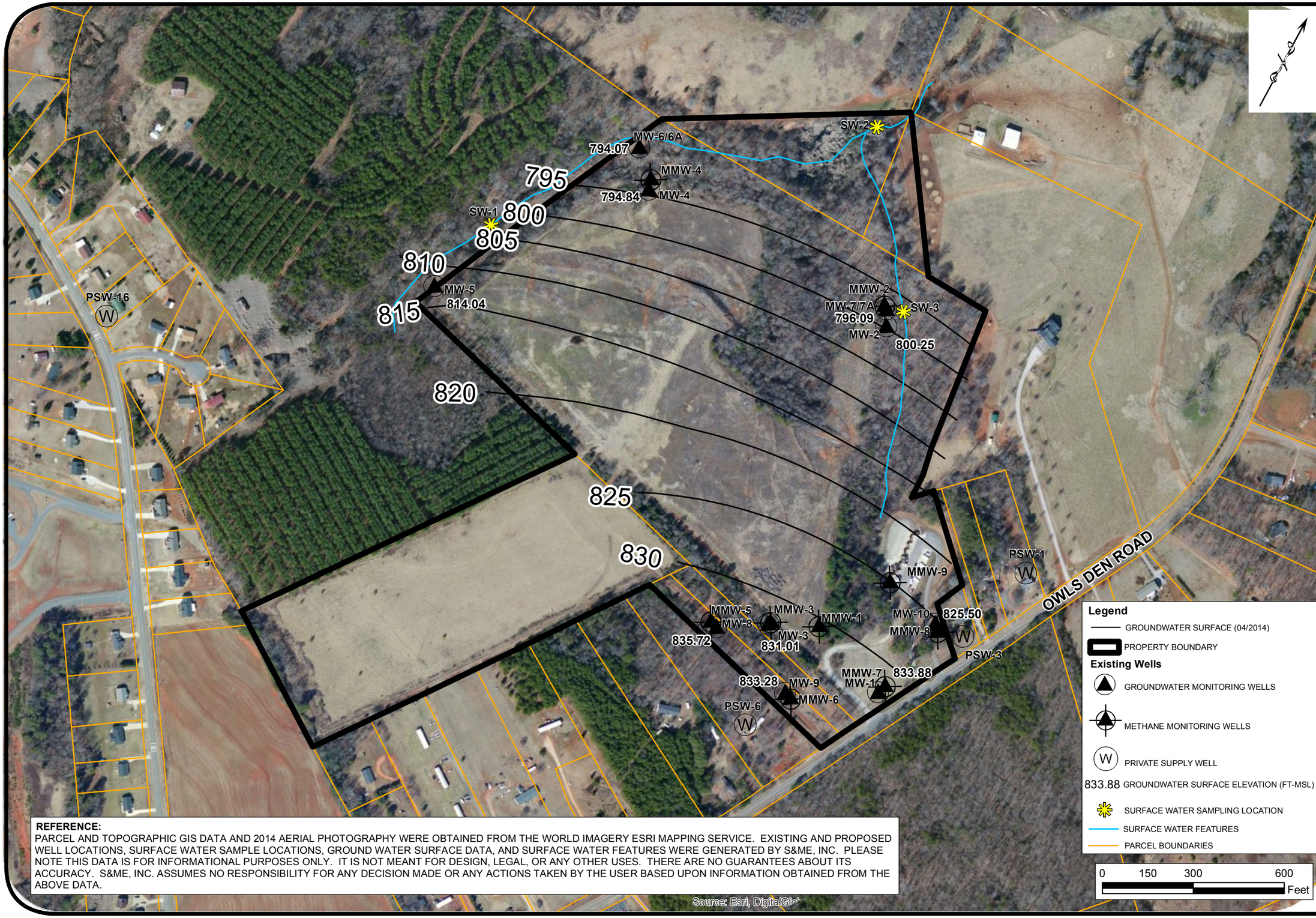
Barium was detected at surface water sampling locations SW-1, SW-2 and SW-3 at concentrations of 64.1, 245, and 211 µg/L, respectively. The NCAC 2B Freshwater Standard established for Barium is 200,000 µg/L.

No other metals were detected in the surface water samples.

4.0 METHANE READINGS

Methane readings from the seven (7) methane monitoring wells on-site (MMW-2, MMW-4, MMW-5, MMW-6, MMW-7, MMW-8, and MMW-9) are measured monthly by Lincoln County personnel using a GEM 2000 gas meter. ***Table 5*** and its corresponding charts summarize the current and historical data collected.

FIGURES



REFERENCE:
PARCEL AND TOPOGRAPHIC GIS DATA AND 2014 AERIAL PHOTOGRAPHY WERE OBTAINED FROM THE WORLD IMAGERY ESRI MAPPING SERVICE. EXISTING AND PROPOSED WELL LOCATIONS, SURFACE WATER SAMPLE LOCATIONS, GROUND WATER SURFACE DATA, AND SURFACE WATER FEATURES WERE GENERATED BY S&ME, INC. PLEASE NOTE THIS DATA IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON INFORMATION OBTAINED FROM THE ABOVE DATA.

DATE:	04/25/2013
DRAWN BY:	SJT
CHECKED BY:	CWM
SCALE:	1" = 300'
PROJECT NO:	1356-07-006

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GROUNDWATER ELEVATION MAP APRIL, 2014

OWLS DEN LANDFILL
LINCOLNTON, NORTH CAROLINA

FIGURE NO.
1

TABLES

Table 1
April 2014 - Water Level Elevations
Lincolnton, North Carolina
Lincoln County Owl's Den Landfill
S&ME Project No. 1356-07-006

Well Identification		Ground Surface Elevation (ft - MSL)	Top of Casing Elevation (ft - MSL)	Depth to Groundwater From Top of Casing (ft)	Groundwater Elevation (ft - MSL)
Background Well	MW-1	863.20	865.69	31.81	833.88
Compliance Well	MW-2	822.50	824.96	24.71	800.25
Compliance Well	MW-3	870.20	872.60	41.59	831.01
Compliance Well	MW-4	831.80	833.90	39.06	794.84
Compliance Well	MW-5	835.90	839.10	25.06	814.04
Compliance Well	MW-6	805.44	808.55	14.48	794.07
Compliance Well	MW-6A	805.17	808.61	17.58	791.03
Compliance Well	MW-7	815.47	818.44	22.35	796.09
Compliance Well	MW-7A	814.68	817.48	20.96	796.52
Compliance Well	MW-8	878.23	881.21	45.49	835.72
Compliance Well	MW-9	882.19	884.94	51.66	833.28
Compliance Well	MW-10	864.33	867.11	41.61	825.50

Notes:

(ft - MSL) - Feet Mean Sea Level
(ft) - Feet
The "A" suffix on the well locations indicates the deep well of the pair.

Table 2
April 2014 - Groundwater Flow Velocity
Lincoln County Owl's Den Landfill
S&ME Project No. 1356-07-006

Well Identification	Hydraulic Conductivity (K) ft/yr	Effective Porosity (n_e) %	Hydraulic Gradient (i) ft/ft	Seepage Velocity (v) ft/yr
MW-1	4.3E+02	0.20	0.04	86
MW-2	2.6E+03	0.28	0.04	377
MW-3	9.8E+02	0.33	0.01	30
MW-4	1.3E+03	0.30	0.04	177
MW-5	6.2E+02	0.27	0.04	92
MW-6	4.2E+02	0.29	0.01	10
MW-7	2.1E+02	0.30	0.04	28
MW-8	5.6E+02	0.28	0.03	68
MW-9	1.3E+03	0.31	0.02	86
MW-10	9.5E+02	0.31	0.02	52

Notes:

(1) Hydraulic Conductivity was calculated from slug tests performed after well construction.

(2) Effective porosity was estimated from soils collected within the saturated portion of screen interval during well construction.

(3) Hydraulic gradient calculated by measuring linear feet between selected contour intervals.

(4) Seepage velocity $v = (K*i)/n_e$

Table 3
April 2014 - Detected Analytes in Groundwater Monitoring Wells
Lincoln County Owl's Den Landfill
Lincolnton, North Carolina
S&ME Project No. 1356-07-006

EPA Volatile Organic Compounds Method 8260B (ug/L)	NCDENR SWSL	15A NCAC 2L	Soild Waste GWP ST	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-6A	MW-7	MW-7A	MW-8	MW-9	MW-10
1,1- Dichloroethane	5	6	NE		1.8	OMITTED FROM GROUNDWATER MONITORING PLAN IN 2008	1.8			1.6	0.44 J	0.57 J			
1,2-Dichlorobenzene	5	20	NE		0.73 J		3.9			1.8	0.48 J				
1,2-Dichloroethane	1	0.4	NE				**1.3**			**0.82 J**					
1,2-Dichloropropane	1	0.6	NE		0.53 J		0.45 J								
1,3-Dichlorobenzene	5	200	NE				0.89 J			0.53 J					
1,4-Dichlorobenzene	1	6	NE		5.0		**12**			**6.6**	4.8	3.2	0.60 J		
2-Chlorotoluene	NE	100	NE		1.9		0.84 J				0.83 J		2.4		
Acetone	100	6000	NE				5.0				10		15		
Benzene	1	1	NE		0.87 J		**1.8**				0.87 J	0.53 J			
Chlorobenzene	3	50	NE		5.4		12			9.8	3.9	2.7			
Chloroethane	10	3,000	NE				0.54 J								
cis-1,2-Dichloroethene	5	70	NE		2.4						0.75 J	4.0	0.54 J		
Isopropylbenzene	NE	70	NE				0.44 J								
Methylene Chloride	1	5	NE										0.72 J		
Methyl-tert-Butyl Ether	NE	20	NE		1.1						0.46 J				
Tetrachloroethene	1	0.7	NE											**1.2**	
Trichloroethene	1	3	NE									1.3			
Xylenes (total)	5	500	NE										0.65 J		
EPA RCRA Metals Method 6010B (ug/L)	**NCDENR SWSL**	**15A NCAC 2L**	**Soild Waste GWP ST**	**MW-1**	**MW-2**		**MW-4**	**MW-5**	**MW-6**	**MW-6A**	**MW-7**	**MW-7A**	**MW-8**	**MW-9**	**MW-10**
Barium	100	700	NE	101	**702**		**798**	102	60.6	498	593	404	201	299	140
Cadmium	1	2	NE		1.59						**3.97**				
Chromium	10	10	NE												3.77 J
Lead	10	15	NE		2.78 J		3.14 J								
Mercury	0.2	1	NE											**4.47**	
Silver	10	20	NE		3.82 J						5.06 J				

Notes:

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

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

(3) GWP ST = Solid Waste Groundwater Protection Standard

(4) NE = No established standard

(5) Bold and highlighted indicates above 15A NCAC 2L or GWP ST

(6) J = Analyte was detected between the method detection limit (MDL) and the method reporting limit (MRL)

(7) Target analytes not shown were reported as below detection limits

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

(9) B = Analyte was detected in associated method blank

Table 4
April 2014 - Detected Analytes in Surface Water Samples
Lincoln County Owl's Den Landfill
Lincolnton, North Carolina
S&ME Project No. 1356-07-006

