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**Bensinger & Garrison**
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# PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

## ~117 ACRES FORMER COASTAL LUMBER PROPERTY

## 1772 TRUEBLOOD ROAD
## WELDON, NORTH CAROLINA
## HAXIFAX COUNTY

## JANUARY, 2013

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FAYETTEVILLE REGIONAL OFFICE

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**PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT**
**FOR**
**~ 117 ACRES FORMER COASTAL LUMBER PROPERTY AT**
**1772 TRUEBLOOD ROAD, WELDON, NORTH CAROLINA**

## CERTIFICATION

Bensinger & Garrison Environmental, Inc. certifies that it has used standard and accepted practices in completion of this project. The undersigned (and their appointees) shall have no liability or obligation to any party other than Meherrin River Forest Products, Inc. (and its successors or assigns) and the undersigned's (and their appointees') obligations are limited to fraudulent statements herein made, or to negligence.

**BENSINGER & GARRISON ENVIRONMENTAL, INC.**

Jack H. Garrison, Jr. — 1-8-13
Jack H. Garrison, Jr.
Senior Environmental Consultant
Date

Wesley Z. Brummer — 1-8-13
Wesley Z. Brummer, P.E.
Vice President/Environmental Engineer
Date

## PROFESSIONAL ENGINEER'S CERTIFICATION

I, Timothy W. Monroe, a Professional Engineer for Bluefield Engineering, P.C., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

Tim W. Monroe 1-8-13

Timothy W. Monroe, P.E. Date
Senior Environmental Engineer

NORTH CAROLINA PROFESSIONAL SEAL 028331 ENGINEER TIMOTHY W. MONROE

Seal No.: 028331
State: North Carolina

Bluefield Engineering, P.C. is licensed to practice engineering in North Carolina. The certification number of the corporation is C–1464.

# PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT FOR ~ 117 ACRES FORMER COASTAL LUMBER PROPERTY AT 1772 TRUEBLOOD ROAD, WELDON, NORTH CAROLINA

## I. INTRODUCTION & SITE DESCRIPTION

The subject property consists of ~117 acres located on the east and west sides of Trueblood Road south of Weldon, North Carolina (see Figure 1: Site Location Map). Site improvements include primarily structural steel and metal siding buildings collectively providing ±108,495 square feet of sheltered area. The improvements were utilized by the former Coastal Lumber Company sawmill which produced rough cut hardwood lumber. The property is fully fenced with manual gate access. An active railroad line borders the eastern side of the property.

Much of the process equipment remains on the site including the sawmill, one dip tank, which was used for treating lumber to protect against mold, and steam heated kilns for drying lumber. Two water supply wells are present on the site, but only one is in service for non-potable water supply to an adjacent wood preserving facility owned by others. Most of the property is unpaved and covered by gravel or crusher run stone, although there are some paved (concrete) areas. Surface water drainage from the industrial site flows to the west into a pond on the subject property, then west into an unnamed tributary, then north into Chockoyotte Creek, which flows east into the Roanoke River.

There are several soil series on the subject property. The main soil series at the subject site is Udorthents. This series is moderately sloping, well drained but moderate to slow permeability. The soils are a mixture of sandy loams and clays where natural soil materials have been excavated or covered. The depth to the high water table is 4–6 feet. Also present is the Emporia–Urban land complex. This series is well drained but moderately permeable. The soils are a mixture of sandy loams and clays to a depth of 67 inches. These soils have a moderate available water capacity, and the depth to the high water table is 3 – 4 feet.

The undeveloped area that is not under water consists of the Turbeville fine sandy loam series. These are deep, well drained soils with sand, clays, and loams to a depth of 86 inches. These soils have moderate permeability and water capacity, and the depth to the high water table is >6.0 feet. This information was obtained from the Web Soil Survey of Halifax County, North Carolina, presented online by the US Department of Agriculture.

Bensinger & Garrison Environmental, Inc. (B&G) completed a Phase I Environmental Site Assessment of the subject property during November 2012. The Phase I identified several potential environmental conditions and recommended sampling of soils, groundwater, surface water, and some sediments deposited by runoff from wood treating operations. During December 3-5, 2012, Tim W. Monroe, P.E. and Wesley Z. Brummer P.E. of Bensinger & Garrison Environmental, Inc. (B&G) completed a Phase II Environmental Site Assessment of the subject property to investigate the potential environmental conditions recommended by the Phase I report. A sample of the pond water was collected on November 16 by Mr. Monroe. This report provides details of the Phase II investigation, analytical results, and recommendations for additional activities, if any.

## II. SOIL SAMPLING ACTIVITIES

Soil samples were obtained at shallow depths in several locations to assess areas of concern from the Phase I assessment (see Figure 2: Site Map & Sampling Locations). Prior to initiating soil and groundwater sampling activities, Mr. Ron Deberry, an employee of Coastal Lumber Company for over 40 years, was interviewed and provided the former location of petroleum UST(s), a description of process equipment, and a history of mill operations. Samples were obtained using standard procedures in Appendix 5 at locations and depths shown in Figure 2 and Appendix 1. Soil sampling locations and analytical methods used include the following:

1. Adjacent to the former dip tank and analyzed by EPA Method 8081 for pesticides (SS–4).
2. Two locations in the former outdoor lumber storage area and analyzed by EPA Method 8081 for pesticides, 6010C for total arsenic, and SM 3500C for total hexavalent chromium (SS–5 and SS–6).
3. From the boring for temporary monitoring well MW-8 at a depth of five feet and analyzed by EPA Methods 8260B for volatiles, 8270D for semi–volatiles, and 6010C for total lead (SS–8–5).
4. Two locations adjacent to a lumber treatment drip pad owned by others and analyzed by EPA Methods 8081 (pesticides), 8260B (volatiles), 8270D (semi–volatiles), total arsenic (6010C), total hexavalent chromium (SM 3500C), and total lead (6010C) (SS–2 and SS–3).
5. One sample from a drainage swale adjacent to the former outdoor lumber storage area and analyzed by all methods and for all parameters listed in #4 above (SS–1).

All samples were transported packed in ice by chain-of-custody protocol to a NC certified laboratory. Boring logs are included in Appendix 1 and 2.

## III. GROUNDWATER SAMPLING ACTIVITIES

Assessment of groundwater quality at the site was conducted by installing and sampling three temporary shallow groundwater monitoring wells (MW–8, MW–13, and MW–14) and by sampling two water supply wells identified as PW–OLD (inactive water supply well) and PW–NEW (active water supply well) as shown in Figure 2. All temporary monitoring wells were sampled utilizing the standard procedures outlined in Appendix 5. Groundwater sampling records are provided in Appendix 3. Depths to groundwater (DTGW) were 12.36 feet for MW-13, 7.34 feet for MW-8, and 2.5 feet for MW-14. DTGW for PW–OLD was measured to be 21.05 feet below ground surface (bgs). PW–NEW was sampled at the water supply tank fill pipe for the adjacent wood treating (preserving) plant and depth to groundwater for the well not determined.

The inactive water supply well (PW-OLD), located between the sawmill and stacker buildings (see Figure 2), was sampled by groundwater pump using clean, clear, PVC tubing. After purging for 110 minutes at a pumping rate of 1.5 gallons/minute (165 gallons purged), the pump lost prime. The groundwater pump was not lowered further into the water column due to concern for pump retrieval and limited remaining length of wiring. The depth of PW-OLD is not known. Once the well recovered, a sample was obtained using the groundwater pump. The three temporary shallow monitoring wells were installed by a NC Certified Well Driller in accordance with 15A NCAC 2C .0100 Well Construction Standards. All three temporary monitoring wells were installed using a six inch diameter hand auger and abandoned on the day sampled in accordance with 15A NCAC 2C .0113. The Well Construction and Abandonment Records are shown in Appendix 2.

The temporary shallow groundwater monitoring wells (MW–8, MW–13 and MW–14) were developed using dedicated bailers to remove fines and then purged of three to five well volumes, or until essentially dry, prior to sampling. B&G obtained groundwater samples during the sampling events using clean, dedicated bailers. As standard procedure, sample bottles were packed in ice and transferred by Chain–of–Custody protocol to a NC Drinking Water Certified Laboratory for analysis. All groundwater samples were analyzed for volatile organic compounds by EPA Method 8260, for semi-volatiles by EPA Method 8270, pesticides by EPA Method 8081, total lead and total arsenic by EPA Method 6010C, and total hexavalent chromium by SM 3500C. The groundwater sample obtained from MW–8 was also analyzed for extractable petroleum hydrocarbons by MAEPH and for volatile petroleum hydrocarbons by MAVPH.

## IV. SURFACE WATER AND POND SEDIMENT SAMPLING ACTIVITIES

To investigate for potential contamination resulting from runoff from the wood preserving plant, the downgradient pond was sampled by obtaining one surface water sample and two sediment samples. Sample locations are shown on Figure 2. The surface water sample was obtained by disposable bailer in a small channel connecting the two pond segments. The bailer ensured that a column of sample was obtained which included depths below the pond surface. Sediment samples were obtained by lowering a clean, stainless steel, open trap sampler to the pond bottom and closing with a trip mechanism to capture deposited material. Bottom samples were de–watered through clean, non-woven filter fabric prior to transfer into laboratory provided sample bottles. As standard procedure, filled sample bottles were packed in ice and transferred by Chain–of–Custody protocol to a NC Drinking Water Certified Laboratory for analysis. The pond water sample and both pond sediment samples were submitted for analysis by for volatiles by EPA Method 8260, semi–volatiles by EPA Method 8270, pesticides by EPA Method 8081, and total arsenic by EPA Method 6010C, and total hexavalent chromium by SM 3500C.

## V. SOIL & POND SEDIMENT SAMPLING RESULTS

Laboratory analytical results are provided in Appendix 4 and concentrations of detected pollutants summarized in Table 1. Results indicate that Dieldrin, an insecticide, is in soils in the vicinity of the dip tank at concentrations exceeding the NCDENR–DWM Inactive Hazardous Sites Branch (DWM–IHSB) protection of groundwater remediation goal. Also, arsenic was found in pond sediment above the DWM–IHSB protection of groundwater remediation goal, the DWM–IHSB health based remediation goal, and the NCDENR–DWQ soil–to–water maximum soil contaminant concentration (MSCC). Tetrachloroethene (PCE) was detected in pond sediment at a concentration slightly above the NCDENR–DWQ soil–to–water maximum soil contaminant concentration (MSCC) however; the same parameter was detected in the method blank.

## VI. GROUNDWATER & POND SURFACE WATER SAMPLING RESULTS

Laboratory analytical results are provided in Appendix 4 and concentrations of detected pollutants summarized in Table 2. Results indicate that bis(2–ethylhexyl)phthalate (DEHP) was found in the pond surface water sample at a concentration above both the NCDENR–DWQ 2L Standard and the EPA National Criteria for Fresh Water Aquatic Life. Total lead was detected in the sample obtained from the water supply well which is not in use (PW–OLD) at a concentration above the NCDENR–DWQ 2L Standard.

Hexavalent chromium was detected in PW–OLD, MW–13 and MW–14 above the NCDENR–DWQ 2L Standard. No other identified pollutant was detected at a concentration above any standard or criteria for groundwater or surface water.

## VII. CONCLUSIONS

A. Both pond sediment samples contained arsenic at concentrations above the NCDENR–DWQ soil-to-water MSCC (Maximum Soil Contaminant Concentration). One pond sediment sample also contained a solvent, PCE, at a concentration slightly above the NCDENR–DWQ soil-to-water MSCC. PCE was also detected in the 8260B quality control method blank. Although the method blank concentration is not high enough to make the result suspect, it does bring into question the potential for adverse environmental impact from PCE at the concentrations indicated.

B. Soil samples at two locations near the dip tank contained an insecticide (Dieldrin) at concentrations above the NCDENR-DWQ Inactive Hazardous Site Branch Protection of Groundwater Remediation Goal.

C. The pond surface water sample contained bis(2-ethylhexyl)phthalate (DEHP) at ten times the EPA National Criteria for Human Health.

D. Groundwater samples from one water supply well (PW–OLD), MW–13 and MW–14 were found to contain concentrations of hexavalent chromium above the 2L groundwater quality standard. Concentrations of detected contaminants that do not have a 2L groundwater quality standard were all below the method reporting limit.

E. The groundwater sample from the water supply well not in use (PW–OLD) contained lead above the 2L groundwater quality standard.