EPA Volatile Organic Compounds Method 8260B (ug/L)	**15A NCAC 2B**	**SW-1**	**SW-2**	**SW-3**
1,4 - Dichlorobenzene	100		0.85 J	
Chlorobenzene	140		0.57 J	
cis-1,2-Dichloroethene	4,900			1.1
EPA RCRA Metals Method 6010B (ug/L)				
Barium	200,000	64.1	245	211

Notes:

(1) ug/L = micrograms per liter (parts per billion)
(2) 15A NCAC 2B = North Carolina Surface Water Quality Standards for Freshwater
(3) NE = No established standard
(4) Bold indicates above 15A NCAC 2B
(5) J = Analyte was detected between the method detection limit (MDL) and the method reporting limit (MRL)
(6) Target analytes not shown were reported as below detection limits

Table 5 - Methane Gas Measurements

Data Tracking
Owl's Den Landfill (Permit #55-02)

Percent Methane Gas by Date

Date	Well Identification								
	MMW-1	MMW-2	MMW-3	MMW-4	MMW-5	MMW-6	MMW-7	MMW-8	MMW-9
Apr-03	0	35	0	62	N/A	N/A	N/A	N/A	N/A
Oct-03	63	38	31	56	N/A	N/A	N/A	N/A	N/A
Apr-04	0	10	0	0	N/A	N/A	N/A	N/A	N/A
Oct-04	0	8	10	38	N/A	N/A	N/A	N/A	N/A
Apr-05	5	30	44	68	N/A	N/A	N/A	N/A	N/A
Oct-05	36	30	18	58	N/A	N/A	N/A	N/A	N/A
Apr-06	30	36	0	0	N/A	N/A	N/A	N/A	N/A
Oct-06	38	38	0	58	N/A	N/A	N/A	N/A	N/A
Apr-07	100	100	20	100	N/A	N/A	N/A	N/A	N/A
Oct-07	6	12	20	55	N/A	N/A	N/A	N/A	N/A
Apr-08	0.8	20	0	0	N/A	N/A	N/A	N/A	N/A
Jul-08	14.4	42	73	0.2	10.6	0	0	0	0
Oct-08	0	15.4	36	12.6	6.2	3.1	0	0	0
Apr-09	8.5	20.6	46	0	6.6	0.2	0	0	0
Oct-09	16.5	17.7	59.3	61.3	4.2	0	0	0	0
Apr-10	N/A	27	N/A	0.2	8.5	0	0	0	0
Jun-10	N/A	27.6	N/A	68.4	9.9	1.5	0	0	0
Jul-10	N/A	19.6	N/A	66.9	9.4	1.7	0	0	0
Aug-10	N/A	13.8	N/A	48.4	6	0	0	0	0
Sep-10	N/A	13	N/A	0	5.3	0	0	0	0
Oct-10	N/A	10.7	N/A	58.5	4.3	0	0	0	0
Nov-10	N/A	10	N/A	6.8	4.1	0	0	0	0
Dec-10	N/A	4.6	N/A	0.1	3.7	0	0	0	0
Jan-11	N/A	12.6	N/A	41.2	3.4	0.2	0	0	0
Feb-11	N/A	13.9	N/A	36.7	4.4	0.2	0	0	0
Mar-11	N/A	15.3	N/A	11.1	4.8	0	0	0	0
Apr-11	N/A	13.1	N/A	0.2	6.2	0	0	0	0
May-11	N/A	15.2	N/A	9.6	3.4	0	0	0	0
Jun-11	N/A	15.1	N/A	48.7	6.3	0	0	0	0
Jul-11	N/A	17.2	N/A	42	9	0	0	0	0
Aug-11	N/A	18.2	N/A	0	5.2	0	0	0	0
Sep-11	N/A	15.5	N/A	66.5	3.7	0	0	0	0
Oct-11	N/A	10.7	N/A	6.4	3.6	0	0	0	0
Nov-11	N/A	4.3	N/A	59.3	3.4	0	0	0	0
Dec-11	N/A	17.9	N/A	60.2	3.8	0.1	0	0	0
Jan-12	N/A	21.4	N/A	36.2	5.4	0	0	0	0
Feb-12	N/A	22.6	N/A	0	5.9	0	0	0	0
Mar-12	N/A	21.6	N/A	36.3	5.9	0	0	0	0
Apr-12	N/A	24.9	N/A	19.7	6.1	0	0	0	0
May-12	N/A	26.2	N/A	70.5	5.2	0.2	0	0	0
Jun-12	N/A	23.4	N/A	70.9	4.5	0	0	0	0
Jul-12	N/A	20.9	N/A	0	3.9	0	0	0	0
Aug-12	N/A	14.2	N/A	8.3	2.4	0	0	0	0
Sep-12	N/A	13.2	N/A	0.4	1.3	0	0	0	0
Oct-12	N/A	15.5	N/A	61.7	1.3	0	0	0	0
Nov-12	N/A	10.8	N/A	1.2	0.7	0	0	0	0
Dec-12	N/A	9.8	N/A	0	0.3	0	0	0	0.8
Jan-13	N/A	18.1	N/A	14.8	0.4	0	0	0	0
Feb-13	N/A	22.9	N/A	29.4	0.7	0	0	0	0
Mar-13	N/A	24.2	N/A	68.5	1	0	0	0	0
Apr-13	N/A	26.1	N/A	70.8	1.5	0	0	0	0
May-13	N/A	27.3	N/A	39.3	1.5	0	0	0	0
Jun-13	N/A	28.6	N/A	46.1	1.6	0	0	0	0
Jul-13	N/A	34.4	N/A	55.9	1.8	0	0	0	0
Aug-13	N/A	33.4	N/A	72.0	2.2	0	0	0	0
Sep-13	N/A	26.9	N/A	40.4	2.3	0	0	0	0
Oct-13	N/A	19.2	N/A	62.6	1.7	0	0	0	0
Nov-13	N/A	13	N/A	44.6	0.5	0	0	0	0
Dec-13	N/A	18.9	N/A	16.6	0.8	0	0	0	0
Jan-14	N/A	24.5	N/A	67.4	1.7	0	0	0	0
Feb-14	N/A	23.4	N/A	35.8	1.5	0	0	0	0
Mar-14	N/A	27.6	N/A	63.1	2.1	0	0	0	0
Apr-14	N/A	28.2	N/A	0	2.8	0	0	0	0

Notes:
(1) Recorded measurements are in percent methane.
(2) Methane monitoring wells 5 through 9 were installed during the 2008 assessment activities.
(3) Methane monitoring wells 1 and 3 were removed from the monitoring plan following the 2008 assessment activities due to their close proximity to the edge of waste.
(4) Highlighted data are above 100 percent of the lower explosive limit.
(5) Lower explosive limit for methane is 5 percent.
(6) Upper explosive limit for methane is 15 percent.
(7) N/A = Not Available

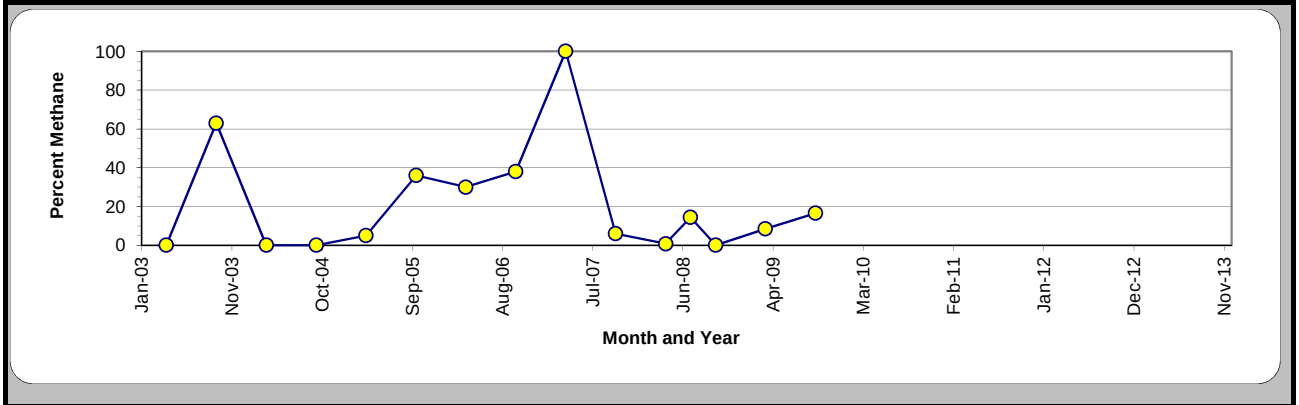
Charts - Methane Gas Measurements

Data Tracking

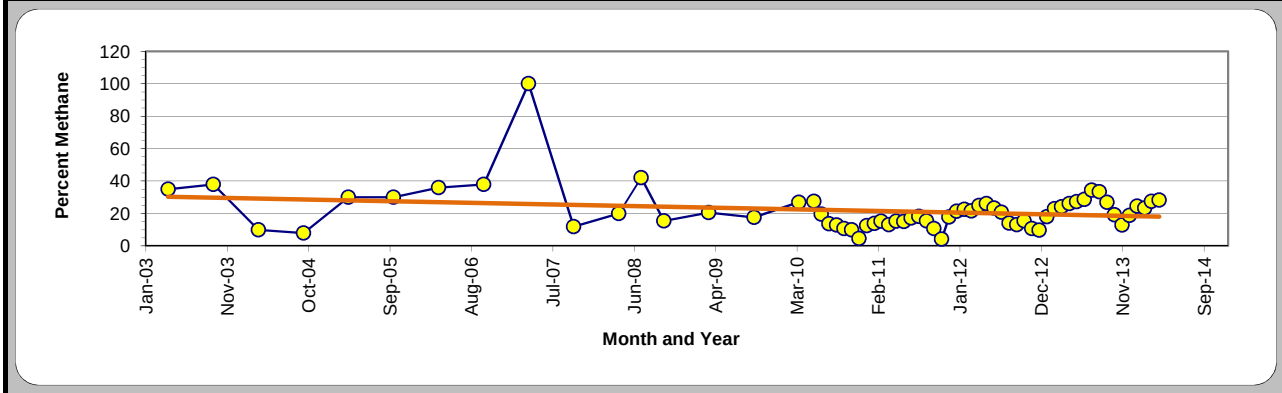
Owl's Den Landfill (Permit #55-02)

Percent Methane Gas by Date

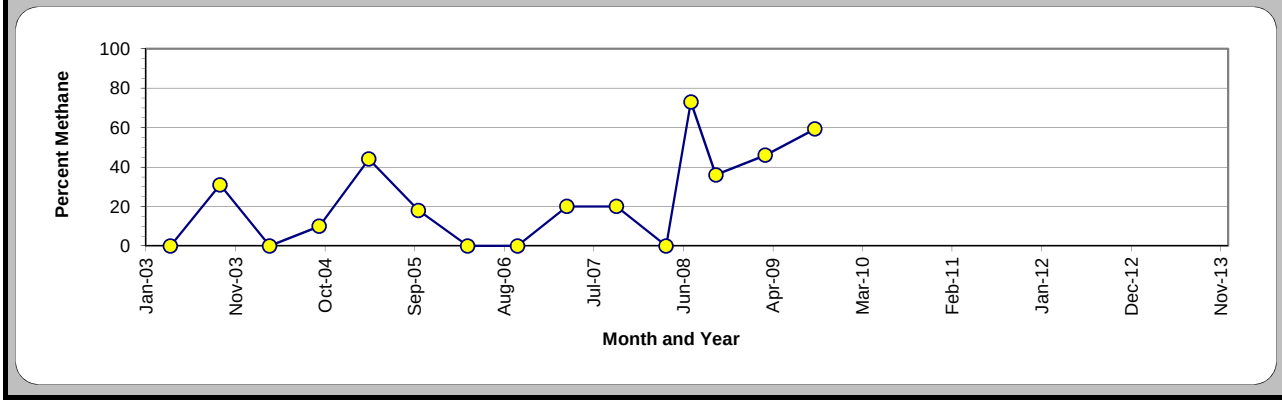
MMW-1



MMW-2



MMW-3

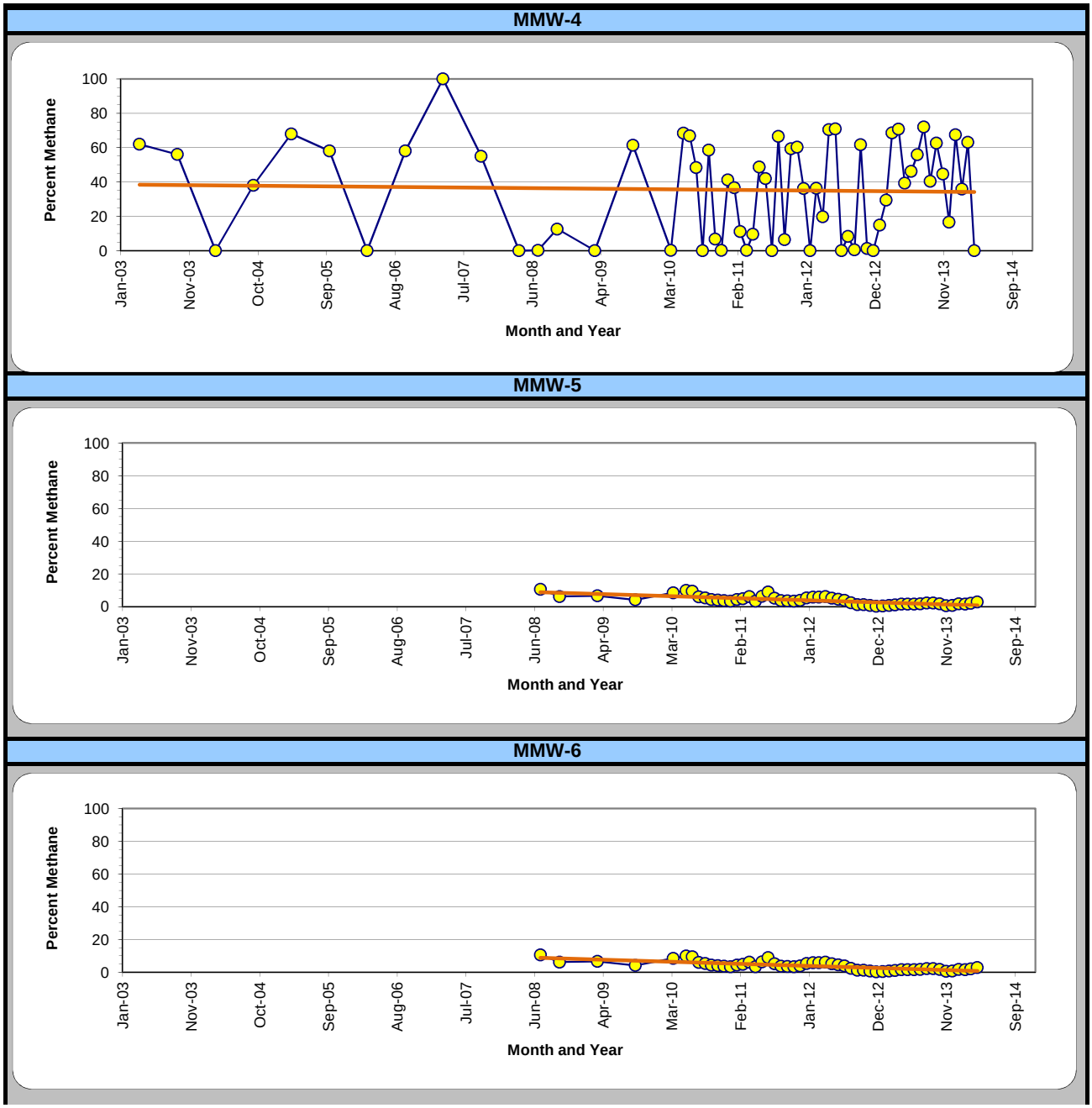


Charts - Methane Gas Measurements

Data Tracking

Owl's Den Landfill (Permit #55-02)

Percent Methane Gas by Date



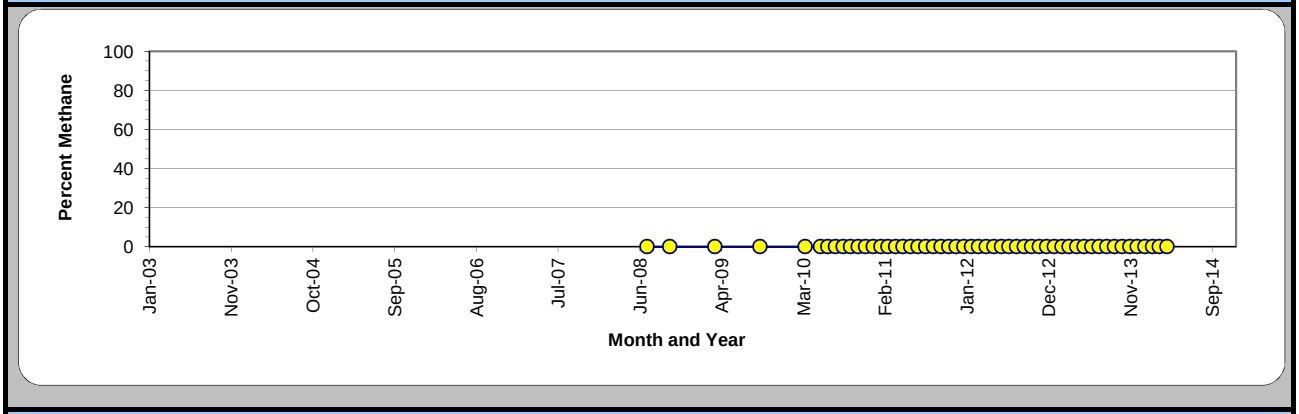
Charts - Methane Gas Measurements

Data Tracking

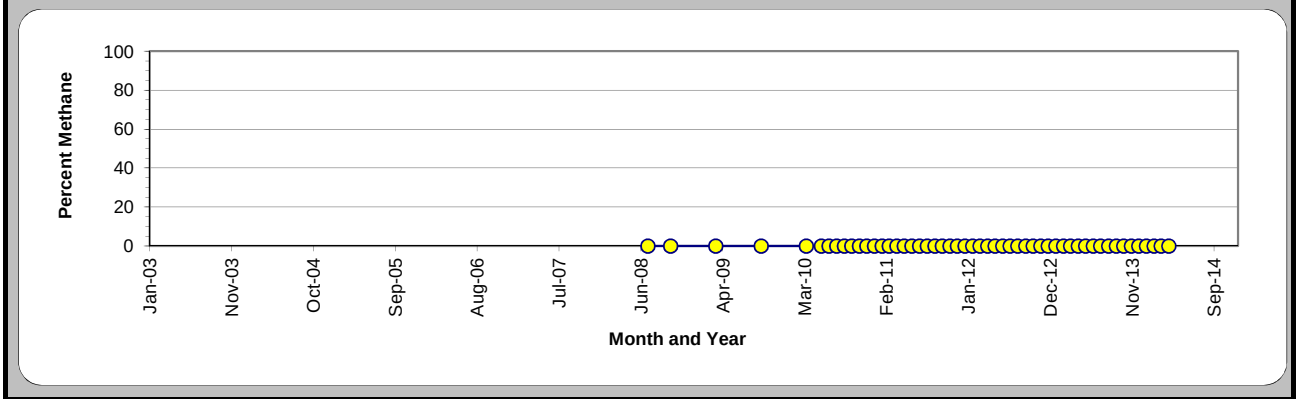
Owl's Den Landfill (Permit #55-02)

Percent Methane Gas by Date

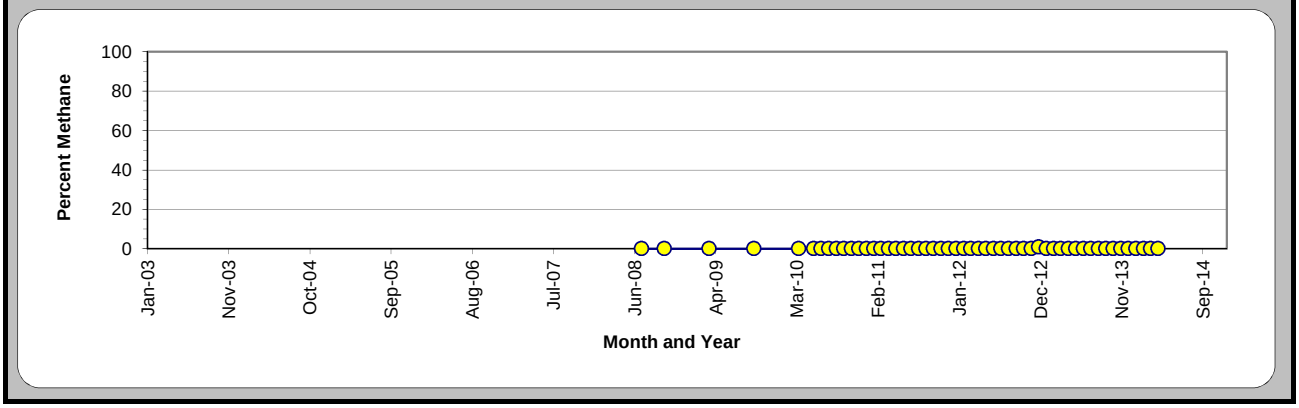
MMW-7



MMW-8



MMW-9



APPENDIX I

FIELD SAMPLING LOGS AND LABORATORY REPORTS

Surface Water Samples and Methane Readings
Owl's Den Landfill
S&ME Project 1356-07-006

Location	Date	Time Sampled	Sample Observations
SW-1	4/18/2014	10:15	Clear with floating solids
SW-2	4/18/2014	13:30	Clear - streambed stained orange
SW-3	4/18/2014	13:40	Clear

OCTOBER ONLY

Location	Date	Time Sampled	Comments
PSW-1			
PSW-3			
PSW-4			**ABANDONED**
PSW-5			**ABANDONED**
PSW-6			
PSW-16			

Location	% LEL	% Gas	Date and Time of Reading
MMW-1			**OMITTED FROM MONITORING PLAN**
MMW-2	584	29.2	4/18/14 13:30
MMW-3			**OMITTED FROM MONITORING PLAN**
MMW-4	904	45.2	4/18/14 10:55
MMW-5	48	2.3	4/18/14 9:50
MMW-6	28	1.4	4/18/14 9:55
MMW-7	0	0.0	4/18/14 9:20
MMW-8	0	0.0	4/18/14 9:30
MMW-9	0	0.0	4/18/14 9:25