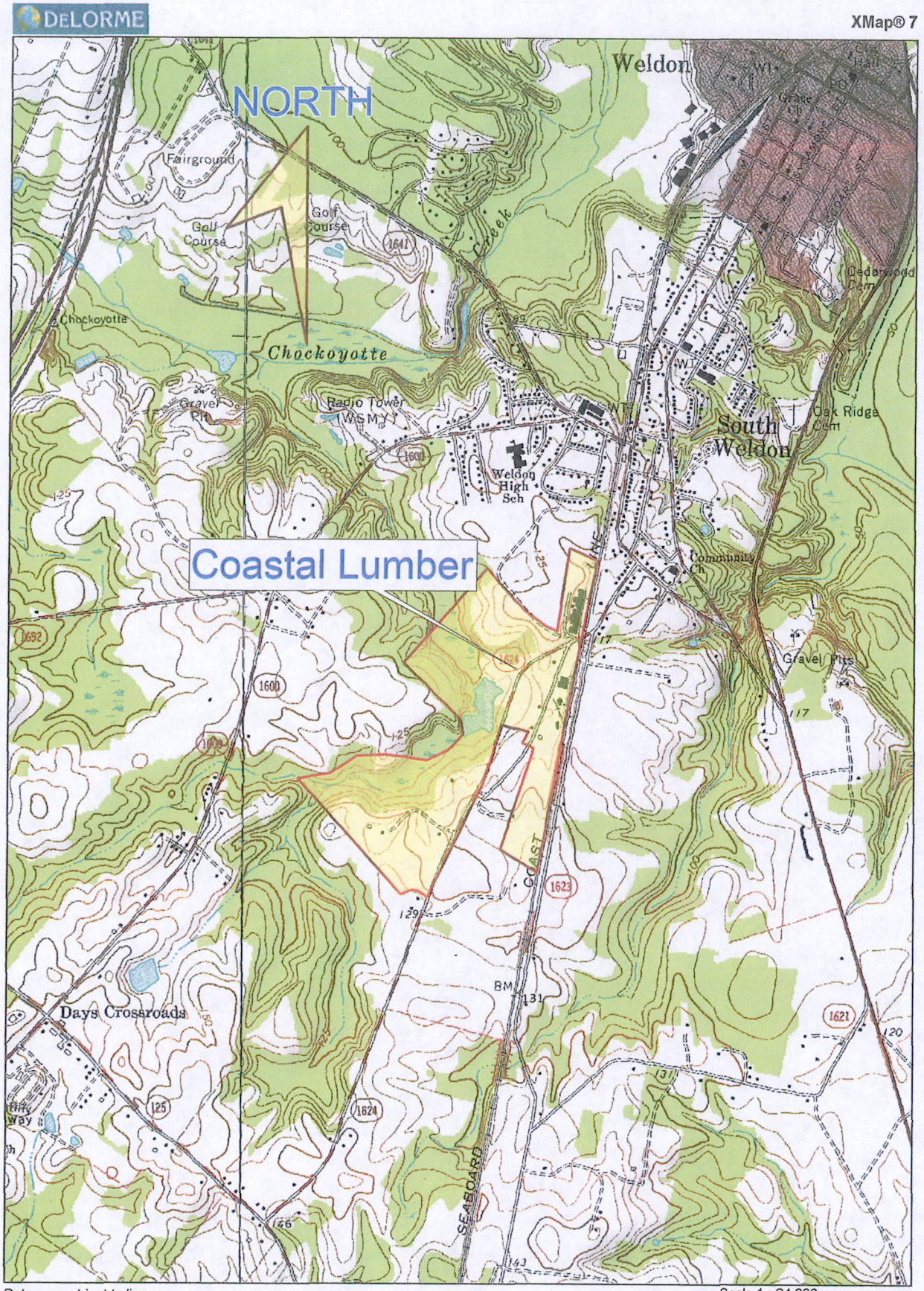
F. No petroleum residuals were detected in the area of the former fuel UST installation(s) which was located near MW-8 (see Figure 2) based on interview(s) with prior employee(s).

## VIII. RECOMMENDATIONS

A. Two copies of this report should be provided to the property owner(s) and they should submit one copy to the NCDENR-Division of Water Quality, Raleigh Regional Office, Aquifer Protection Section, 1628 Mail Service Center, Raleigh, NC 27699-1628.

B. B&G recommends that any future development proceed under the North Carolina Brownfields Program administered by the NCDENR-Division of Waste Management. Application may proceed once the site has received an incident number.

# FIGURES




BENSINGER & GARRISON ENVIRONMENTAL, INC.
BLUEFIELD ENGINEERING, P.C.

PROJECT NO.: 213912

DATE: Jan. 2013

DRAWN BY: WZB

APPROVED BY: JHG

FILE: Coastal Ph. 1

SCALE: 1 : 24,000

SOURCE: Delorme 3D TopoQuads

USGS Topos: Weldon, NC

NOTES:

FIGURE 1: SITE LOCATION MAP
Coastal Lumber

1772 Trueblood Road
Weldon, Halifax County, North Carolina

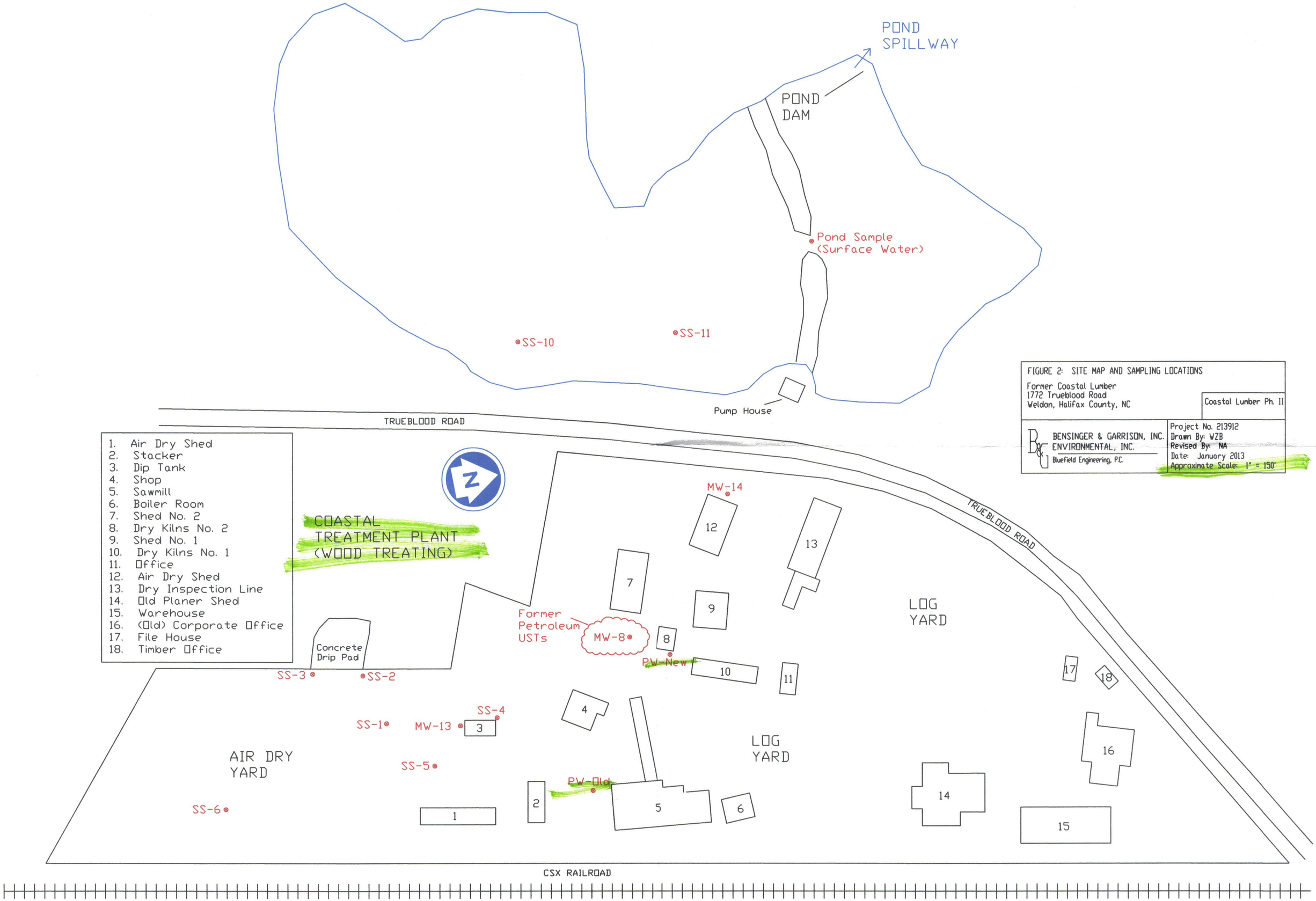



FIGURE 2: SITE MAP AND SAMPLING LOCATIONS

Former Coastal Lumber
1772 Trueblood Road
Weldon, Halifax County, NC

Coastal Lumber Ph. II

BENSINGER & GARRISON, INC.
ENVIRONMENTAL, INC.
Bluefield Engineering, P.C.

Project No. 213912
Drawn By: WZB
Revised By: NA
Date: January 2013
Approximate Scale: 1" = 150'

# TABLES

## TABLE 1: SOIL & POND SEDIMENT SAMPLE ANALYTICAL RESULTS

**Former Coastal Lumber Company Property**
**1772 Trueblood Road, Weldon, Halifax County, NC**

| PARAMETER | SS-1 | SS-2 | SS-3 | SS-4 | SS-5 | SS-6 | SS-8-5 | SS-10 | SS-11 | NCDENR-DWQ Soil-to-Water MSCC |
|---|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 0.022 | | | | | | | | 0.11 | 16 |
| 9-Octadecenamide, (Z)- | 0.44J | 0.23J | 0.32J | | | | | | | |
| Acetone | 0.067 | 0.049 | | | | | 0.040 | 0.27 | 0.28 | 24 |
| Arsenic – Total | 0.58 | 1.02 | 1.59 | | 5.16 | 0.655 | | 26.9 | 29.9 | 5.8* / 1.6** / 1.6*** |
| Cyclohexene | 0.33JB | 0.31JB | 0.38JB | | | | 0.36JB | 1.4JB | 1.6JB | 2800** |
| Cyclopentasiloxane, decamet… | 0.0033J | 0.0012J | 0.0016J | | | | | | 0.02J | |
| Cyclotetrasiloxane, octamet… | 0.0031J | | | | | | | | | |
| Ethane, 1,1,2,2-tetrachloro- | 0.43JB**** | 0.44JB**** | 0.46JB**** | | | | 0.54JB**** | 2.7JB**** | 2.7JB**** | 0.0012 |
| Ethane, 1,1,2-trichloro- | 0.17JB**** | 0.18JB**** | 0.19JB**** | | | | 0.23JB**** | 1.2JB**** | 1.1JB**** | 0.002 |
| Lead – Total | 5.38 | 5.59 | 6.75 | | | | 6.48 | | | 270 |
| 7-Oxabicyclo[4.1.0]heptane | | | 0.17J | | | | 0.2J | | | |
| Dieldrin | | | | 0.0029 | 0.0041 | | | | | 0.0008* / 0.11** / 0.11*** |
| Methylene Chloride | | | | | | | | 0.0042J | 0.0088J | 0.02 |
| Octadecane | | | | | | | | | 1.2J | |
| Tetracosane | | | | | | | | | 0.98J | |
| Carbon Disulfide | | | | | | | | | 0.0052J | 4.3 |
| Tetrachloroethene (PCE) | | | | | | | | | 0.0089JB | 0.0074 |

*All results are in mg/kg unless otherwise noted*
*Shaded cells are above a protection of groundwater standard*
*D – Data reported from a dilution*
*J – Estimated concentration; detected below the reporting limit but above the detection limit.*
*B – Parameter also detected in quality control method blank*
*Blank cells – parameter not detected*

** Protection of Groundwater Remediation Goal of the Inactive Hazardous Sites Branch*
*** EPA Regional Screening Level for Industrial Soil*
**** Health Based Industrial Soil Remediation Goal of the Inactive Hazardous Sites Branch*

*******NOTE: Results for Ethane 1,1,2,2-tetrachloro- and Ethane 1,1,2-trichloro- are not valid. Detects are from an improper method search.***

## TABLE 2: GROUNDWATER & SURFACE WATER SAMPLE ANALYTICAL RESULTS

**Former Coastal Lumber Company Property**
**1772 Trueblood Road, Weldon, Halifax County, NC**

| PARAMETER | MW-8 | PW-OLD | PW-NEW | POND WATER SAMPLE | MW-13 | MW-14 | NCDENR-DWQ 2L STANDARD |
|---|---|---|---|---|---|---|---|
| Arsenic - Total | | | | 5.48J | | | 10 / 10** |
| Bis(2-ethylhexyl)phthalate | | | | 22 | | | 3 / 2.2*** |
| Bromacil | 25J | | | | | | |
| Caprolactam | 4.1J | | | | | 4.6J | 4,000 |
| Chlorobenzene | 2.7 | | | | | 0.5J | 50 |
| Cyclohexene | 15JB | 18JB | 8.1JB | | 10JB | 7.6JB | 230* |
| Lead – Total | 2.58J | 427 | | | 5.18J | 2.18J | 15 |
| Hexavalent Chromium | | 13 | 9.9J | | 11 | 19 | 10 |
| Methylene Chloride | | | | 0.4J | | | 5 |
| 1-Adamantanol | | | | | 17J | | |
| Diethylphthalate | | | | 210D | 4.2J | | 6,000 / 1200* |
| Di-n-butylphthalate (DBP) | | | | | 1.6J | | 700 / 9.5* |

*All results are in ug/l unless otherwise noted*
*Shaded cells are above 2L groundwater or surface water standard or EPA National Criteria*
*D – Data reported from a dilution*
*J – Estimated concentration; detected below the reporting limit but above the detection limit*
*B – Parameter also detected in quality control method blank*
*Blank cells – parameter not detected*

** EPA National Criteria for Fresh Water Aquatic Life*
*** NCDENR-DWQ Surface Water Standard for Human Health*
**** EPA National Criteria for Human Health*