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-1

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	2.6
Depth to Water (ft)	31.81		
Depth to Base of Well (ft)	47.50	(well casing volume = water column*0.164)	
Water Column (ft)	15.69		
Equipment Used to Measure Depths	Electronic Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	10:23	5.36	14.6	50
	2.6	10:26	5.30	16.1	30
	5.2	10:29	5.27	16.6	28
Final	7.8	10:31	5.27	16.4	28

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	9:15
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments

Lab ENCO

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-2

Sampling Personnel (1) Jasmine Tayouga (2) Courtney Murphy
Weather Conditions Approx 55°F, sunny
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC
Depth to Water (ft) 24.71
Depth to Base of Well (ft) 40.50
Water Column (ft) 15.79
Well Casing Volume
(well casing volume = water column*0.164)
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date 4/17/2014 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	15:05	5.87	18.6	621
	2.6	15:07	5.82	18.0	639
	5.2	15:09	5.79	17.8	590
Final	7.8	15:11	5.81	17.8	568

Well Sampling Data

Sampling Date 4/18/2014
Sampling Time 13:15
Sampling Equipment Disposable Teflon Bailer
Sample Observations Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments
Lab ENCO

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-3

Sampling Personnel (1) Jasmine Tayouga (2) Courtney Murphy
Weather Conditions
Unusual Site Conditions

Water Level Data

Measuring Point Location TOC Well Casing Volume
Depth to Water (ft) 41.59
Depth to Base of Well (ft) 50.4 (well casing volume = water column*0.164)
Water Column (ft) 8.8
Equipment Used to Measure Depths Electric Water Level Probe

Well Purging Data

Date Purging Equipment

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

Well Sampling Data

Sampling Date
Sampling Time
Sampling Equipment
Sample Observations

Analytical Data

Method	Container Type and No.	Preservation

Comments
Lab

NO SAMPLE - WATER LEVEL MEASUREMENT ONLY

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-4

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	3.0
Depth to Water (ft)	39.06		
Depth to Base of Well (ft)	57.10	(well casing volume = water column*0.164)	
Water Column (ft)	18.04		
Equipment Used to Measure Depths	Electric Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Field Cleaned Whale Pump

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	13:53	6.26	19.4	1322
	3.0	13:55	6.32	18.6	1376
	6.0	13:59	6.24	18.4	1389
Final	9.0	14:02	6.24	18.2	1349

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	10:45
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments Slight odor; hinge cover doesn't line up properly
Lab ENCO

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-5

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.3
Depth to Water (ft)	25.06		
Depth to Base of Well (ft)	33.20	(well casing volume = water column*0.164)	
Water Column (ft)	8.14		
Equipment Used to Measure Depths	Electric Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	13:30	5.48	15.5	84
	1.3	13:31	5.50	15.1	75
	2.6	13:35	5.51	15.1	73
Final	3.9	13:37	5.50	14.9	71

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	10:10
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments

Lab ENCO

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-6

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.6
Depth to Water (ft)	14.48		
Depth to Base of Well (ft)	24.11	(well casing volume = water column*0.164)	
Water Column (ft)	9.63		
Equipment Used to Measure Depths	Electric Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	14:22	5.25	14.4	50
	1.6	14:24	5.17	13.4	49
	3.2	14:27	5.60	13.6	53
Final	4.8	14:29	5.38	13.7	46

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	11:20
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments

Lab ENCO

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-6A

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	6.7
Depth to Water (ft)	17.58		
Depth to Base of Well (ft)	58.44	(well casing volume = water column*0.164)	
Water Column (ft)	40.86		
Equipment Used to Measure Depths	Electric Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Field Cleaned Whale Pump

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	14:20	7.92	17.1	510
	6.7	14:22	6.78	15.7	606
	13.4	14:24	6.60	15.9	844
Final	20.1	14:26	6.59	16.2	914

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	11:15
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments

Lab ENCO

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-7

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	0.9
Depth to Water (ft)	22.35		
Depth to Base of Well (ft)	27.97	(well casing volume = water column*0.164)	
Water Column (ft)	5.62		
Equipment Used to Measure Depths	Electric Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	15:20	6.04	17.8	605
	0.9	15:22	6.03	17.2	579
	1.8	15:24	6.04	17.4	587
Final	2.7	15:26	6.03	17.2	588

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	13:20
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments Broken hinge
Lab ENCO

Project Name: Owl's Den Landfill
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-7A

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	5.5
Depth to Water (ft)	20.96		
Depth to Base of Well (ft)	54.30	(well casing volume = water column*0.164)	
Water Column (ft)	33.34		
Equipment Used to Measure Depths	Electric Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Field Cleaned Whale Pump

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	15:18	6.07	17.7	389
	5.5	15:21	6.24	17.3	387
	11.0	15:24	6.21	17.5	393
Final	Dry at 11.5 gal				

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	13:25
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments Hornets on cap
Lab ENCO

Project Name: Owl's Den Landfill Assessment
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-8

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.9
Depth to Water (ft)	45.49		
Depth to Base of Well (ft)	56.80	(well casing volume = water column*0.164)	
Water Column (ft)	11.31		
Equipment Used to Measure Depths	Electronic Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	11:03	5.65	14.6	79
	1.9	11:07	5.83	14.6	105
	3.8	11:10	5.85	14.5	55
Final	5.7	11:13	5.81	14.5	105

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	9:45
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments Slight odor/white organisms or material in sample
Lab ENCO

Project Name: Owl's Den Landfill Assessment
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-9

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	2.1
Depth to Water (ft)	51.66		
Depth to Base of Well (ft)	64.28	(well casing volume = water column*0.164)	
Water Column (ft)	12.62		
Equipment Used to Measure Depths	Electronic Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	11:21	6.31	15.8	208
	2.1	11:24	5.95	15.9	141
	4.2	11:29	6.00	16.1	141
Final	6.3	11:31	6.07	16.3	147

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	9:55
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Clear

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments

Lab ENCO

Project Name: Owl's Den Landfill Assessment
Project Location: Lincoln County, North Carolina
Project Number: 1356-07-006

Well ID MW-10

Sampling Personnel	(1) Jasmine Tayouga	(2) Courtney Murphy
Weather Conditions	Approx 55°F, sunny	
Unusual Site Conditions		

Water Level Data

Measuring Point Location	TOC	Well Casing Volume	1.5
Depth to Water (ft)	41.61		
Depth to Base of Well (ft)	50.96	(well casing volume = water column*0.164)	
Water Column (ft)	9.35		
Equipment Used to Measure Depths	Electronic Water Level Probe		

Well Purging Data

Date 4/17/2014 Purging Equipment Disposable Teflon Bailer

	Total Voume (Gal)	Time	pH	Temp (ºC)	Conductance (µS)
Initial	0	10:43	5.80	15.7	34
	1.5	10:45	5.83	15.9	35
	3.0	10:48	5.86	16.0	34
Final	4.5	10:53	5.87	15.8	34

Well Sampling Data

Sampling Date	4/18/2014
Sampling Time	9:30
Sampling Equipment	Disposable Teflon Bailer
Sample Observations	Slightly turbid

Analytical Data

Method	Container Type and No.	Preservation
Method 8260	(3) 40 ml glass vials	HCL
RCRA Metals	(1) 250 ml plastic bottles	HNO3

Comments

Lab ENCO

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515

Monday, May 5, 2014
S&ME, Inc. (SM002)
Attn: Courtney Murphy
9751 Southern Pine Blvd.
Charlotte, NC 28273

RE: Laboratory Results for
Project Number: 1356-07-006, Project Name/Desc: Owl's Den LF - Groundwater
ENCO Workorder(s): C404462

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Saturday, April 19, 2014.

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

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

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

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

Sincerely,

Chuck Smith

Project Manager

Enclosure(s)

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 5502-MW1 **Lab ID: C404462-01** **Sampled: 04/18/14 09:15** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:20
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:19
EPA 8260B	05/02/14	04/29/14 13:46	04/30/14 06:50

Client ID: 5502-MW2 **Lab ID: C404462-02** **Sampled: 04/18/14 13:15** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:22
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:21
EPA 8260B	05/02/14	04/29/14 13:46	04/30/14 07:20

Client ID: 5502-MW4 **Lab ID: C404462-03** **Sampled: 04/18/14 10:45** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:25
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:23
EPA 8260B	05/02/14	04/29/14 13:46	04/30/14 07:50

Client ID: 5502-MW5 **Lab ID: C404462-04** **Sampled: 04/18/14 10:10** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:28
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:25
EPA 8260B	05/02/14	04/29/14 13:46	04/30/14 08:20

Client ID: 5502-MW6 **Lab ID: C404462-05** **Sampled: 04/18/14 11:20** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:31
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:27
EPA 8260B	05/02/14	04/29/14 13:46	04/30/14 08:50

Client ID: 5502-MW6A **Lab ID: C404462-06** **Sampled: 04/18/14 11:15** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:33
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:29
EPA 8260B	05/02/14	04/29/14 13:46	04/30/14 09:20

Client ID: 5502-MW7 **Lab ID: C404462-07** **Sampled: 04/18/14 13:20** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:36
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:31
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 01:58

Client ID: 5502-MW7A **Lab ID: C404462-08** **Sampled: 04/18/14 13:25** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:39
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:33
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 02:27

Client ID: 5502-MW8 **Lab ID: C404462-09** **Sampled: 04/18/14 09:45** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:42
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:35
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 02:57

Client ID: 5502-MW9 **Lab ID: C404462-10** **Sampled: 04/18/14 09:55** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:45
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:37
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 03:27

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 5502-MW10 **Lab ID: C404462-11** **Sampled: 04/18/14 09:30** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:55
EPA 7470A	05/16/14	05/01/14 10:30	05/02/14 14:44
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 03:57

Client ID: 5502-TripBlank **Lab ID: C404462-12** **Sampled: 04/18/14 09:15** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 04:27

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SAMPLE DETECTION SUMMARY

Client ID: 5502-MW1 **Lab ID: C404462-01**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	101		1.00	10.0	ug/L	EPA 6010C	

Client ID: 5502-MW2 **Lab ID: C404462-02**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
1,1-Dichloroethane	1.8		0.13	1.0	ug/L	EPA 8260B	
1,2-Dichlorobenzene	0.73	J	0.19	1.0	ug/L	EPA 8260B	
1,2-Dichloropropane	0.53	J	0.10	1.0	ug/L	EPA 8260B	
1,4-Dichlorobenzene	5.0		0.19	1.0	ug/L	EPA 8260B	
2-Chlorotoluene	1.9		0.081	1.0	ug/L	EPA 8260B	
Barium - Total	702		1.00	10.0	ug/L	EPA 6010C	
Benzene	0.87	J	0.15	1.0	ug/L	EPA 8260B	
Cadmium - Total	1.59		0.360	1.00	ug/L	EPA 6010C	
Chlorobenzene	5.4		0.17	1.0	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	2.4		0.15	1.0	ug/L	EPA 8260B	
Lead - Total	2.78	J	2.10	10.0	ug/L	EPA 6010C	
Methyl-tert-Butyl Ether	1.1		0.16	1.0	ug/L	EPA 8260B	
Silver - Total	3.82	J	1.90	10.0	ug/L	EPA 6010C	