# APPENDICES

# APPENDIX 1:

# SOIL BORING LOGS

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: MW–8 DATE: 12/4/12 SURFACE ELEVATION: _____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 1.5 | Crusher run gravel | | | | |
| 1.5 – 5 | Orange brown sandy clayey soil | | | | |
| 5 – 8 | Light brown clayey silty sand | SS–8–5 | | | |
| 8 – 10 | Tan silty sand to coarse sand | | | | Saturated soils at 8' depth |
| 10' – 10' 10" | Orange brown silty sand | | | | |
| | Boring terminated at 10' 10" | | | | |
| | Bottom of hole (boring) | | | | |

**Type of Sample**
SS - Split Spoon
SL - Split Spoon w/Liner
ST - Shelby Tube
HA - Hand Auger

**Drillers:** Bensinger & Garrison Environmental
Drilling Method: Hand Auger
Drilling Foreman: Wes Brummer
Backfill Material: Soil / Bentonite

Groundwater
Encountered At: Ft
After Completion: Ft
After__ Hrs: Ft

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: MW–13 DATE: 12/3/12 SURFACE ELEVATION: ____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 1 | Brownish gray silty sand | | | | Organic content to 1' depth |
| | | | | | |
| 1 – 2 | Brown clayey silty sand | | | | |
| | | | | | |
| 2 – 5 | Orange brown clayey silty sand | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 5 – 7 | Light brown clayey silty sand | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 7 – 9 | Grayish brown clayey silty sand | | | | River rock |
| | | | | | |
| | | | | | |
| | | | | | |
| 9 – 13 | Grayish orange brown clayey silty sand | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | Moist soils at 11' depth |
| | | | | | |
| | | | | | Saturated soils at 12' depth |
| | | | | | |
| | Boring terminated at 13' | | | | |
| | | | | | |
| | | | | | |

**Type of Sample**
SS - Split Spoon
SL - Split Spoon w/Liner
ST - Shelby Tube
HA - Hand Auger

**Drillers:** Bensinger & Garrison Environmental
Drilling Method: Hand Auger
Drilling Foreman: Wes Brummer
Backfill Material: Soil / Bentonite

Groundwater
Encountered At: Ft
After Completion: Ft
After__ Hrs: Ft

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: MW–14 DATE: 12/4/12 SURFACE ELEVATION: _____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 6" | Sand and rock | | | | |
| 6" – 12" | Crush and run with organics | | | | |
| 12" – 3' | Dark gray silty sand | | | | |
| 3 – 7 | Light gray clayey silty sand | | | | |
| | | | | | Organic content saturated soils at 4' depth |
| | Boring terminated at 7' depth | | | | |

**Type of Sample**
SS - Split Spoon
SL - Split Spoon w/Liner
ST - Shelby Tube
HA - Hand Auger

**Drillers:** Bensinger & Garrison Environmental
Drilling Method: Hand Auger
Drilling Foreman: Wes Brummer
Backfill Material: Soil / Bentonite

Groundwater
Encountered At: Ft
After Completion: Ft
After__ Hrs: Ft

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: SS–1 DATE: 12/4/12 SURFACE ELEVATION: _____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 6" | Topsoil with organics (grass, etc.) | | | | |
| 6" – 12" | Reddish brown sandy silt | | | | |
| 12" – 18" | Reddish brown clayey silt | SS–1 | | | Sample 12" – 18" |

**Type of Sample**
SS - Split Spoon
SL - Split Spoon w/Liner
ST - Shelby Tube
HA - Hand Auger

**Drillers:** Bensinger & Garrison Environmental
Drilling Method: Hand Auger
Drilling Foreman: Wes Brummer
Backfill Material: Soil / Bentonite

Groundwater
Encountered At: Ft
After Completion: Ft
After__ Hrs: Ft

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: SS–2 DATE: 12/3/12 SURFACE ELEVATION: _____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 6" | Gravel | | | | |
| 6" – 12" | Reddish brown clayey silt | | | | |
| 12" – 18" | Reddish brown silty clay | SS–2 | | | Sample 12" – 18" |

**Type of Sample**
SS - Split Spoon
SL - Split Spoon w/Liner
ST - Shelby Tube
HA - Hand Auger

**Drillers:** Bensinger & Garrison Environmental
Drilling Method: Hand Auger
Drilling Foreman: Wes Brummer
Backfill Material: Soil / Bentonite

Groundwater
Encountered At: Ft
After Completion: Ft
After__ Hrs: Ft

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: SS–3 DATE: 12/3/12 SURFACE ELEVATION: _____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 6" | Gravel | | | | |
| 6" – 24" | Reddish brown silty clay | | | | |
| | | SS–3 | | | Sample 12" – 24" |

**Type of Sample**
**SS - Split Spoon**
**SL - Split Spoon w/Liner**
**ST - Shelby Tube**
**HA - Hand Auger**

**Drillers:** **Bensinger & Garrison Environmental**
**Drilling Method:** **Hand Auger**
**Drilling Foreman:** **Wes Brummer**
**Backfill Material:** **Soil / Bentonite**

**Groundwater**
**Encountered At:** **Ft**
**After Completion:** **Ft**
**After__ Hrs:** **Ft**

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: SS–4 DATE: 12/3/12 SURFACE ELEVATION: _____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 12" | Gravel sand mix | | | | |
| 12" – 16" | Gravel with dark organic | | | | |
| 16" – 20" | Reddish coarse sand | SS–4 | | | Sample 16" – 20" |

**Type of Sample**
SS - Split Spoon
SL - Split Spoon w/Liner
ST - Shelby Tube
HA - Hand Auger

**Drillers:** Bensinger & Garrison Environmental
Drilling Method: Hand Auger
Drilling Foreman: Wes Brummer
Backfill Material: Soil / Bentonite

Groundwater
Encountered At: Ft
After Completion: Ft
After__ Hrs: Ft

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: SS–5 DATE: 12/4/12 SURFACE ELEVATION: _____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 6" | Gravel and topsoil | | | | |
| 6" – 18" | Reddish brown silty sand | | | | |
| | | SS–5 | | | Sample 12" – 18" |

**Type of Sample**
SS - Split Spoon
SL - Split Spoon w/Liner
ST - Shelby Tube
HA - Hand Auger

**Drillers:** Bensinger & Garrison Environmental
Drilling Method: Hand Auger
Drilling Foreman: Wes Brummer
Backfill Material: Soil / Bentonite

Groundwater
Encountered At: Ft
After Completion: Ft
After__ Hrs: Ft

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# BENSINGER & GARRISON ENVIRONMENTAL, INC.
## LOG OF TEST BORING

BORING NO: SS–6 DATE: 12/4/12 SURFACE ELEVATION: _____ PROJECT # 213912

PROJECT: Coastal Lumber – Phase II

| Depth in Feet | Soil Description | Sample # & Type | Blow count for 6" | FID Reading (ppm) init/15 min | Comments |
|---|---|---|---|---|---|
| 0 – 6" | Topsoil | | | | |
| 6" – 18" | Brownish red silty sand | | | | |
| | | SS–6 | | | Sample 12" – 18" |

**Type of Sample**
SS - Split Spoon
SL - Split Spoon w/Liner
ST - Shelby Tube
HA - Hand Auger

**Drillers:** Bensinger & Garrison Environmental
Drilling Method: Hand Auger
Drilling Foreman: Wes Brummer
Backfill Material: Soil / Bentonite

Groundwater
Encountered At: Ft
After Completion: Ft
After__ Hrs: Ft

*Standard Penetration Test - Driving 2" OD Sampler 18" w/140# Hammer Falling 30"*

# APPENDIX 2:

# TEMPORARY MONITORING WELL CONSTRUCTION & ABANDONMENT RECORDS

Bensinger & Garrison
ENVIRONMENTAL, INC.
Bluefield Engineering, P.C.

P.O. BOX 14609 • RTP, NC 27709
PHONE 919-484-8536
FAX 919-484-8540

December 21, 2012

**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**
**7010 1870 0001 0029 9667**

NCDENR
Division of Water Quality
Attn: Information Processing
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

**RE: Groundwater Temporary Monitoring Well Construction Records for MW-8, MW-13 & MW-14 at Former Coastal Lumber Company Property**

To Whom It May Concern:

Enclosed are the Well Construction Records for three (3) on-site temporary groundwater monitoring wells installed on December 3 & 4, 2012. All three monitoring wells are located on the former Coastal Lumber Company property at 1722 Trueblood Road, Weldon, Halifax County, NC. The wells were permanently abandoned within 48 hours of construction by the standards set forth 15A NCAC 02C .0113. Well abandonment records will be sent under a separate cover letter. If you have any questions, please call me or Jack Garrison at (919) 484-8536.

Sincerely,
**BENSINGER & GARRISON ENVIRONMENTAL, INC.**

Wesley Z. Brummer, P.E.
Environmental Engineer

*WZB/gb*
*Enclosures*
*Environmental Assessments/2012/213912/Well Construction_ltr_12-12*

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

NCDENR - Div. of Water Quality
attn: Information Processing
1617 Mail Service Ctr.
Raleigh, NC 27699-1617

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

X

☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

RECEIVED BY
DEC 27 2012
W.Q. SERVICE CENTER

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

7010 1870 0001 0029 9667

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7010 1870 0001 0029 9667

**U.S. Postal Service™**
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For delivery information visit our website at www.usps.com®

RALEIGH NC 27699

**OFFICIAL USE**

| | | | |
|---|---|---|---|
| Postage | $ | $1.30 | 0709 |
| Certified Fee | $2.95 | $2.95 | 06 |
| Return Receipt Fee (Endorsement Required) | $2.35 | $2.35 | Postmark Here |
| Restricted Delivery Fee (Endorsement Required) | | $0.00 | |
| Total Postage & Fees | $ | $6.60 | 12/21/2012 |

Sent To NCDENR-DWQ Attn: Info Processing
Street, Apt. No.; or PO Box No. 1617 MSC
City, State, ZIP+4 Raleigh, NC 27699-1617

PS Form 3800, August 2006 See Reverse for Instructions

# NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

**WELL CONTRACTOR CERTIFICATION #** 4068-B

**1. WELL CONTRACTOR:**

Wesley Zane Brummer
Well Contractor (Individual) Name

Bensinger & Garrison Environmental, Inc.
Well Contractor Company Name

1426 East NC Highway 54, Suite C
Street Address

Durham — NC — 27713
City or Town — State — Zip Code

(919) 484-8536
Area code Phone number

**2. WELL INFORMATION:**

WELL CONSTRUCTION PERMIT# NA

OTHER ASSOCIATED PERMIT#(if applicable) NA

SITE WELL ID #(if applicable) MW-8

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

DATE DRILLED 12-4-12

**4. WELL LOCATION:**

1772 Trueblood Road, 27839, Parcel No. 1200295
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Weldon COUNTY Halifax

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

LATITUDE 36 ° 24 ' 5.7700 " DMS OR 3x.xxxxxxxxx DD

LONGITUDE 75 ° 36 ' 39.7900 " DMS OR 7x.xxxxxxxxx DD

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

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

Former Coastal Lumber — Facility ID# (if applicable)
Facility Name

1772 Trueblood Road
Street Address

Weldon — NC — 27839
City or Town — State — Zip Code

Don Bright
Contact Name

71 North Oak Street
Mailing Address

Alberta — VA — 23821
City or Town — State — Zip Code

(434) 949-7707
Area code Phone number

**6. WELL DETAILS:**

a. **TOTAL DEPTH:** 10' 10"

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

c. **WATER LEVEL** Below Top of Casing: 9.03 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 1.67 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

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

f. **DISINFECTION: Type** NA **Amount** NA

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

| | | | |
|---|---|---|---|
| Top 7.36' | Bottom 10.83' | Top | Bottom |
| Top | Bottom | Top | Bottom |
| Top | Bottom | Top | Bottom |

**7. CASING:**

| Depth | | Diameter | Thickness/ Weight | Material |
|---|---|---|---|---|
| Top 0 | Bottom 5.83 Ft. | 2" | Sch 40 | PVC |
| Top | Bottom Ft. | | | |
| Top | Bottom Ft. | | | |

8. GROUT:

| Depth | | Material | Method |
|---|---|---|---|
| Top 1 | Bottom 4.83 Ft. | Bentonite | Pour |
| Top | Bottom Ft. | | |
| Top | Bottom Ft. | | |

**9. SCREEN:**

| Depth | | Diameter | Slot Size | Material |
|---|---|---|---|---|
| Top 5.83 | Bottom 10.83 Ft. | 2 in. | .1 in. | PVC |
| Top | Bottom Ft. | in. | in. | |
| Top | Bottom Ft. | in. | in. | |

**10. SAND/GRAVEL PACK:**

| Depth | | Size | Material |
|---|---|---|---|
| Top 4.83 | Bottom 10.83 Ft. | No. 2 | Sand |
| Top | Bottom Ft. | | |
| Top | Bottom Ft. | | |

11. DRILLING LOG

| Top | Bottom | Formation Description |
|---|---|---|
| 0 | 1.5' | Crush and Run Gravel |
| 1.5' | 5' | Orange Brown Sandy Clayer Silt |
| 5' | 8' | Light Brown Clayey Silty Sand |
| 8' | 10' | Tan Silty Sand to Coarse Sand |
| 10' | 10.83' | Orange Brown Silty Sand |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**12. REMARKS:**