Client ID: 5502-MW4 **Lab ID: C404462-03**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
1,1-Dichloroethane	1.8		0.13	1.0	ug/L	EPA 8260B	
1,2-Dichlorobenzene	3.9		0.19	1.0	ug/L	EPA 8260B	
1,2-Dichloroethane	1.3		0.21	1.0	ug/L	EPA 8260B	
1,2-Dichloropropane	0.45	J	0.10	1.0	ug/L	EPA 8260B	
1,3-Dichlorobenzene	0.89	J	0.15	1.0	ug/L	EPA 8260B	
1,4-Dichlorobenzene	12		0.19	1.0	ug/L	EPA 8260B	
2-Chlorotoluene	0.84	J	0.081	1.0	ug/L	EPA 8260B	
Acetone	5.0		1.2	5.0	ug/L	EPA 8260B	
Barium - Total	798		1.00	10.0	ug/L	EPA 6010C	
Benzene	1.8		0.15	1.0	ug/L	EPA 8260B	
Chlorobenzene	12		0.17	1.0	ug/L	EPA 8260B	
Chloroethane	0.54	J	0.23	1.0	ug/L	EPA 8260B	
Isopropylbenzene	0.44	J	0.14	1.0	ug/L	EPA 8260B	
Lead - Total	3.14	J	2.10	10.0	ug/L	EPA 6010C	

Client ID: 5502-MW5 **Lab ID: C404462-04**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	102		1.00	10.0	ug/L	EPA 6010C	

Client ID: 5502-MW6 **Lab ID: C404462-05**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	60.6		1.00	10.0	ug/L	EPA 6010C	

Client ID: 5502-MW6A **Lab ID: C404462-06**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
1,1-Dichloroethane	1.6		0.13	1.0	ug/L	EPA 8260B	
1,2-Dichlorobenzene	1.8		0.19	1.0	ug/L	EPA 8260B	
1,2-Dichloroethane	0.82	J	0.21	1.0	ug/L	EPA 8260B	
1,3-Dichlorobenzene	0.53	J	0.15	1.0	ug/L	EPA 8260B	
1,4-Dichlorobenzene	6.6		0.19	1.0	ug/L	EPA 8260B	
Barium - Total	498		1.00	10.0	ug/L	EPA 6010C	
Chlorobenzene	9.8		0.17	1.0	ug/L	EPA 8260B	

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SAMPLE DETECTION SUMMARY

Client ID: 5502-MW7 **Lab ID: C404462-07**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
1,1-Dichloroethane	0.44	J	0.13	1.0	ug/L	EPA 8260B	
1,2-Dichlorobenzene	0.48	J	0.19	1.0	ug/L	EPA 8260B	
1,4-Dichlorobenzene	4.8		0.19	1.0	ug/L	EPA 8260B	
2-Chlorotoluene	0.83	J	0.081	1.0	ug/L	EPA 8260B	
Acetone	10		1.2	5.0	ug/L	EPA 8260B	
Barium - Total	593		1.00	10.0	ug/L	EPA 6010C	
Benzene	0.87	J	0.15	1.0	ug/L	EPA 8260B	
Cadmium - Total	3.97		0.360	1.00	ug/L	EPA 6010C	
Chlorobenzene	3.9		0.17	1.0	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	0.75	J	0.15	1.0	ug/L	EPA 8260B	
Methyl-tert-Butyl Ether	0.46	J	0.16	1.0	ug/L	EPA 8260B	
Silver - Total	5.06	J	1.90	10.0	ug/L	EPA 6010C	

Client ID: 5502-MW7A **Lab ID: C404462-08**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
1,1-Dichloroethane	0.57	J	0.13	1.0	ug/L	EPA 8260B	
1,4-Dichlorobenzene	3.2		0.19	1.0	ug/L	EPA 8260B	
Barium - Total	404		1.00	10.0	ug/L	EPA 6010C	
Benzene	0.53	J	0.15	1.0	ug/L	EPA 8260B	
Chlorobenzene	2.7		0.17	1.0	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	4.0		0.15	1.0	ug/L	EPA 8260B	
Trichloroethene	1.3		0.15	1.0	ug/L	EPA 8260B	

Client ID: 5502-MW8 **Lab ID: C404462-09**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
1,4-Dichlorobenzene	0.60	J	0.19	1.0	ug/L	EPA 8260B	
2-Chlorotoluene	2.4		0.081	1.0	ug/L	EPA 8260B	
Acetone	15		1.2	5.0	ug/L	EPA 8260B	
Barium - Total	201		1.00	10.0	ug/L	EPA 6010C	
cis-1,2-Dichloroethene	0.54	J	0.15	1.0	ug/L	EPA 8260B	
Methylene chloride	0.72	J	0.23	1.0	ug/L	EPA 8260B	
Xylenes (Total)	0.65	J	0.45	3.0	ug/L	EPA 8260B	

Client ID: 5502-MW9 **Lab ID: C404462-10**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	299		1.00	10.0	ug/L	EPA 6010C	
Mercury - Total	4.47		0.170	0.200	ug/L	EPA 7470A	
Tetrachloroethene	1.2		0.17	1.0	ug/L	EPA 8260B	

Client ID: 5502-MW10 **Lab ID: C404462-11**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	140		1.00	10.0	ug/L	EPA 6010C	
Chromium - Total	3.77	J	1.40	10.0	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 5502-MW1 | **Lab Sample ID:** C404462-01 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 09:15 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW1 | **Lab Sample ID:** C404462-01 | **Received:** 04/19/14 09:15
Matrix: Ground Water | **Sampled:** 04/18/14 09:15 | **Work Order:** C404462
Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D29028	EPA 8260B	04/30/14 06:50	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*51-122*	*4D29028*	*EPA 8260B*	*04/30/14 06:50*	*MSZ*	
Dibromofluoromethane	*58*	*1*	*50.0*	*115 %*	*68-117*	*4D29028*	*EPA 8260B*	*04/30/14 06:50*	*MSZ*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*67-127*	*4D29028*	*EPA 8260B*	*04/30/14 06:50*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:19	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:20	JDH	
Barium [7440-39-3]^	**101**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:20	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:20	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:20	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:20	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:20	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:20	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW2 | **Lab Sample ID:** C404462-02 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 13:15 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,1-Dichloroethane [75-34-3]^	**1.8**		ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2-Dichlorobenzene [95-50-1]^	**0.73**	J	ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,2-Dichloropropane [78-87-5]^	**0.53**	J	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
1,4-Dichlorobenzene [106-46-7]^	**5.0**		ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
2-Chlorotoluene [95-49-8]^	**1.9**		ug/L	1	0.081	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Benzene [71-43-2]^	**0.87**	J	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Chlorobenzene [108-90-7]^	**5.4**		ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	**2.4**		ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW2 | **Lab Sample ID:** C404462-02 | **Received:** 04/19/14 09:15
Matrix: Ground Water | **Sampled:** 04/18/14 13:15 | **Work Order:** C404462
Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	**1.1**		ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D29028	EPA 8260B	04/30/14 07:20	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*93 %*	*51-122*	*4D29028*	*EPA 8260B*	*04/30/14 07:20*	*MSZ*	
Dibromofluoromethane	*57*	*1*	*50.0*	*114 %*	*68-117*	*4D29028*	*EPA 8260B*	*04/30/14 07:20*	*MSZ*	
Toluene-d8	*56*	*1*	*50.0*	*111 %*	*67-127*	*4D29028*	*EPA 8260B*	*04/30/14 07:20*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:21	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:22	JDH	
Barium [7440-39-3]^	**702**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:22	JDH	
Cadmium [7440-43-9]^	**1.59**		ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:22	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:22	JDH	
Lead [7439-92-1]^	**2.78**	J	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:22	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:22	JDH	
Silver [7440-22-4]^	**3.82**	J	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:22	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW4 | **Lab Sample ID:** C404462-03 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 10:45 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,1-Dichloroethane [75-34-3]^	**1.8**		ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2-Dichlorobenzene [95-50-1]^	**3.9**		ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2-Dichloroethane [107-06-2]^	**1.3**		ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,2-Dichloropropane [78-87-5]^	**0.45**	J	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,3-Dichlorobenzene [541-73-1]^	**0.89**	J	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
1,4-Dichlorobenzene [106-46-7]^	**12**		ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
2-Chlorotoluene [95-49-8]^	**0.84**	J	ug/L	1	0.081	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Acetone [67-64-1]^	**5.0**		ug/L	1	1.2	5.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Benzene [71-43-2]^	**1.8**		ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Chlorobenzene [108-90-7]^	**12**		ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Chloroethane [75-00-3]^	**0.54**	J	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW4	**Lab Sample ID:** C404462-03	**Received:** 04/19/14 09:15
Matrix: Ground Water	**Sampled:** 04/18/14 10:45	**Work Order:** C404462
Project: Owl's Den LF - Groundwater	**Sampled By:** Jasmine Tayonga	

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	**0.44**	J	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D29028	EPA 8260B	04/30/14 07:50	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*51-122*	*4D29028*	*EPA 8260B*	*04/30/14 07:50*	*MSZ*	
Dibromofluoromethane	*56*	*1*	*50.0*	*113 %*	*68-117*	*4D29028*	*EPA 8260B*	*04/30/14 07:50*	*MSZ*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*67-127*	*4D29028*	*EPA 8260B*	*04/30/14 07:50*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:23	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:25	JDH	
Barium [7440-39-3]^	**798**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:25	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:25	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:25	JDH	
Lead [7439-92-1]^	**3.14**	J	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:25	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:25	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:25	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW5 | **Lab Sample ID:** C404462-04 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 10:10 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW5 | **Lab Sample ID:** C404462-04 | **Received:** 04/19/14 09:15
Matrix: Ground Water | **Sampled:** 04/18/14 10:10 | **Work Order:** C404462
Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D29028	EPA 8260B	04/30/14 08:20	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*51-122*	*4D29028*	*EPA 8260B*	*04/30/14 08:20*	*MSZ*	
Dibromofluoromethane	*58*	*1*	*50.0*	*116 %*	*68-117*	*4D29028*	*EPA 8260B*	*04/30/14 08:20*	*MSZ*	
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*67-127*	*4D29028*	*EPA 8260B*	*04/30/14 08:20*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:25	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:28	JDH	
Barium [7440-39-3]^	**102**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:28	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:28	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:28	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:28	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:28	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:28	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW6 | **Lab Sample ID:** C404462-05 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 11:20 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW6 | **Lab Sample ID:** C404462-05 | **Received:** 04/19/14 09:15
Matrix: Ground Water | **Sampled:** 04/18/14 11:20 | **Work Order:** C404462
Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D29028	EPA 8260B	04/30/14 08:50	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*51-122*	*4D29028*	*EPA 8260B*	*04/30/14 08:50*	*MSZ*	
Dibromofluoromethane	*57*	*1*	*50.0*	*115 %*	*68-117*	*4D29028*	*EPA 8260B*	*04/30/14 08:50*	*MSZ*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*67-127*	*4D29028*	*EPA 8260B*	*04/30/14 08:50*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:27	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:31	JDH	
Barium [7440-39-3]^	**60.6**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:31	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:31	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:31	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:31	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:31	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:31	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW6A | **Lab Sample ID:** C404462-06 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 11:15 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,1-Dichloroethane [75-34-3]^	**1.6**		ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2-Dichlorobenzene [95-50-1]^	**1.8**		ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2-Dichloroethane [107-06-2]^	**0.82**	J	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,3-Dichlorobenzene [541-73-1]^	**0.53**	J	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
1,4-Dichlorobenzene [106-46-7]^	**6.6**		ug/L	1	0.19	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Chlorobenzene [108-90-7]^	**9.8**		ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	