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR — 12-20-12 DATE

Wesley Zane Brummer
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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

Form GW-1b
Rev. 2/09

# NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

**WELL CONTRACTOR CERTIFICATION #** 4068-B

**1. WELL CONTRACTOR:**

Wesley Zane Brummer
Well Contractor (Individual) Name

Bensinger & Garrison Environmental, Inc.
Well Contractor Company Name

1426 East NC Highway 54, Suite C
Street Address

Durham | NC | 27713
City or Town | State | Zip Code

(919) 484-8536
Area code Phone number

**2. WELL INFORMATION:**

WELL CONSTRUCTION PERMIT# NA

OTHER ASSOCIATED PERMIT#(if applicable) NA

SITE WELL ID #(if applicable) MW-13

**3. WELL USE** (Check One Box) Monitoring ☑ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use)

DATE DRILLED 12-3-12

**4. WELL LOCATION:**

1772 Trueblood Road, 27839, Parcel No. 1200295
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Weldon COUNTY Halifax

TOPOGRAPHIC / LAND SETTING: (check appropriate box)

☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 36 ° 24 ' 2.5100 " DMS OR 3x.xxxxxxxxx DD

LONGITUDE 75 ° 36 ' 38.3200 " DMS OR 7x.xxxxxxxxx DD

Latitude/longitude source: ☐ GPS ☑ Topographic map

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

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

Former Coastal Lumber
Facility Name | Facility ID# (if applicable)

1772 Trueblood Road
Street Address

Weldon | NC | 27839
City or Town | State | Zip Code

Don Bright
Contact Name

71 North Oak Street
Mailing Address

Alberta | VA | 23821
City or Town | State | Zip Code

(434) 949-7707
Area code Phone number

**6. WELL DETAILS:**

a. **TOTAL DEPTH:** 13'

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

c. **WATER LEVEL** Below Top of Casing: 14.21 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 1.83 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

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

f. **DISINFECTION: Type** NA **Amount** NA

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

| | | | |
|---|---|---|---|
| Top 12.38 | Bottom 13' | Top | Bottom |
| Top | Bottom | Top | Bottom |
| Top | Bottom | Top | Bottom |

**7. CASING:**

| Depth | | Diameter | Thickness/ Weight | Material |
|---|---|---|---|---|
| Top 0 | Bottom 8 Ft. | 2" | Sch 40 | PVC |
| Top | Bottom Ft. | | | |
| Top | Bottom Ft. | | | |

**8. GROUT:**

| Depth | | Material | Method |
|---|---|---|---|
| Top 5 | Bottom 7 Ft. | Bentonite | Pour |
| Top | Bottom Ft. | | |
| Top | Bottom Ft. | | |

**9. SCREEN:**

| Depth | | Diameter | Slot Size | Material |
|---|---|---|---|---|
| Top 8 | Bottom 13' Ft. | 2 in. | .1 in. | PVC |
| Top | Bottom Ft. | in. | in. | |
| Top | Bottom Ft. | in. | in. | |

**10. SAND/GRAVEL PACK:**

| Depth | | Size | Material |
|---|---|---|---|
| Top 7 | Bottom 13' Ft. | No. 2 | Sand |
| Top | Bottom Ft. | | |
| Top | Bottom Ft. | | |

**11. DRILLING LOG**

| Top | Bottom | Formation Description |
|---|---|---|
| 0 | 1' | Brownish Gray Silty Sand |
| 1.5' | 2' | Brown Clayey Silty Sand |
| 2' | 5' | Orange Brown Clayey Silty Sand |
| 5' | 7' | Light Brown Clayey Silty Sand |
| 7' | 9' | Grayish Brown Clayey Silty Sand |
| 9' | 13' | Grayish Orange Brown Clayey Silty Sand |
| | | |
| | | |
| | | |
| | | |
| | | |

**12. REMARKS:**

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR | 12-20-12 DATE

Wesley Zane Brummer
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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

Form GW-1b
Rev. 2/09

# NON RESIDENTIAL WELL CONSTRUCTION RECORD

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

**WELL CONTRACTOR CERTIFICATION #** 4068-B

**1. WELL CONTRACTOR:**

Wesley Zane Brummer
Well Contractor (Individual) Name

Bensinger & Garrison Environmental, Inc.
Well Contractor Company Name

1426 East NC Highway 54, Suite C
Street Address

Durham NC 27713
City or Town State Zip Code

( 919 ) 484-8536
Area code Phone number

**2. WELL INFORMATION:**

WELL CONSTRUCTION PERMIT# NA

OTHER ASSOCIATED PERMIT#(if applicable) NA

**SITE** WELL ID #(if applicable) MW-14

**3. WELL USE** (Check One Box) Monitoring ☑ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use) _____

**DATE DRILLED** 12-4-12

**4. WELL LOCATION:**

1772 Trueblood Road, 27839, Parcel No. 1200295
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Weldon COUNTY Halifax

TOPOGRAPHIC / LAND SETTING: (check appropriate box)

☐Slope ☐Valley ☑Flat ☐Ridge ☐Other _____

LATITUDE 36 ° 24 ' 8.7100 " DMS **OR** 3x.xxxxxxxxx DD

LONGITUDE 75 ° 36 ' 43.1300 " DMS **OR** 7x.xxxxxxxxx DD

Latitude/longitude source: ☐GPS ☑Topographic map

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

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

Former Coastal Lumber
Facility Name Facility ID# (if applicable)

1772 Trueblood Road
Street Address

Weldon NC 27839
City or Town State Zip Code

Don Bright
Contact Name

71 North Oak Street
Mailing Address

Alberta VA 23821
City or Town State Zip Code

( 434 ) 949-7707
Area code Phone number

**6. WELL DETAILS:**

a. **TOTAL DEPTH:** 7'

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

c. **WATER LEVEL** Below Top of Casing: 6.77 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 4.17 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

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

f. **DISINFECTION: Type** NA **Amount** NA

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

| | | | |
|---|---|---|---|
| Top 0 | Bottom 2.6 | Top | Bottom |
| Top | Bottom | Top | Bottom |
| Top | Bottom | Top | Bottom |

**7. CASING:**

| Depth | | Diameter | Thickness/ Weight | Material |
|---|---|---|---|---|
| Top 0 | Bottom 2 Ft. | 2" | Sch 40 | PVC |
| Top | Bottom Ft. | | | |
| Top | Bottom Ft. | | | |

8. GROUT:

| Depth | | Material | Method |
|---|---|---|---|
| Top 0 | Bottom 1 Ft. | Bentonite | Pour |
| Top | Bottom Ft. | | |
| Top | Bottom Ft. | | |

**9. SCREEN:**

| Depth | | Diameter | Slot Size | Material |
|---|---|---|---|---|
| Top 2 | Bottom 7 Ft. | 2 in. | .1 in. | PVC |
| Top | Bottom Ft. | in. | in. | |
| Top | Bottom Ft. | in. | in. | |

**10. SAND/GRAVEL PACK:**

| Depth | | Size | Material |
|---|---|---|---|
| Top 1 | Bottom 7 Ft. | No. 2 | Sand |
| Top | Bottom Ft. | | |
| Top | Bottom Ft. | | |

11. DRILLING LOG

| Top | Bottom | Formation Description |
|---|---|---|
| 0 | 0.5' | Sand and Rock |
| 0.5' | 1' | Crush & Run with Organics |
| 1' | 3' | Dark gray Silty Sand |
| 3' | 7' | Light Gray clayey silty sand |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**12. REMARKS:**

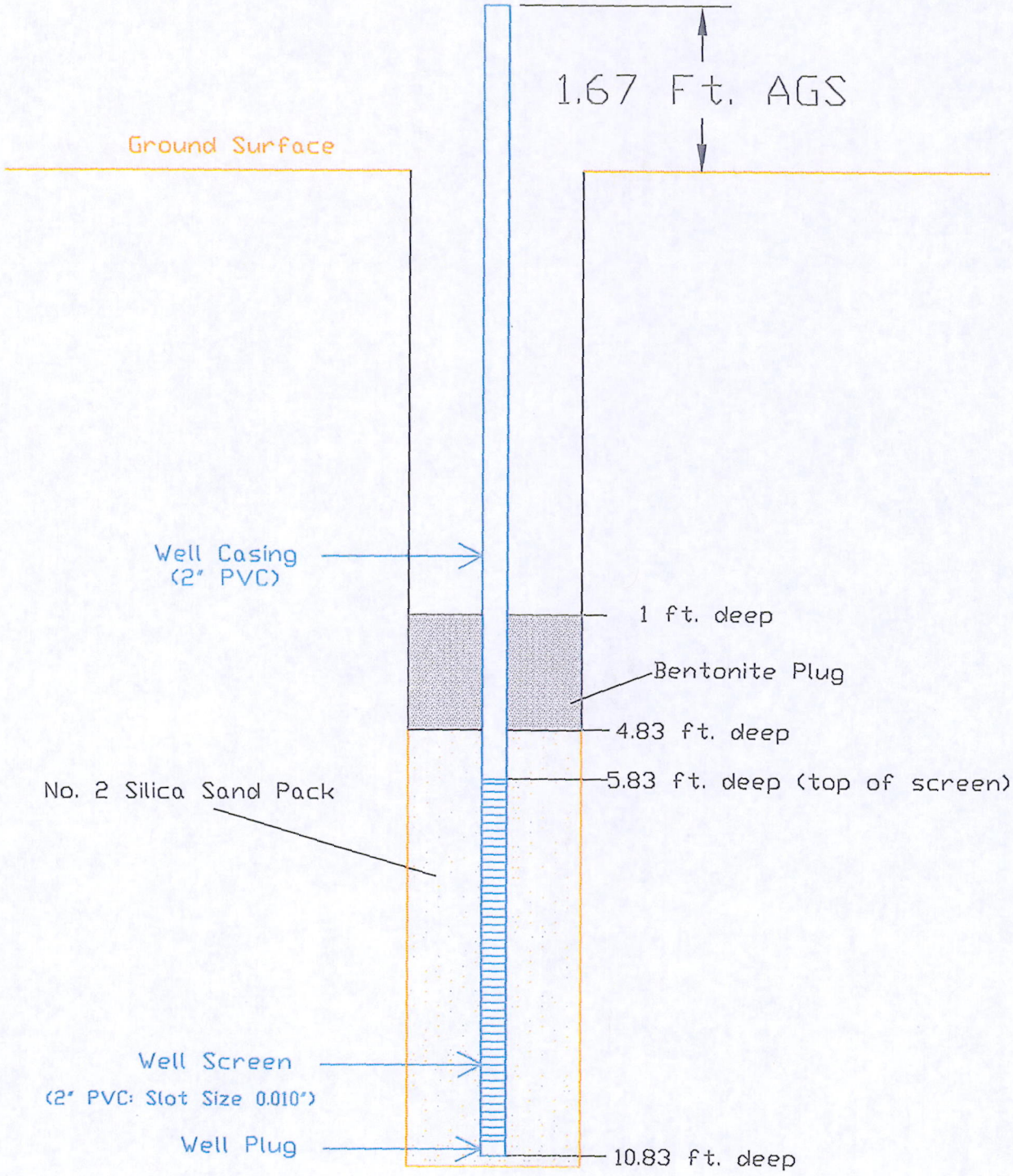
*I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.*

SIGNATURE OF CERTIFIED WELL CONTRACTOR 12-20-12 DATE

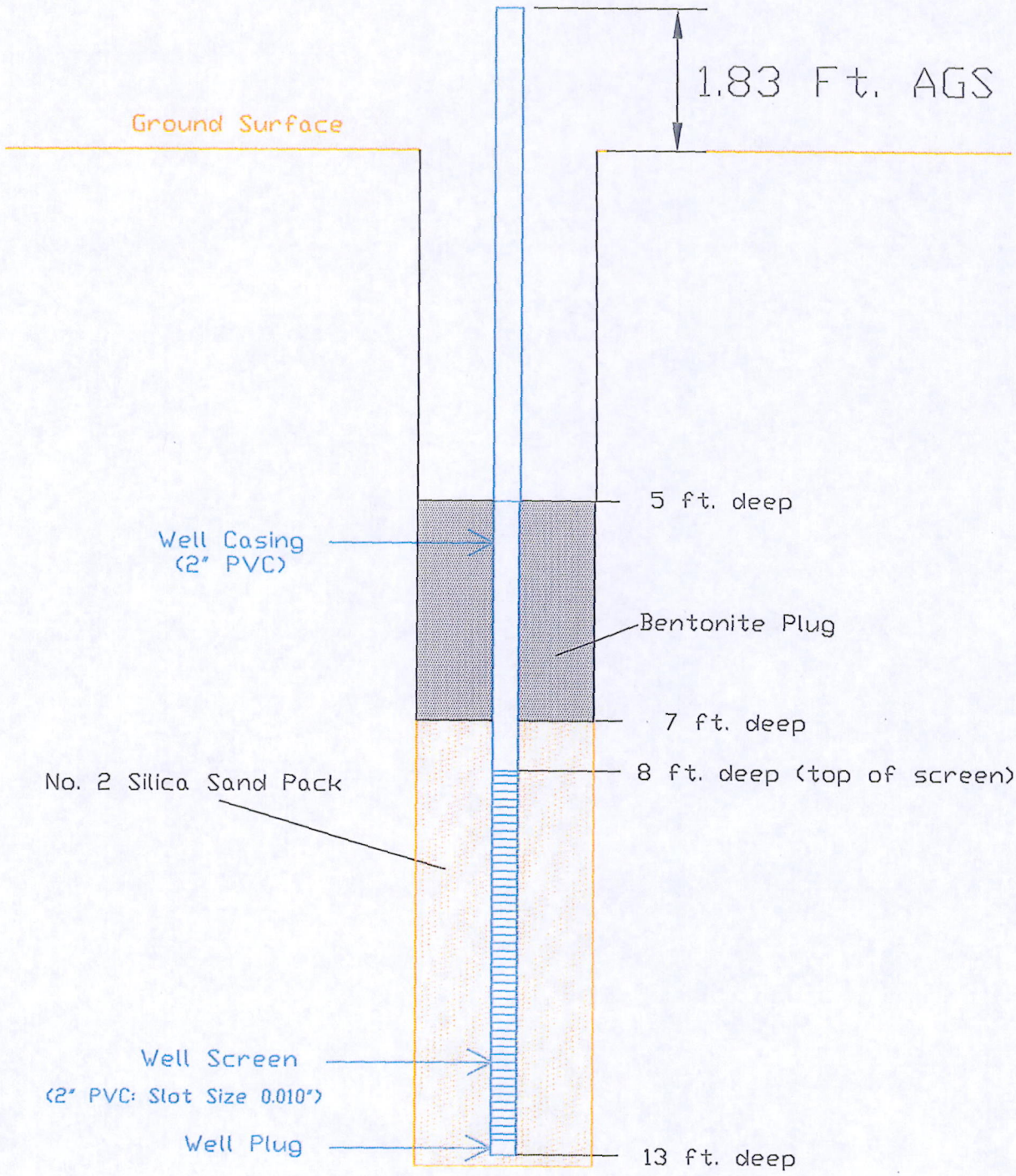
Wesley Zane Brummer
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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