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ANALYTICAL RESULTS

Description:	5502-MW6A	**Lab Sample ID:**	C404462-06	**Received:**	04/19/14 09:15
Matrix:	Ground Water	**Sampled:**	04/18/14 11:15	**Work Order:**	C404462
Project:	Owl's Den LF - Groundwater	**Sampled By:**	Jasmine Tayonga		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D29028	EPA 8260B	04/30/14 09:20	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*96 %*	*51-122*	*4D29028*	*EPA 8260B*	*04/30/14 09:20*	*MSZ*	
Dibromofluoromethane	*59*	*1*	*50.0*	*117 %*	*68-117*	*4D29028*	*EPA 8260B*	*04/30/14 09:20*	*MSZ*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*67-127*	*4D29028*	*EPA 8260B*	*04/30/14 09:20*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:29	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:33	JDH	
Barium [7440-39-3]^	**498**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:33	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:33	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:33	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:33	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:33	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:33	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW7 | **Lab Sample ID:** C404462-07 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 13:20 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,1-Dichloroethane [75-34-3]^	**0.44**	J	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2-Dichlorobenzene [95-50-1]^	**0.48**	J	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
1,4-Dichlorobenzene [106-46-7]^	**4.8**		ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
2-Chlorotoluene [95-49-8]^	**0.83**	J	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Acetone [67-64-1]^	**10**		ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Benzene [71-43-2]^	**0.87**	J	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Chlorobenzene [108-90-7]^	**3.9**		ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	**0.75**	J	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW7 | **Lab Sample ID:** C404462-07 | **Received:** 04/19/14 09:15
Matrix: Ground Water | **Sampled:** 04/18/14 13:20 | **Work Order:** C404462
Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	**0.46**	J	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 01:58	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*95 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 01:58*	*MSZ*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 01:58*	*MSZ*	
Toluene-d8	*56*	*1*	*50.0*	*111 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 01:58*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:31	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:36	JDH	
Barium [7440-39-3]^	**593**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:36	JDH	
Cadmium [7440-43-9]^	**3.97**		ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:36	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:36	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:36	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:36	JDH	
Silver [7440-22-4]^	**5.06**	J	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:36	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW7A | **Lab Sample ID:** C404462-08 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 13:25 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,1-Dichloroethane [75-34-3]^	**0.57**	J	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
1,4-Dichlorobenzene [106-46-7]^	**3.2**		ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Benzene [71-43-2]^	**0.53**	J	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Chlorobenzene [108-90-7]^	**2.7**		ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	**4.0**		ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW7A	**Lab Sample ID:** C404462-08	**Received:** 04/19/14 09:15
Matrix: Ground Water	**Sampled:** 04/18/14 13:25	**Work Order:** C404462
Project: Owl's Den LF - Groundwater	**Sampled By:** Jasmine Tayonga	

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Trichloroethene [79-01-6]^	**1.3**		ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 02:27	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 02:27*	*MSZ*	
Dibromofluoromethane	*55*	*1*	*50.0*	*111 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 02:27*	*MSZ*	
Toluene-d8	*56*	*1*	*50.0*	*111 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 02:27*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:33	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:39	JDH	
Barium [7440-39-3]^	**404**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:39	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:39	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:39	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:39	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:39	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:39	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW8 | **Lab Sample ID:** C404462-09 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 09:45 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
1,4-Dichlorobenzene [106-46-7]^	**0.60**	J	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
2-Chlorotoluene [95-49-8]^	**2.4**		ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Acetone [67-64-1]^	**15**		ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	**0.54**	J	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW8 | **Lab Sample ID:** C404462-09 | **Received:** 04/19/14 09:15
Matrix: Ground Water | **Sampled:** 04/18/14 09:45 | **Work Order:** C404462
Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Methylene chloride [75-09-2]^	**0.72**	J	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	
Xylenes (Total) [1330-20-7]^	**0.65**	J	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 02:57	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 02:57*	*MSZ*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 02:57*	*MSZ*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 02:57*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:35	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:42	JDH	
Barium [7440-39-3]^	**201**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:42	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:42	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:42	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:42	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:42	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:42	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW9 | **Lab Sample ID:** C404462-10 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 09:55 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW9 | **Lab Sample ID:** C404462-10 | **Received:** 04/19/14 09:15
Matrix: Ground Water | **Sampled:** 04/18/14 09:55 | **Work Order:** C404462
Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Tetrachloroethene [127-18-4]^	**1.2**		ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 03:27	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 03:27*	*MSZ*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 03:27*	*MSZ*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 03:27*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	**4.47**		ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:37	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:45	JDH	
Barium [7440-39-3]^	**299**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:45	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:45	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:45	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:45	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:45	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:45	JDH	

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ANALYTICAL RESULTS

Description: 5502-MW10 | **Lab Sample ID:** C404462-11 | **Received:** 04/19/14 09:15

Matrix: Ground Water | **Sampled:** 04/18/14 09:30 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	

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ANALYTICAL RESULTS

Description: 5502-MW10 | **Lab Sample ID:** C404462-11 | **Received:** 04/19/14 09:15
Matrix: Ground Water | **Sampled:** 04/18/14 09:30 | **Work Order:** C404462
Project: Owl's Den LF - Groundwater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 03:57	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*91 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 03:57*	*MSZ*	
Dibromofluoromethane	*56*	*1*	*50.0*	*112 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 03:57*	*MSZ*	
Toluene-d8	*56*	*1*	*50.0*	*111 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 03:57*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4E01016	EPA 7470A	05/02/14 14:44	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:55	JDH	
Barium [7440-39-3]^	**140**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:55	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:55	JDH	
Chromium [7440-47-3]^	**3.77**	J	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:55	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:55	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:55	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:55	JDH	

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ANALYTICAL RESULTS

Description: 5502-TripBlank | **Lab Sample ID:** C404462-12 | **Received:** 04/19/14 09:15

Matrix: Water | **Sampled:** 04/18/14 09:15 | **Work Order:** C404462

Project: Owl's Den LF - Groundwater | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	

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ANALYTICAL RESULTS

Description: 5502-TripBlank
Matrix: Water
Project: Owl's Den LF - Groundwater

Lab Sample ID: C404462-12
Sampled: 04/18/14 09:15
Sampled By: ENCO

Received: 04/19/14 09:15
Work Order: C404462

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 04:27	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 04:27*	*MSZ*	
Dibromofluoromethane	*56*	*1*	*50.0*	*111 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 04:27*	*MSZ*	
Toluene-d8	*54*	*1*	*50.0*	*109 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 04:27*	*MSZ*	

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QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 4D29028 - EPA 5030B_MS

Blank (4D29028-BLK1) Prepared: 04/29/2014 13:46 Analyzed: 04/30/2014 01:21

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,1-Dichloropropene	0.15	U	1.0	ug/L							
1,2,3-Trichlorobenzene	0.012	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
1,2,4-Trimethylbenzene	0.10	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,3,5-Trimethylbenzene	0.30	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,3-Dichloropropane	0.16	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2,2-Dichloropropane	0.28	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Chloroethyl Vinyl Ether	1.1	U	5.0	ug/L							
2-Chlorotoluene	0.081	U	1.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Chlorotoluene	0.068	U	1.0	ug/L							
4-Isopropyltoluene	0.085	U	1.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromobenzene	0.16	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							
Dichlorodifluoromethane	0.20	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Hexachlorobutadiene	0.22	U	1.0	ug/L							
Isopropylbenzene	0.14	U	1.0	ug/L							

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

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 4D29028 - EPA 5030B_MS - Continued

Blank (4D29028-BLK1) Continued Prepared: 04/29/2014 13:46 Analyzed: 04/30/2014 01:21

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene chloride	0.23	U	1.0	ug/L							
Methyl-tert-Butyl Ether	0.16	U	1.0	ug/L							
Naphthalene	0.11	U	1.0	ug/L							
n-Butyl Benzene	0.058	U	1.0	ug/L							
n-Propyl Benzene	0.12	U	1.0	ug/L							
sec-Butylbenzene	0.10	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
tert-Butylbenzene	0.17	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							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
4-Bromofluorobenzene	*47*			*ug/L*	*50.0*		*94*	*51-122*			
Dibromofluoromethane	*56*			*ug/L*	*50.0*		*113*	*68-117*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*67-127*			

LCS (4D29028-BS1) Prepared: 04/29/2014 13:46 Analyzed: 04/30/2014 01:51

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	20		1.0	ug/L	20.0		99	75-133			
Benzene	19		1.0	ug/L	20.0		97	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		98	83-117			
Toluene	17		1.0	ug/L	20.0		85	71-118			
Trichloroethene	20		1.0	ug/L	20.0		101	74-119			

Matrix Spike (4D29028-MS1) Prepared: 04/29/2014 13:46 Analyzed: 04/30/2014 02:21

Source: C404428-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	23		1.0	ug/L	20.0	0.21 U	116	75-133			
Benzene	21		1.0	ug/L	20.0	0.15 U	107	81-134			
Chlorobenzene	22		1.0	ug/L	20.0	0.60	105	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	94	71-118			
Trichloroethene	22		1.0	ug/L	20.0	0.15 U	111	74-119			

Matrix Spike Dup (4D29028-MSD1) Prepared: 04/29/2014 13:46 Analyzed: 04/30/2014 02:51

Source: C404428-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	24		1.0	ug/L	20.0	0.21 U	119	75-133	2	20	
Benzene	22		1.0	ug/L	20.0	0.15 U	112	81-134	5	17	
Chlorobenzene	22		1.0	ug/L	20.0	0.60	107	83-117	2	16	
Toluene	19		1.0	ug/L	20.0	0.14 U	94	71-118	0.6	17	
Trichloroethene	23		1.0	ug/L	20.0	0.15 U	116	74-119	4	22	

Batch 4D30028 - EPA 5030B_MS

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

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 4D30028 - EPA 5030B_MS - Continued

Blank (4D30028-BLK1) Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 19:59

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,1-Dichloropropene	0.15	U	1.0	ug/L							
1,2,3-Trichlorobenzene	0.012	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
1,2,4-Trimethylbenzene	0.10	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,3,5-Trimethylbenzene	0.30	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,3-Dichloropropane	0.16	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2,2-Dichloropropane	0.28	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Chloroethyl Vinyl Ether	1.1	U	5.0	ug/L							
2-Chlorotoluene	0.081	U	1.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Chlorotoluene	0.068	U	1.0	ug/L							
4-Isopropyltoluene	0.085	U	1.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromobenzene	0.16	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							
Dichlorodifluoromethane	0.20	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Hexachlorobutadiene	0.22	U	1.0	ug/L							
Isopropylbenzene	0.14	U	1.0	ug/L							

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

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 4D30028 - EPA 5030B_MS - Continued

Blank (4D30028-BLK1) Continued Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 19:59

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene chloride	0.23	U	1.0	ug/L							
Methyl-tert-Butyl Ether	0.16	U	1.0	ug/L							
Naphthalene	0.11	U	1.0	ug/L							
n-Butyl Benzene	0.058	U	1.0	ug/L							
n-Propyl Benzene	0.12	U	1.0	ug/L							
sec-Butylbenzene	0.10	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
tert-Butylbenzene	0.17	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							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
4-Bromofluorobenzene	*45*			*ug/L*	*50.0*		*91*	*51-122*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*107*	*68-117*			
Toluene-d8	*54*			*ug/L*	*50.0*		*107*	*67-127*			

LCS (4D30028-BS1) Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 20:29

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		90	75-133			
Benzene	19		1.0	ug/L	20.0		96	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		98	83-117			
Toluene	17		1.0	ug/L	20.0		83	71-118			
Trichloroethene	21		1.0	ug/L	20.0		106	74-119			

Matrix Spike (4D30028-MS1) Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 20:59

Source: C403937-06

Analyte	Result	Flag	PQL	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	102	75-133			
Benzene	21		1.0	ug/L	20.0	0.15 U	103	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	104	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	90	71-118			
Trichloroethene	22		1.0	ug/L	20.0	0.15 U	112	74-119			

Matrix Spike Dup (4D30028-MSD1) Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 21:29

Source: C403937-06

Analyte	Result	Flag	PQL	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	107	75-133	5	20	
Benzene	21		1.0	ug/L	20.0	0.15 U	105	81-134	2	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	105	83-117	2	16	
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118	2	17	
Trichloroethene	24		1.0	ug/L	20.0	0.15 U	118	74-119	5	22	

Metals by EPA 6000/7000 Series Methods - Quality Control

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

QUALITY CONTROL DATA

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 4E01016 - EPA 7470A

Blank (4E01016-BLK1) Prepared: 05/01/2014 10:30 Analyzed: 05/02/2014 13:52

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

LCS (4E01016-BS1) Prepared: 05/01/2014 10:30 Analyzed: 05/02/2014 13:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.23		0.200	ug/L	5.00		85	80-120			

Matrix Spike (4E01016-MS1) Prepared: 05/01/2014 10:30 Analyzed: 05/02/2014 13:59

Source: C404342-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.31		0.200	ug/L	5.00	0.170 U	66	75-125			QM-07

Matrix Spike Dup (4E01016-MSD1) Prepared: 05/01/2014 10:30 Analyzed: 05/02/2014 14:01

Source: C404342-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.21		0.200	ug/L	5.00	0.170 U	64	75-125	3	25	QM-07

Post Spike (4E01016-PS1) Prepared: 05/01/2014 10:30 Analyzed: 05/02/2014 14:03

Source: C404342-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	3.37		0.200	ug/L	5.00	0.0420	67	75-125			QM-08

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

Batch 4D24045 - EPA 3005A

Blank (4D24045-BLK1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:28

Analyte	Result	Flag	PQL	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							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Lead	2.10	U	10.0	ug/L							
Selenium	5.00	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							

LCS (4D24045-BS1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	211		10.0	ug/L	200		105	80-120			
Barium	218		10.0	ug/L	200		109	80-120			
Cadmium	21.8		1.00	ug/L	20.0		109	80-120			
Chromium	212		10.0	ug/L	200		106	80-120			
Lead	214		10.0	ug/L	200		107	80-120			
Selenium	207		10.0	ug/L	200		104	80-120			
Silver	221		10.0	ug/L	200		110	80-120			

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

QUALITY CONTROL DATA

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

Batch 4D24045 - EPA 3005A - Continued

Matrix Spike (4D24045-MS1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:48

Source: C402502-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	219		10.0	ug/L	200	5.40 U	110	75-125			
Barium	265		10.0	ug/L	200	44.0	111	75-125			
Cadmium	21.9		1.00	ug/L	20.0	0.360 U	110	75-125			
Chromium	214		10.0	ug/L	200	1.40 U	107	75-125			
Lead	214		10.0	ug/L	200	2.10 U	107	75-125			
Selenium	215		10.0	ug/L	200	5.00 U	107	75-125			
Silver	222		10.0	ug/L	200	1.90 U	111	75-125			

Matrix Spike Dup (4D24045-MSD1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:50

Source: C402502-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	214		10.0	ug/L	200	5.40 U	107	75-125	2	20	
Barium	261		10.0	ug/L	200	44.0	109	75-125	1	20	
Cadmium	21.7		1.00	ug/L	20.0	0.360 U	108	75-125	1	20	
Chromium	211		10.0	ug/L	200	1.40 U	105	75-125	1	20	
Lead	211		10.0	ug/L	200	2.10 U	106	75-125	1	20	
Selenium	211		10.0	ug/L	200	5.00 U	105	75-125	2	20	
Silver	218		10.0	ug/L	200	1.90 U	109	75-125	2	20	

Post Spike (4D24045-PS1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:53

Source: C402502-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.197		0.0100	mg/L	0.200	-0.00118	99	80-120			
Barium	0.240		0.0100	mg/L	0.200	0.0440	98	80-120			
Cadmium	0.0196		0.00100	mg/L	0.0200	-8.00E-5	99	80-120			
Chromium	0.200		0.0100	mg/L	0.200	0.000751	99	80-120			
Lead	0.196		0.0100	mg/L	0.200	0.00180	97	80-120			
Selenium	0.199		0.0100	mg/L	0.200	-0.00237	101	80-120			
Silver	0.209		0.0100	mg/L	0.200	0.000600	104	80-120			

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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.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence (85% or greater confidence) to make a "tentative identification".
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).

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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

Page 1 of 1

Client Name: S&ME, Inc. (SM002)	Project Number: 1356-07-006
Address: 9751 Southern Pine Blvd.	Project Name/Desc: Owl's Den LF - Groundwater
City/ST/Zip: Charlotte, NC 28273	PO # / Billing Info: 60235
Tel: (704) 523-4726 Fax: (704) 525-3953	Reporting Contact: Courtney Murphy
Sampler(s) Name, Affiliation (Print): Jasmine Tayouga	Billing Contact: Barbara Ellington
Sampler(s) Signature: Jasmine Tayouga	Site Location / Time Zone: Lincolnton, NC

Requested Analyses: 8260B; Ag,As,Ba,Cd,Cr,Pb,Se; Hg

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C404462

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B	Ag,As,Ba,Cd,Cr,Pb,Se	Hg	Sample Comments
	5502-MW1	4/18/14	09:15	G	GW	4	X	X	X	
	5502-MW2		13:15		GW	4	X	X	X	
	~~5502-MW3~~				~~GW~~	~~4~~	~~X~~	~~X~~	~~X~~	
	5502-MW4		10:45		GW	4	X	X	X	
	5502-MW5		10:10		GW	4	X	X	X	
	5502-MW6		11:20		GW	4	X	X	X	
	5502-MW6A		11:15		GW	4	X	X	X	
	5502-MW7		13:20		GW	4	X	X	X	
	5502-MW7A		13:25		GW	4	X	X	X	
	5502-MW8		09:45		GW	4	X	X	X	
	5502-MW9		09:55		GW	4	X	X	X	
	5502-MW10		09:30		GW	4	X	X	X	

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
		Jasmine Tayouga	4/18/14 16:15	[signature]	~~4/18/14~~ 4/19/14 915
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: 1.2°		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

ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515

Monday, May 5, 2014
S&ME, Inc. (SM002)
Attn: Courtney Murphy
9751 Southern Pine Blvd.
Charlotte, NC 28273

RE: Laboratory Results for
Project Number: 1356-07-006, Project Name/Desc: Owl's Den LF - Surfacewater
ENCO Workorder(s): C404463

Dear Courtney Murphy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Saturday, April 19, 2014.

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

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

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

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

Sincerely,

Chuck Smith

Project Manager

Enclosure(s)

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 5502-SW1 **Lab ID: C404463-01** **Sampled: 04/18/14 10:15** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 13:58
EPA 7470A	05/16/14	04/29/14 13:00	04/30/14 14:54
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 04:57

Client ID: 5502-SW2 **Lab ID: C404463-02** **Sampled: 04/18/14 13:30** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 14:01
EPA 7470A	05/16/14	04/29/14 13:00	04/30/14 14:56
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 05:26

Client ID: 5502-SW3 **Lab ID: C404463-03** **Sampled: 04/18/14 13:40** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	10/15/14	04/24/14 15:44	04/30/14 14:04
EPA 7470A	05/16/14	04/29/14 13:00	04/30/14 14:59
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 05:56

Client ID: 5502-TripBlank **Lab ID: C404463-04** **Sampled: 04/18/14 10:15** **Received: 04/19/14 09:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	05/02/14	04/30/14 13:13	05/01/14 06:25

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

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SAMPLE DETECTION SUMMARY

Client ID: 5502-SW1 **Lab ID: C404463-01**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	64.1		1.00	10.0	ug/L	EPA 6010C	

Client ID: 5502-SW2 **Lab ID: C404463-02**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
1,4-Dichlorobenzene	0.85	J	0.19	1.0	ug/L	EPA 8260B	
Barium - Total	245		1.00	10.0	ug/L	EPA 6010C	
Chlorobenzene	0.57	J	0.17	1.0	ug/L	EPA 8260B	

Client ID: 5502-SW3 **Lab ID: C404463-03**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	211		1.00	10.0	ug/L	EPA 6010C	
cis-1,2-Dichloroethene	1.1		0.15	1.0	ug/L	EPA 8260B	

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

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ANALYTICAL RESULTS

Description: 5502-SW1 | **Lab Sample ID:** C404463-01 | **Received:** 04/19/14 09:15
Matrix: Surface Water | **Sampled:** 04/18/14 10:15 | **Work Order:** C404463
Project: Owl's Den LF - Surfacewater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	

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

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ANALYTICAL RESULTS

Description: 5502-SW1 | **Lab Sample ID:** C404463-01 | **Received:** 04/19/14 09:15
Matrix: Surface Water | **Sampled:** 04/18/14 10:15 | **Work Order:** C404463
Project: Owl's Den LF - Surfacewater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 04:57	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*93 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 04:57*	*MSZ*	
Dibromofluoromethane	*57*	*1*	*50.0*	*114 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 04:57*	*MSZ*	
Toluene-d8	*56*	*1*	*50.0*	*112 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 04:57*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4D29022	EPA 7470A	04/30/14 14:54	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 13:58	JDH	
Barium [7440-39-3]^	**64.1**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 13:58	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 13:58	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 13:58	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 13:58	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 13:58	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 13:58	JDH	

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ANALYTICAL RESULTS

Description: 5502-SW2 | **Lab Sample ID:** C404463-02 | **Received:** 04/19/14 09:15
Matrix: Surface Water | **Sampled:** 04/18/14 13:30 | **Work Order:** C404463
Project: Owl's Den LF - Surfacewater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
1,4-Dichlorobenzene [106-46-7]^	**0.85**	J	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Chlorobenzene [108-90-7]^	**0.57**	J	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	