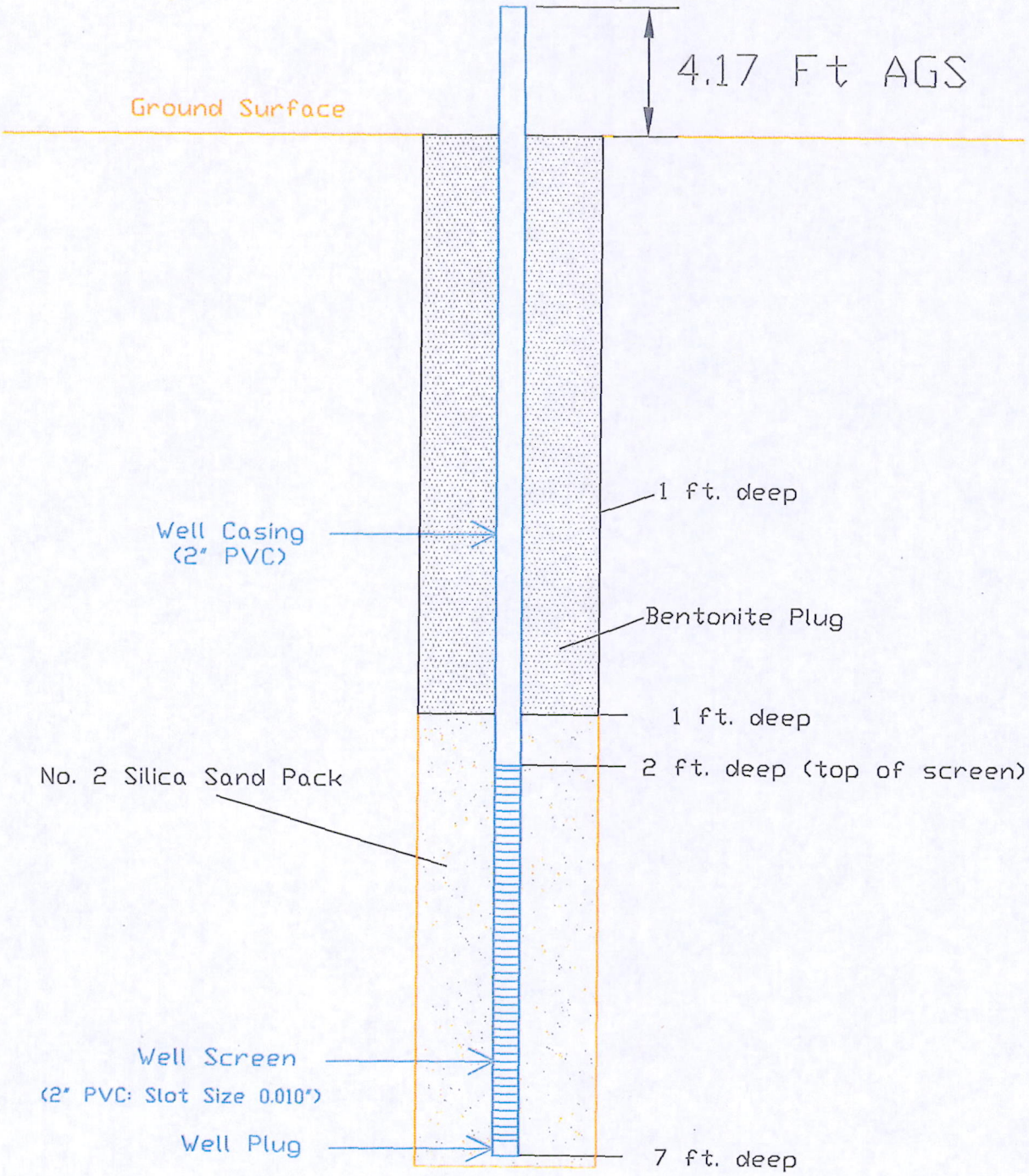
Form GW-1b
Rev. 2/09




| | | |
|---|---|---|
| FIGURE 1: TEMPORARY GROUNDWATER MONITORING WELL (MW-8)<br><br>Former Costal Lumber Company<br>1772 Trueblood Road<br>Weldon, Halifax County, North Carolina | PROJECT NO.: 213912<br>DATE: Dec., 2012<br>REVISION DATE: NA<br>DRAWN BY: WZB<br>APPROVED BY: TWM<br>FILE: Coastal-MW Rec | SCALE: Not to Scale<br><br>BENSINGER & GARRISON ENVIRONMENTAL, INC.<br>BLUEFIELD ENGINEERING, P.C. |



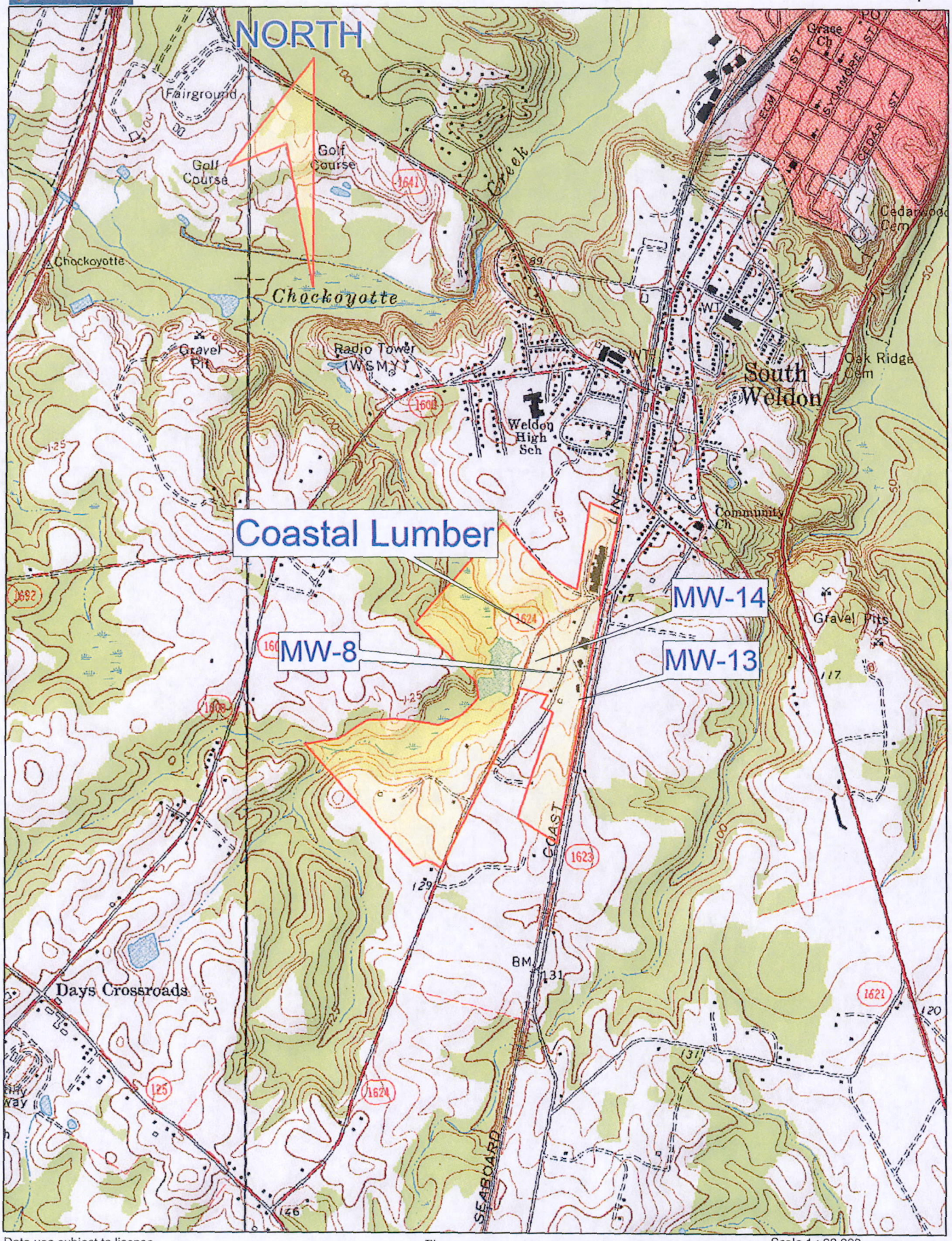

| | | |
|---|---|---|
| FIGURE 2: TEMPORARY GROUNDWATER MONITORING WELL (MW-13)<br><br>Former Coastal Lumber Property<br>1772 Trueblood Road<br>Weldon, Halifax County, North Carolina | PROJECT NO.: 213912<br>DATE: Dec., 2012<br>REVISION DATE: NA<br>DRAWN BY: WZB<br>APPROVED BY: TWM<br>FILE: Coastal-MW Rec | SCALE: Not to Scale<br><br>BENSINGER & GARRISON ENVIRONMENTAL, INC.<br>BLUEFIELD ENGINEERING, P.C. |




| | | |
|---|---|---|
| FIGURE 3: TEMPORARY GOUNDWATER MONITORING WELL (MW-14 ) | PROJECT NO.: 213912 | SCALE: Not to Scale |
| | DATE: Dec., 2012 | |
| | REVISION DATE: NA | |
| Former Coastal Lumber Property<br>1772 Trueblood Road<br>Weldon, Halifax County, North Carolina | DRAWN BY: WZB | BENSINGER & GARRISON ENVIRONMENTAL, INC.<br>BLUEFIELD ENGINEERING, P.C. |
| | APPROVED BY: TWM | |
| | FILE: Coastal-MW Rec | |

DELORME

XMap® 7




Data use subject to license.

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www.delorme.com

TN

MN (9.8°W)

Scale 1 : 20,800

1" = 1,733.3 ft

Data Zoom 13-2

Bensinger & Garrison
ENVIRONMENTAL, INC.
Bluefield Engineering, P.C.

P.O. BOX 14609 • RTP, NC 27709
PHONE 919-484-8536
FAX 919-484-8540

December 21, 2012

**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**
**7010 1870 0001 0029 9827**

NCDENR
Division of Water Quality
Attn: Information Processing
1617 Mail Service Center
Raleigh, NC 27699–1617

**RE: Monitoring Well Abandonment Records for MW–8, MW-13, & MW-14**
**Former Coastal Lumber Property**
**1772 Trueblood Road, Weldon, Halifax County, North Carolina 27839**

To Whom It May Concern:

Attached are the well abandonment records for the monitoring wells referenced above.

Should you have any questions, please call me at (919) 484–8536.