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ANALYTICAL RESULTS

Description: 5502-SW2 | **Lab Sample ID:** C404463-02 | **Received:** 04/19/14 09:15
Matrix: Surface Water | **Sampled:** 04/18/14 13:30 | **Work Order:** C404463
Project: Owl's Den LF - Surfacewater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 05:26	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 05:26*	*MSZ*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 05:26*	*MSZ*	
Toluene-d8	*56*	*1*	*50.0*	*111 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 05:26*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4D29022	EPA 7470A	04/30/14 14:56	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 14:01	JDH	
Barium [7440-39-3]^	**245**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 14:01	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 14:01	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 14:01	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 14:01	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 14:01	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 14:01	JDH	

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ANALYTICAL RESULTS

Description: 5502-SW3 | **Lab Sample ID:** C404463-03 | **Received:** 04/19/14 09:15

Matrix: Surface Water | **Sampled:** 04/18/14 13:40 | **Work Order:** C404463

Project: Owl's Den LF - Surfacewater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	**1.1**		ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	

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ANALYTICAL RESULTS

Description: 5502-SW3 | **Lab Sample ID:** C404463-03 | **Received:** 04/19/14 09:15
Matrix: Surface Water | **Sampled:** 04/18/14 13:40 | **Work Order:** C404463
Project: Owl's Den LF - Surfacewater | **Sampled By:** Jasmine Tayonga

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 05:56	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 05:56*	*MSZ*	
Dibromofluoromethane	*56*	*1*	*50.0*	*111 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 05:56*	*MSZ*	
Toluene-d8	*55*	*1*	*50.0*	*109 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 05:56*	*MSZ*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.170	U	ug/L	1	0.170	0.200	4D29022	EPA 7470A	04/30/14 14:59	T1D	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	4D24045	EPA 6010C	04/30/14 14:04	JDH	
Barium [7440-39-3]^	**211**		ug/L	1	1.00	10.0	4D24045	EPA 6010C	04/30/14 14:04	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	4D24045	EPA 6010C	04/30/14 14:04	JDH	
Chromium [7440-47-3]^	1.40	U	ug/L	1	1.40	10.0	4D24045	EPA 6010C	04/30/14 14:04	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	4D24045	EPA 6010C	04/30/14 14:04	JDH	
Selenium [7782-49-2]^	5.00	U	ug/L	1	5.00	10.0	4D24045	EPA 6010C	04/30/14 14:04	JDH	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	4D24045	EPA 6010C	04/30/14 14:04	JDH	

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ANALYTICAL RESULTS

Description: 5502-TripBlank | **Lab Sample ID:** C404463-04 | **Received:** 04/19/14 09:15
Matrix: Water | **Sampled:** 04/18/14 10:15 | **Work Order:** C404463
Project: Owl's Den LF - Surfacewater | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	

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ANALYTICAL RESULTS

Description: 5502-TripBlank
Matrix: Water
Project: Owl's Den LF - Surfacewater

Lab Sample ID: C404463-04
Sampled: 04/18/14 10:15
Sampled By: ENCO

Received: 04/19/14 09:15
Work Order: C404463

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	4D30028	EPA 8260B	05/01/14 06:25	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*46*	*1*	*50.0*	*93 %*	*51-122*	*4D30028*	*EPA 8260B*	*05/01/14 06:25*	*MSZ*	
Dibromofluoromethane	*57*	*1*	*50.0*	*114 %*	*68-117*	*4D30028*	*EPA 8260B*	*05/01/14 06:25*	*MSZ*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*67-127*	*4D30028*	*EPA 8260B*	*05/01/14 06:25*	*MSZ*	

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QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 4D30028 - EPA 5030B_MS

Blank (4D30028-BLK1) Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 19:59

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,1-Dichloropropene	0.15	U	1.0	ug/L							
1,2,3-Trichlorobenzene	0.012	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
1,2,4-Trimethylbenzene	0.10	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,3,5-Trimethylbenzene	0.30	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,3-Dichloropropane	0.16	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2,2-Dichloropropane	0.28	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Chloroethyl Vinyl Ether	1.1	U	5.0	ug/L							
2-Chlorotoluene	0.081	U	1.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Chlorotoluene	0.068	U	1.0	ug/L							
4-Isopropyltoluene	0.085	U	1.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromobenzene	0.16	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							
Dichlorodifluoromethane	0.20	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Hexachlorobutadiene	0.22	U	1.0	ug/L							
Isopropylbenzene	0.14	U	1.0	ug/L							

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QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 4D30028 - EPA 5030B_MS - Continued

Blank (4D30028-BLK1) Continued Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 19:59

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Methylene chloride	0.23	U	1.0	ug/L							
Methyl-tert-Butyl Ether	0.16	U	1.0	ug/L							
Naphthalene	0.11	U	1.0	ug/L							
n-Butyl Benzene	0.058	U	1.0	ug/L							
n-Propyl Benzene	0.12	U	1.0	ug/L							
sec-Butylbenzene	0.10	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
tert-Butylbenzene	0.17	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							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
4-Bromofluorobenzene	*45*			*ug/L*	*50.0*		*91*	*51-122*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*107*	*68-117*			
Toluene-d8	*54*			*ug/L*	*50.0*		*107*	*67-127*			

LCS (4D30028-BS1) Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 20:29

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		90	75-133			
Benzene	19		1.0	ug/L	20.0		96	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		98	83-117			
Toluene	17		1.0	ug/L	20.0		83	71-118			
Trichloroethene	21		1.0	ug/L	20.0		106	74-119			

Matrix Spike (4D30028-MS1) Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 20:59

Source: C403937-06

Analyte	Result	Flag	PQL	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	102	75-133			
Benzene	21		1.0	ug/L	20.0	0.15 U	103	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	104	83-117			
Toluene	18		1.0	ug/L	20.0	0.14 U	90	71-118			
Trichloroethene	22		1.0	ug/L	20.0	0.15 U	112	74-119			

Matrix Spike Dup (4D30028-MSD1) Prepared: 04/30/2014 13:13 Analyzed: 04/30/2014 21:29

Source: C403937-06

Analyte	Result	Flag	PQL	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	107	75-133	5	20	
Benzene	21		1.0	ug/L	20.0	0.15 U	105	81-134	2	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	105	83-117	2	16	
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118	2	17	
Trichloroethene	24		1.0	ug/L	20.0	0.15 U	118	74-119	5	22	

Metals by EPA 6000/7000 Series Methods - Quality Control

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QUALITY CONTROL DATA

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 4D29022 - EPA 7470A

Blank (4D29022-BLK1) Prepared: 04/29/2014 13:00 Analyzed: 04/30/2014 14:22

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

LCS (4D29022-BS1) Prepared: 04/29/2014 13:00 Analyzed: 04/30/2014 14:49

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.13		0.200	ug/L	5.00		103	80-120			

Matrix Spike (4D29022-MS1) Prepared: 04/29/2014 13:00 Analyzed: 04/30/2014 14:29

Source: C403875-05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	6.03		0.200	ug/L	5.00	0.170 U	121	75-125			

Matrix Spike Dup (4D29022-MSD1) Prepared: 04/29/2014 13:00 Analyzed: 04/30/2014 14:31

Source: C403875-05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.85		0.200	ug/L	5.00	0.170 U	117	75-125	3	25	

Post Spike (4D29022-PS1) Prepared: 04/29/2014 13:00 Analyzed: 04/30/2014 14:33

Source: C403875-05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.89		0.200	ug/L	5.00	-0.0100	98	75-125			

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

Batch 4D24045 - EPA 3005A

Blank (4D24045-BLK1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:28

Analyte	Result	Flag	PQL	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							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Lead	2.10	U	10.0	ug/L							
Selenium	5.00	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							

LCS (4D24045-BS1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	211		10.0	ug/L	200		105	80-120			
Barium	218		10.0	ug/L	200		109	80-120			
Cadmium	21.8		1.00	ug/L	20.0		109	80-120			
Chromium	212		10.0	ug/L	200		106	80-120			
Lead	214		10.0	ug/L	200		107	80-120			
Selenium	207		10.0	ug/L	200		104	80-120			
Silver	221		10.0	ug/L	200		110	80-120			

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QUALITY CONTROL DATA

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

Batch 4D24045 - EPA 3005A - Continued

Matrix Spike (4D24045-MS1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:48

Source: C402502-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	219		10.0	ug/L	200	5.40 U	110	75-125			
Barium	265		10.0	ug/L	200	44.0	111	75-125			
Cadmium	21.9		1.00	ug/L	20.0	0.360 U	110	75-125			
Chromium	214		10.0	ug/L	200	1.40 U	107	75-125			
Lead	214		10.0	ug/L	200	2.10 U	107	75-125			
Selenium	215		10.0	ug/L	200	5.00 U	107	75-125			
Silver	222		10.0	ug/L	200	1.90 U	111	75-125			

Matrix Spike Dup (4D24045-MSD1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:50

Source: C402502-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	214		10.0	ug/L	200	5.40 U	107	75-125	2	20	
Barium	261		10.0	ug/L	200	44.0	109	75-125	1	20	
Cadmium	21.7		1.00	ug/L	20.0	0.360 U	108	75-125	1	20	
Chromium	211		10.0	ug/L	200	1.40 U	105	75-125	1	20	
Lead	211		10.0	ug/L	200	2.10 U	106	75-125	1	20	
Selenium	211		10.0	ug/L	200	5.00 U	105	75-125	2	20	
Silver	218		10.0	ug/L	200	1.90 U	109	75-125	2	20	

Post Spike (4D24045-PS1) Prepared: 04/24/2014 15:44 Analyzed: 04/30/2014 12:53

Source: C402502-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.197		0.0100	mg/L	0.200	-0.00118	99	80-120			
Barium	0.240		0.0100	mg/L	0.200	0.0440	98	80-120			
Cadmium	0.0196		0.00100	mg/L	0.0200	-8.00E-5	99	80-120			
Chromium	0.200		0.0100	mg/L	0.200	0.000751	99	80-120			
Lead	0.196		0.0100	mg/L	0.200	0.00180	97	80-120			
Selenium	0.199		0.0100	mg/L	0.200	-0.00237	101	80-120			
Silver	0.209		0.0100	mg/L	0.200	0.000600	104	80-120			

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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.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence (85% or greater confidence) to make a "tentative identification".

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ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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

www.encolabs.com

Client Name: S&ME, Inc. (SM002)	Project Number: 1356-07-006
Address: 9751 Southern Pine Blvd.	Project Name/Desc: Owl's Den LF - Surfacewater
City/ST/Zip: Charlotte, NC 28273	PO # / Billing Info: 60235
Tel: (704) 523-4726 Fax: (704) 525-3953	Reporting Contact: Courtney Murphy
Sampler(s) Name, Affiliation (Print): Jasmine Tayanga	Billing Contact: Barbara Ellington
Sampler(s) Signature: [signature]	Site Location / Time Zone: Lincolnton, NC

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C404463

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B	Ag,As,Ba,Cd,Cr,Pb,Se	Hg								Sample Comments
	5502-SW1	4/18/14	10:15	G	SW	4	X	X	X								
	5502-SW2	↓	13:30	G	SW	4	X	X	X								
	5502-SW3	↓	13:40	G	SW	4	X	X	X								
	5502-TripBlank	↓			WA	2	X										

Preservation (See Codes) (Combine as necessary)

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By: [signature]	Date/Time: 4/18/14 10:15	Received By: [signature]	Date/Time: 4/19/14 915
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: 1.7°		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