Sincerely,
**BENSINGER & GARRISON ENVIRONMENTAL, INC.**

Wesley Z. Brummer, P.E.
Environmental Engineer

*WZB/gb*
*Enclosures*
*Environmental Assessments/2012/213912/MW_Abandonment_ltr_12–12*

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

NCDENR - Div. of Water Quality
attn: Information Processing
1617 Mail Service Ctr.
Raleigh, NC 27699-1617

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X
☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

RECEIVED BY
DEC 27 2012
Felix Rafaeli
MAIL SERVICE CENTER

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7010 1870 0001 0029 9827

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7010 1870 0001 0029 9827

**U.S. Postal Service™**
**CERTIFIED MAIL™ RECEIPT**
*(Domestic Mail Only; No Insurance Coverage Provided)*

For delivery information visit our website at www.usps.com®

RALEIGH NC 27699

OFFICIAL USE

| | | | |
|---|---|---|---|
| Postage | $ | $1.10 | 0709 |
| Certified Fee | $2.95 | $2.95 | 06 |
| Return Receipt Fee (Endorsement Required) | $2.35 | $2.35 | Postmark Here |
| Restricted Delivery Fee (Endorsement Required) | | $0.00 | |
| Total Postage & Fees | $ | $6.40 | 12/21/2012 |

Sent To NCDENR - Div. of Water Quality
Street, Apt. No.; or PO Box No. Attn: Info Processing 1617 MSC
City, State, ZIP+4 Raleigh, NC 27699-1617

PS Form 3800, August 2006 See Reverse for Instructions

# WELL ABANDONMENT RECORD

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

**WELL CONTRACTOR CERTIFICATION #** 4068-B

**1. WELL CONTRACTOR:**

Wesley Zane Brummer
Well Contractor (Individual) Name

Bensinger & Garrison Environmental, Inc.
Well Contractor Company Name

1426 East NC Highway 54, Suite C
Street Address

Durham | NC | 27713
City or Town | State | Zip Code

(919) 484-8536
Area code | Phone number

**2. WELL INFORMATION:**

**SITE WELL ID #** (if applicable) MW-8

**STATE WELL PERMIT #** (if applicable) NA

**COUNTY WELL PERMIT #** (if applicable) NA

**DWQ or OTHER PERMIT #** (if applicable) NA

**WELL USE** (Check applicable use) ☑ **Monitoring** ☐ **Residential**

☐ **Municipal/Public** ☐ **Industrial/Commercial** ☐ **Agricultural**

☐ **Recovery** ☐ **Injection** ☐ **Irrigation**

☐ Other (list use) _____

**3. WELL LOCATION:**

COUNTY Halifax QUADRANGLE NAME Weldon

NEAREST TOWN: Weldon

1772 Trueblood Road, 27839, Parcel No. 1200295
(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other _____
(Check appropriate setting)

LATITUDE 36 ° 24 ' 5.7700 " DMS OR 3X.XXXXXXXXDD

LONGITUDE 75 ° 36 ' 39.7900 " DMS OR 7X.XXXXXXXXDD

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

**4a. FACILITY** - The name of the business where the well is located. Complete 4a :
(If a residential well, skip 4a; complete 4b, well owner information only.)

**FACILITY ID #** (if applicable) NA

NAME OF FACILITY Former Coastal Lumber

STREET ADDRESS 1772 Trueblood Road

Weldon | NC | 27839
City or Town | State | Zip Code

**4b. CONTACT PERSON/WELL OWNER:**

NAME Don Bright

STREET ADDRESS 71 North Oak Street, Alberta, VA 23821

**5. WELL DETAILS:**

a. Total Depth 10.83 ft. Diameter: 2" in.

b. Water Level (Below Measuring Point): 9.03 ft.

Measuring point is 1.67 ft. above land surface.

**6. CASING:**

| | Length | | Diameter | |
|---|---|---|---|---|
| a. Casing Depth (if known): | 5.81 | ft. | 2" | in. |
| b. Casing Removed: | 2.48 | ft. | 2" | in. |

**7. DISINFECTION:** None

(Amount of 65%75% calcium hypochlorite used)

**8. SEALING MATERIAL:**

**Neat Cement**

Cement _____ lb.
Water _____ gal.

**Sand Cement**

Cement _____ lb.
Water _____ gal.

**Bentonite**

Bentonite 50 lb.

Type: ☐ Slurry ☑ Pellets

Water 3 gal.

**Other**

Type material _____

Amount _____

**9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:**

Introduced 3/8" bentonite pellets slowly into the bottom of the well by a tremie pipe that was raised as the well filled.

**10. WELL DIAGRAM** : Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used

**11. DATE WELL ABANDONED** 12-5-12

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE 12-21-12

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL — DATE
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

Wesley Zane Brummer
PRINTED NAME OF PERSON ABANDONING THE WELL

**Submit a copy to the owner and the original to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-1617, Phone : (919) 807-6300**

Form GW-30
Rev. 5/10

# WELL ABANDONMENT RECORD

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

**WELL CONTRACTOR CERTIFICATION #** 4068-B

**1. WELL CONTRACTOR:**

Wesley Zane Brummer
Well Contractor (Individual) Name

Bensinger & Garrison Environmental, Inc.
Well Contractor Company Name

1426 East NC Highway 54, Suite C
Street Address

Durham | NC | 27713
City or Town | State | Zip Code

(919) 484-8536
Area code Phone number

**2. WELL INFORMATION:**

**SITE WELL ID #** (if applicable) MW-13

**STATE WELL PERMIT #** (if applicable) NA

**COUNTY WELL PERMIT #** (if applicable) NA

**DWQ or OTHER PERMIT #** (if applicable) NA

**WELL USE** (Check applicable use) ☑ **Monitoring** ☐ **Residential**

☐ **Municipal/Public** ☐ **Industrial/Commercial** ☐ **Agricultural**

☐ **Recovery** ☐ **Injection** ☐ **Irrigation**

☐ Other (list use) _____

**3. WELL LOCATION:**

COUNTY Halifax QUADRANGLE NAME Weldon

NEAREST TOWN: Weldon

1772 Trueblood Road, 27839, Parcel No. 1200295
(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other _____
(Check appropriate setting)

LATITUDE 36 ° 24 ' 2.5100 " DMS **OR** 3X.XXXXXXXXDD

LONGITUDE 75 ° 36 ' 38.3200 " DMS **OR** 7X.XXXXXXXXDD

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

**4a. FACILITY** - The name of the business where the well is located. Complete 4a :
(If a residential well, skip 4a; complete 4b, well owner information only.)

**FACILITY ID #** (if applicable) NA

NAME OF FACILITY Former Coastal Lumber

STREET ADDRESS 1772 Trueblood Road

Weldon | NC | 27839
City or Town | State | Zip Code

**4b. CONTACT PERSON/WELL OWNER:**

NAME Don Bright

STREET ADDRESS 71 North Oak Street, Alberta, VA 23821

**5. WELL DETAILS:**

a. Total Depth 13 ft. Diameter: 2" in.

b. Water Level (Below Measuring Point): 14.21 ft.

Measuring point is 1.83 ft. above land surface.

**6. CASING:**

| | Length | Diameter |
|---|---|---|
| a. Casing Depth (if known): | 8 ft. | 2" in. |
| b. Casing Removed: | 5 ft. | 2" in. |

**7. DISINFECTION:** None

(Amount of 65%75% calcium hypochlorite used)

**8. SEALING MATERIAL:**

**Neat Cement**

Cement _____ lb.
Water _____ gal.

**Sand Cement**

Cement _____ lb.
Water _____ gal.

**Bentonite**

Bentonite 50 lb.

Type: ☐ Slurry ☑ Pellets

Water 3 gal.

**Other**

Type material _____

Amount _____

**9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:**

Introduced 3/8" bentonite pellets slowly into the bottom of the well by a tremie pipe that was raised as the well filled.

**10. WELL DIAGRAM** : *Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used*

**11. DATE WELL ABANDONED** 12-5-12

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

[signature] 12-21-12
**SIGNATURE OF CERTIFIED WELL CONTRACTOR** **DATE**

**SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL** **DATE**
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

Wesley Zane Brummer
**PRINTED NAME OF PERSON ABANDONING THE WELL**

**Submit a copy to the owner and the original to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-1617, Phone : (919) 807-6300**

Form GW-30
Rev. 5/10

# WELL ABANDONMENT RECORD

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

**WELL CONTRACTOR CERTIFICATION #** 4068-B

**1. WELL CONTRACTOR:**

Wesley Zane Brummer
Well Contractor (Individual) Name

Bensinger & Garrison Environmental, Inc.
Well Contractor Company Name

1426 East NC Highway 54, Suite C
Street Address

Durham | NC | 27713
City or Town | State | Zip Code

(919) 484-8536
Area code Phone number

**2. WELL INFORMATION:**

**SITE WELL ID #** (if applicable) MW-14

**STATE WELL PERMIT #** (if applicable) NA

**COUNTY WELL PERMIT #** (if applicable) NA

**DWQ or OTHER PERMIT #** (if applicable) NA

**WELL USE** (Check applicable use) ☑ **Monitoring** ☐ **Residential**

☐ **Municipal/Public** ☐ **Industrial/Commercial** ☐ **Agricultural**

☐ **Recovery** ☐ **Injection** ☐ **Irrigation**

☐ Other (list use) _____

**3. WELL LOCATION:**

COUNTY Halifax QUADRANGLE NAME Weldon

NEAREST TOWN: Weldon

1772 Trueblood Road, 27839, Parcel No. 1200295
(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other _____
(Check appropriate setting)

LATITUDE 36 ° 24 ' 8.7100 " DMS OR 3X.XXXXXXXXDD

LONGITUDE 75 ° 36 ' 43.1300 " DMS OR 7X.XXXXXXXXDD

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

**4a. FACILITY** - The name of the business where the well is located. Complete 4a :
(If a residential well, skip 4a; complete 4b, well owner information only.)

**FACILITY ID #** (if applicable) NA

NAME OF FACILITY Former Coastal Lumber

STREET ADDRESS 1772 Trueblood Road

Weldon | NC | 27839
City or Town | State | Zip Code

**4b. CONTACT PERSON/WELL OWNER:**

NAME Don Bright

STREET ADDRESS 71 North Oak Street, Alberta, VA 23821

**5. WELL DETAILS:**

a. Total Depth 7' ft. Diameter: 2" in.

b. Water Level (Below Measuring Point): 6.77 ft.
Measuring point is 4.17 ft. above land surface.

**6. CASING:**

| | Length | Diameter |
|---|---|---|
| a. Casing Depth (if known): | 2 ft. | 2" in. |
| b. Casing Removed: | 5 ft. | 2" in. |

**7. DISINFECTION:** None

(Amount of 65%75% calcium hypochlorite used)

**8. SEALING MATERIAL:**

**Neat Cement**

Cement _____ lb.
Water _____ gal.

**Sand Cement**

Cement _____ lb.
Water _____ gal.

**Bentonite**

Bentonite 50 lb.

Type: ☐ Slurry ☑ Pellets
Water 3 gal.

**Other**

Type material _____

Amount _____

**9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:**

Introduced 3/8" bentonite pellets slowly into the bottom of the well by a tremie pipe that was raised as the well filled.

**10. WELL DIAGRAM** : Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used

**11. DATE WELL ABANDONED** 12-5-12

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

Wesley Z Brummer — 12-21-12
**SIGNATURE OF CERTIFIED WELL CONTRACTOR** **DATE**

**SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL** **DATE**
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

Wesley Zane Brummer
**PRINTED NAME OF PERSON ABANDONING THE WELL**

**Submit a copy to the owner and the original to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-1617, Phone : (919) 807-6300**

Form GW-30
Rev. 5/10

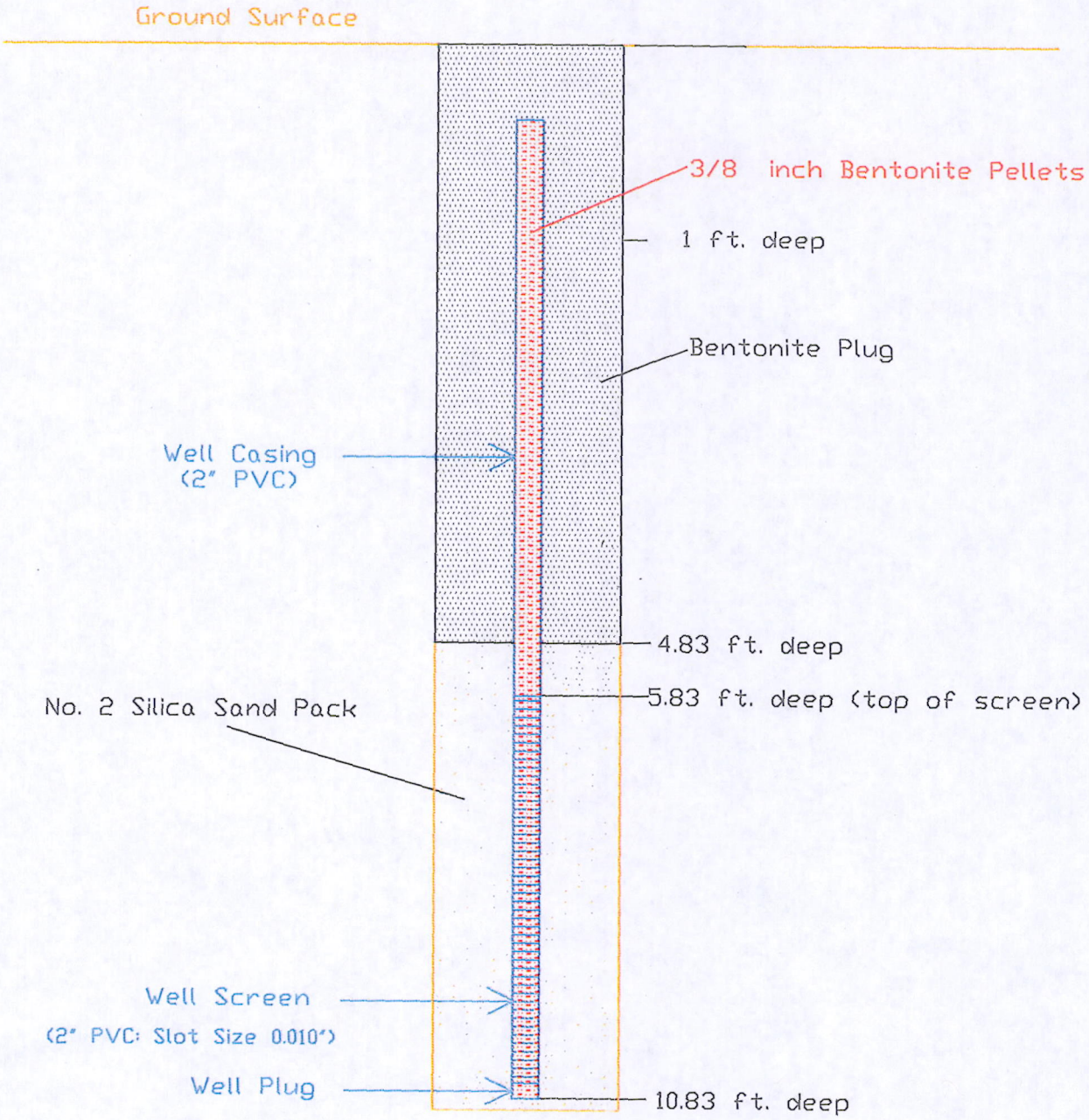


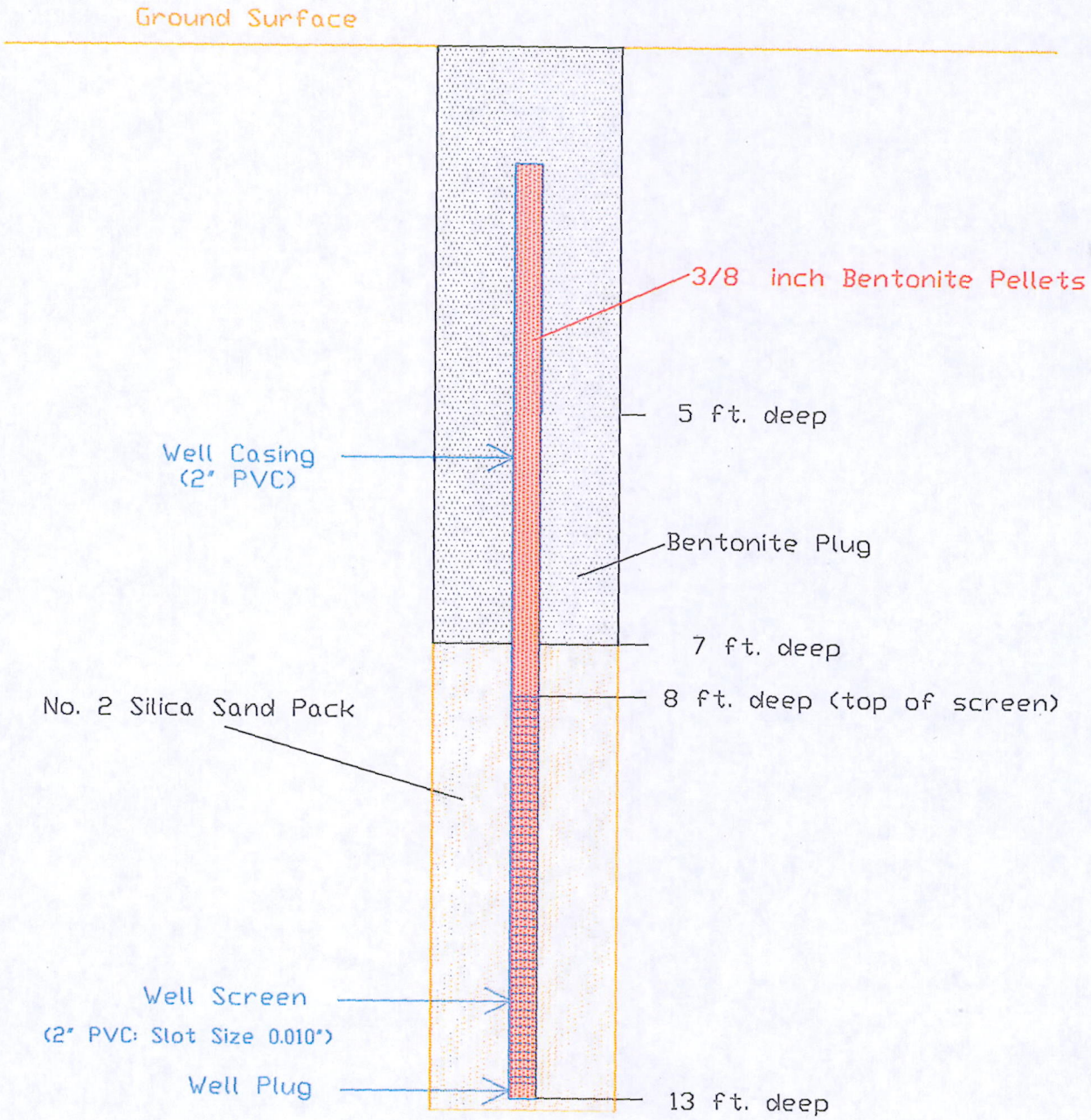

FIGURE 1: TEMPORARY GROUNDWATER MONITORING WELL (MW-8)

Former Costal Lumber Company
1772 Trueblood Road
Weldon, Halifax County, North Carolina

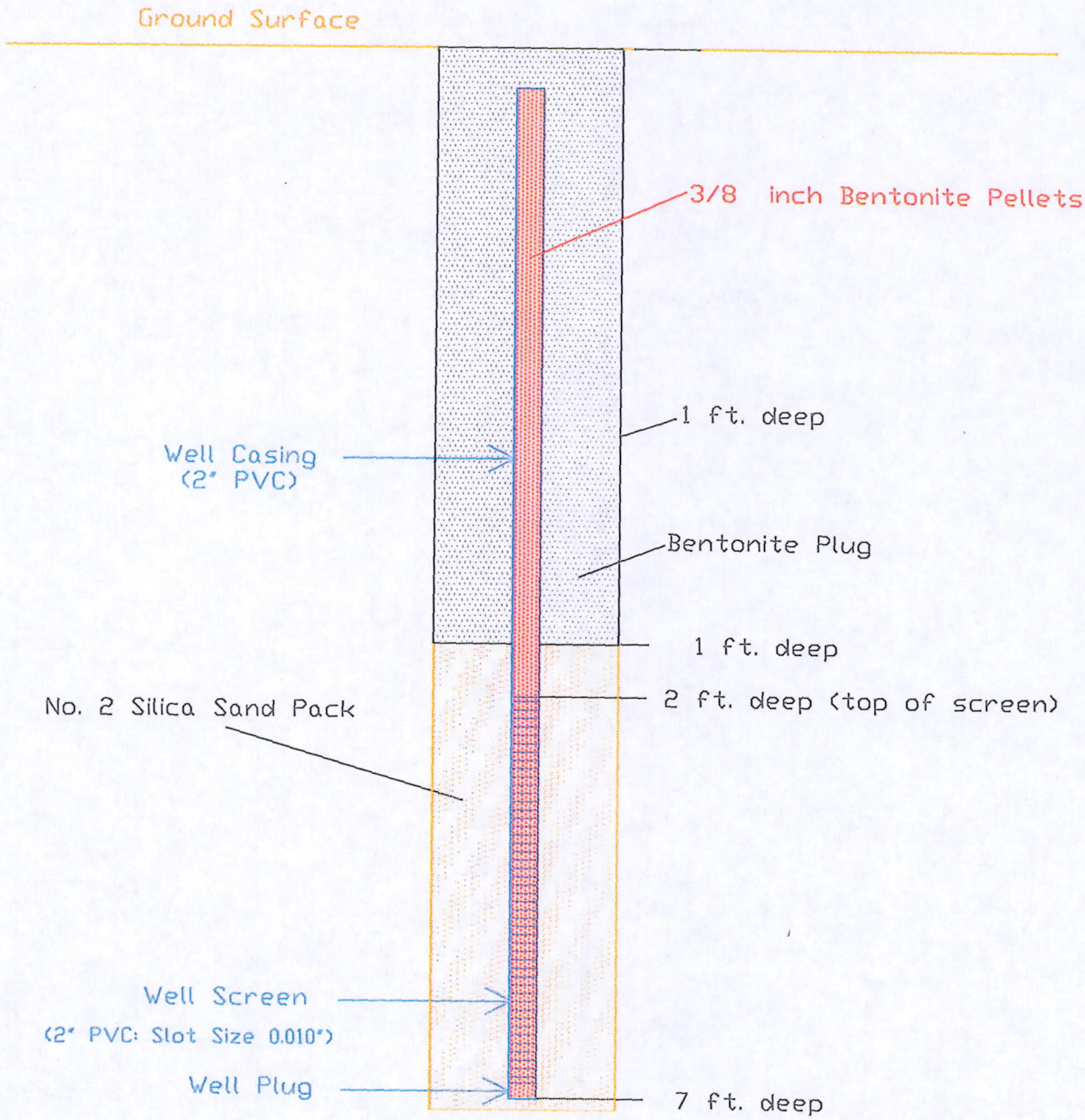
| | |
|---|---|
| PROJECT NO.: | 213912 |
| DATE: | Dec., 2012 |
| REVISION DATE: | NA |
| DRAWN BY: | WZB |
| APPROVED BY: | TWM |
| FILE: | Coastal-MW Rec |

SCALE: Not to Scale

BENSINGER & GARRISON ENVIRONMENTAL, INC.
BLUEFIELD ENGINEERING, P.C.




| | | |
|---|---|---|
| FIGURE 2: TEMPORARY GROUNDWATER MONITORING WELL (MW-13)<br><br>Former Coastal Lumber Property<br>1772 Trueblood Road<br>Weldon, Halifax County, North Carolina | PROJECT NO.: 213912<br>DATE: Dec., 2012<br>REVISION DATE: NA<br>DRAWN BY: WZB<br>APPROVED BY: TWM<br>FILE: Coastal-MW Rec | SCALE: Not to Scale<br><br>BENSINGER & GARRISON ENVIRONMENTAL, INC.<br>BLUEFIELD ENGINEERING, P.C. |




| | | |
|---|---|---|
| FIGURE 3: TEMPORARY GROUNDWATER MONITORING WELL (MW-14 ) | PROJECT NO.: 213912 | SCALE: Not to Scale |
| Former Coastal Lumber Property<br>1772 Trueblood Road<br>Weldon, Halifax County, North Carolina | DATE: Dec., 2012<br>REVISION DATE: NA<br>DRAWN BY: WZB<br>APPROVED BY: TWM<br>FILE: Coastal-MW Rec | BENSINGER & GARRISON ENVIRONMENTAL, INC.<br>BLUEFIELD ENGINEERING, P.C. |

# APPENDIX 3:

# TEMPORARY MONITORING WELL SAMPLING RECORDS

# GROUNDWATER ELEVATION MONITORING FORM

Site Name: _____ Date: 12/5/12

Project Number: 213912 Sampler Name: TWM

| WELL ID NO. | *DEPTH TO GROUNDWATER (DTGW) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | READING #1 | | READING #2 | | READING #3 | | READING #4 | | READING #5 | |
| | Time | DTGW | Time | DTGW | Time | DTGW | Time | DTGW | Time | DTGW |
| MW-13 | 8:45 | 14.21 | 9:05 | 14.20 | ✓ | | | | | |
| MW-9 | 8:53 | 9.05 | 9:13 | 9.01 | ✓ | | | | | |
| MW-14 | 9:02 | 6.75 | 9:22 | 6.73 | ✓ | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

*Continue recording depth to groundwater until level has equilibrated (± 1%)

NOTES/COMMENTS: Depths from top of casing

| | |
|---|---|
| Project Title: Former Coastal Lumber Co. Ph. II | |
| Project Number: 213912 | |
| Date 12/5/12 | Samplers: WZB/TWM |

MONITORING WELL SAMPLING DATA

| Well No. MW-8 | MW 8 | 010 Stable | MW13 | New Stable | | |
|---|---|---|---|---|---|---|
| Total Well Depth (ft.) 10'-10" | | Well PWO | | | | |
| Water Depth: Marker Reading (ft.) | | | | | | |
| Tape Reading (+ or -) | | | | | | |
| Water Depth (marker + tape) | 7'-4" | | | | | |
| Water Column (total depth - water depth) | 3'-6" | | | | | |
| Well Volume (see note) | 0.56 | | | | | |
| Volume to Purge (3 to 5 well volumes) | 2.8 | | | | | |
| Bailer ID Number | | | | | | |
| Volume Purged (note if well bailed dry) | 3.0 | | | | | |
| Sample No. | | | | | | |
| Date Collected | 12/5/12 | 12/5/12 | [illegible] | [illegible] | | |
| Time Collected | 2:30 pm | 2:42 pm | 4:00PM | 71.15PM | | |
| pH | 5.62 | 7.52 | 4.70 | 7.44 | | |
| Temperature (°C) | 17.6 | 17.3 | 15.6 | 18.3 | | |
| Conductivity (units = µS ) | 126.6 | 396 | 71.5 | 359 | | |

Note: Volumes per foot of water column; 2" well = 0.16 gal/ft. 4" well = 0.65 gal/ft, 6' well = 1.5 gal/ft. Casing 20" ags

Bensinger & Garrison Environmental, Inc.

Bluefield Engineering, P. C.

GROUNDWATER MONITORING DATA FORM

| | |
|---|---|
| Project Title: Former Coastal Lumber Co. Ph. II | |
| Project Number: 213912 | |
| Date 12/5/12 | Samplers: |

MONITORING WELL SAMPLING DATA

| | | | | | | |
|---|---|---|---|---|---|---|
| Well No. MW - 13 | | | | | | |
| Total Well Depth (ft.) 13' | | | | | | |
| Water Depth: Marker Reading (ft.) | | | | | | |
| Tape Reading (+ or -) | | | | | | |
| Water Depth (marker + tape) | | | | | | |
| Water Column (total depth - water depth) | 7" | | | | | |
| Well Volume (see note) | 0.1 | | | | | |
| Volume to Purge (3 to 5 well volumes) | 0.5 | | | | | |
| Bailer ID Number | Dep | | | | | |
| Volume Purged (note if well bailed dry) | 3gal/Dry | | | | | |
| Sample No. | MW-13 | | | | | |
| Date Collected | 12-5-12 | | | | | |
| Time Collected | 2:00 PM | | | | | |
| pH | 4.78 | | | | | |
| Temperature (°C) | 18.6 | | | | | |
| Conductivity (units = ) | 71.5 | | | | | |

Note: Volumes per foot of water column; 2" well = 0.16 gal/ft. Casing 22" ags
4" well = 0.65 gal/ft, 6' well = 1.5 gal/ft.

Bensinger & Garrison Environmental, Inc.

Bluefield Engineering, P. C.

GROUNDWATER MONITORING DATA FORM

| | |
|---|---|
| Project Title: Former Coastal Lumber Co. Ph. II | |
| Project Number: 213312 | |
| Date 12/5/12 | Samplers: TWM |

MONITORING WELL SAMPLING DATA

| | | | | | | |
|---|---|---|---|---|---|---|
| Well No. MW-14 | | | | | | |
| Total Well Depth (ft.) 7' | | | | | | |
| Water Depth: Marker Reading (ft.) | | | | | | |
| Tape Reading (+ or -) | | | | | | |
| Water Depth (marker + tape) | | | | | | |
| Water Column (total depth - water depth) | 4'-5" | | | | | |
| Well Volume (see note) | 0.7 | | | | | |
| Volume to Purge (3 to 5 well volumes) | 3.5 | | | | | |
| Bailer ID Number | | | | | | |
| Volume Purged (note if well bailed dry) | 3.5 | | | | | |
| Sample No. | | | | | | |
| Date Collected | 12/5/12 | | | | | |
| Time Collected | 1:45 pm | | | | | |
| pH | 6.5 | | | | | |
| Temperature (°C) | 14.1 | | | | | |
| Conductivity (units = mS ) | 797 | | | | | |

Note: Volumes per foot of water column; 2" well = 0.16 gal/ft. 4" well = 0.65 gal/ft, 6' well = 1.5 gal/ft. Casing 50" ags (cut) Well Developed (18 gal)

Bensinger & Garrison Environmental, Inc.

Bluefield Engineering, P. C.

GROUNDWATER MONITORING DATA FORM

**BENSINGER & GARRISON ENVIRONMENTAL, INC.**
**Field pH and Conductivity Form**

**Site(s) ID:** Coastal - Ph II

**Client Project No.:** 21391d

**Signature:** Wesley R [illegible] **Time:** 11:30 AM, **Date:** 12-5-12

| **pH Calibration Data** | | |
|---|---|---|
| | | |
| Buffers Used | Result | Acceptable Y/N |
| 4.00 | 4.00 | Yes |
| 7.00 | 7.04 | Yes |
| 10.00 | 10.00 | Yes |

**On-Site Buffer Check**

| Buffer Used | Result | Signature (sign below) | Time (below) |
|---|---|---|---|
| 4.00 | 4.02 | Wesley R [illegible] | 11:45 AM |
| 7.00 | 7.03 | Wesley R [illegible] | 11:45 AM |
| 10.00 | 10.04 | Wesley R [illegible] | 11:45 AM |
| | | | |
| | | | |
| | | | |
| | | | |

| **Conductivity Standard (µS)** | | |
|---|---|---|
| | | |
| | Result | Acceptable Y/N |
| 84 | 84 | Yes |
| 1413 | 1412 | Yes |
| 12880 | 12880 | Yes |
| 10 | | |

**On-Site Check**

| Calibration Solution | Result | Signature (sign below) | Time (below) |
|---|---|---|---|
| 84 | 83.2 | Wesley R [illegible] | 11:50 AM |
| 1413 | 1411 | Wesley R [illegible] | 11:51 AM |
| 12880 | 12870 | Wesley R [illegible] | 11:52 AM. |
| | | | |

pH Buffer 4.00 Lot #: 2AA670 Expiration date: 1-2014
pH Buffer 7.00 Lot #: 2AC44 Expiration date: 4-2014
pH Buffer 10.00 Lot #: 1A0046 Expiration date: 4-2013

Conductivity Calibration Solution 84 µS Lot #: 2AH253 Expiration date: 8-2013
Conductivity Calibration Solution 1413 µS Lot #: 2AC669 Expiration date: 3-2013
Conductivity Calibration Solution 12880 µS Lot #: 2AC650 Expiration date: 3-2013
Conductivity Calibration Solution 10 µS Lot #: Expiration date:

# APPENDIX 4:

# LABORATORY ANALYTICAL REPORTS

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

**www.encolabs.com**

Wednesday, December 5, 2012

BENSINGER & GARRISON (BE012)

Attn: Jack Garrison

PO BOX 14609

RTP, NC 27709-

**RE: Laboratory Results for**
**Project Number: 213912, Project Name/Desc: 213912**
**ENCO Workorder(s): C213506**

Dear Jack Garrison,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, November 16, 2012.

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

Chuck Smith
Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 23.

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## SAMPLE SUMMARY/LABORATORY CHRONICLE

| Client ID: Pond Sample | Lab ID: C213506-01 | Sampled: 11/16/12 10:20 | Received: 11/16/12 13:40 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 05/15/13 | | 11/19/12 | 12:22 | 11/21/2012 11:47 |
| EPA 8081B | 11/23/12 | 12/31/12 | 11/21/12 | 14:37 | 11/29/2012 12:25 |
| EPA 8260B | 11/30/12 | | 11/26/12 | 08:29 | 11/26/2012 16:06 |
| EPA 8270D | 11/23/12 | 12/27/12 | 11/17/12 | 07:43 | 11/26/2012 14:38 |
| SM3500-Cr D VI | 11/17/12 10:20 | | 11/16/12 | 18:01 | 11/16/2012 18:11 |

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## SAMPLE DETECTION SUMMARY

| Client ID: Pond Sample | | | Lab ID: C213506-01 | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **Results** | **Flag** | **MDL** | **PQL** | **Units** | **Method** | **Notes** |
| Arsenic - Total | 5.48 | J | 2.80 | 10.0 | ug/L | EPA 6010C | |
| Bis(2-ethylhexyl)phthalate | 22 | | 1.7 | 5.0 | ug/L | EPA 8270D | |
| Diethylphthalate | 210 | D | 6.3 | 30 | ug/L | EPA 8270D | |
| Methylene chloride | 0.40 | J | 0.23 | 1.0 | ug/L | EPA 8260B | |
| Unknown | 140 | JB | | | ug/L | EPA 8270D | B |

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## ANALYTICAL RESULTS

**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

### Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.012 | U | ug/L | 1 | 0.012 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.66 | U | ug/L | 1 | 0.66 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.30 | U | ug/L | 1 | 0.30 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 2-Butanone [78-93-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 5.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.081 | U | ug/L | 1 | 0.081 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.88 | U | ug/L | 1 | 0.88 | 5.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.068 | U | ug/L | 1 | 0.068 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.085 | U | ug/L | 1 | 0.085 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Acetone [67-64-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 5.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Benzene [71-43-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Bromoform [75-25-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Bromomethane [74-83-9] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Carbon disulfide [75-15-0] ^ | 1.5 | U | ug/L | 1 | 1.5 | 5.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Carbon tetrachloride [56-23-5] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Chloroethane [75-00-3] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Chloroform [67-66-3] ^ | 0.18 | U | ug/L | 1 | 0.18 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Chloromethane [74-87-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.27 | U | ug/L | 1 | 0.27 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |

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**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene [98-82-8] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.17 | U | ug/L | 1 | 0.17 | 2.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| **Methylene chloride [75-09-2] ^** | **0.40** | J | ug/L | 1 | 0.23 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Naphthalene [91-20-3] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.058 | U | ug/L | 1 | 0.058 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| o-Xylene [95-47-6] ^ | 0.065 | U | ug/L | 1 | 0.065 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Styrene [100-42-5] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Toluene [108-88-3] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.24 | U | ug/L | 1 | 0.24 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.32 | U | ug/L | 1 | 0.32 | 1.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.45 | U | ug/L | 1 | 0.45 | 3.0 | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *51* | *1* | *50.0* | *102 %* | *51-122* | *2K26007* | *EPA 8260B* | *11/26/12 16:06* | *JKG* | |
| *Dibromofluoromethane* | *51* | *1* | *50.0* | *103 %* | *68-117* | *2K26007* | *EPA 8260B* | *11/26/12 16:06* | *JKG* | |
| *Toluene-d8* | *53* | *1* | *50.0* | *106 %* | *67-127* | *2K26007* | *EPA 8260B* | *11/26/12 16:06* | *JKG* | |

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**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds [NA] | 0.0 | U | ug/L | 1 | | | 2K26007 | EPA 8260B | 11/26/12 16:06 | JKG | |

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**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 2.6 | U | ug/L | 1 | 2.6 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 2.9 | U | ug/L | 1 | 2.9 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 3.3 | U | ug/L | 1 | 3.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 3.2 | U | ug/L | 1 | 3.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Acenaphthene [83-32-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Acenaphthylene [208-96-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Anthracene [120-12-7] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Benzidine [92-87-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Benzoic acid [65-85-0] ^ | 1.0 | U | ug/L | 1 | 1.0 | 50 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| **Bis(2-ethylhexyl)phthalate [117-81-7] ^** | **22** | | ug/L | 1 | 1.7 | 5.0 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Chrysene [218-01-9] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 2.3 | U | ug/L | 1 | 2.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Dibenzofuran [132-64-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| **Diethylphthalate [84-66-2] ^** | **210** | D | ug/L | 3 | 6.3 | 30 | 2K17001 | EPA 8270D | 11/27/12 14:04 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 3.1 | U | ug/L | 1 | 3.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |

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**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Fluorene [86-73-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Hexachloroethane [67-72-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 2.2 | U | ug/L | 1 | 2.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Isophorone [78-59-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Naphthalene [91-20-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Nitrobenzene [98-95-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 1.8 | U | ug/L | 1 | 1.8 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Phenanthrene [85-01-8] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Phenol [108-95-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Pyrene [129-00-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |
| Pyridine [110-86-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *64* | *1* | *100* | *64 %* | *10-179* | *2K17001* | *EPA 8270D* | *11/26/12 14:38* | *DFM* | |
| *2-Fluorobiphenyl* | *27* | *1* | *50.0* | *53 %* | *10-149* | *2K17001* | *EPA 8270D* | *11/26/12 14:38* | *DFM* | |
| *2-Fluorophenol* | *37* | *1* | *100* | *37 %* | *10-110* | *2K17001* | *EPA 8270D* | *11/26/12 14:38* | *DFM* | |
| *Nitrobenzene-d5* | *24* | *1* | *50.0* | *49 %* | *10-149* | *2K17001* | *EPA 8270D* | *11/26/12 14:38* | *DFM* | |
| *Phenol-d5* | *30* | *1* | *100* | *30 %* | *10-88* | *2K17001* | *EPA 8270D* | *11/26/12 14:38* | *DFM* | |
| *Terphenyl-d14* | *34* | *1* | *50.0* | *67 %* | *10-188* | *2K17001* | *EPA 8270D* | *11/26/12 14:38* | *DFM* | |

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**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Unknown [NA] | 140 | JB | ug/L | 1 | | | 2K17001 | EPA 8270D | 11/26/12 14:38 | DFM | B |

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**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.049 | U | ug/L | 1 | 0.049 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Aldrin [309-00-2] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.20 | U | ug/L | 1 | 0.20 | 0.50 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.032 | U | ug/L | 1 | 0.032 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Endrin [72-20-8] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.039 | U | ug/L | 1 | 0.039 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.034 | U | ug/L | 1 | 0.034 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.030 | U | ug/L | 1 | 0.030 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.037 | U | ug/L | 1 | 0.037 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Isodrin [465-73-6] ^ | 0.031 | U | ug/L | 1 | 0.031 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.025 | U | ug/L | 1 | 0.025 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Mirex [2385-85-5] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 0.50 | 2K21027 | EPA 8081B | 11/29/12 12:25 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *1.2* | *1* | *1.00* | *120 %* | *44-134* | *2K21027* | *EPA 8081B* | *11/29/12 12:25* | *MSZ* | |
| *Decachlorobiphenyl* | *1.3* | *1* | *1.00* | *129 %* | *37-149* | *2K21027* | *EPA 8081B* | *11/29/12 12:25* | *MSZ* | |

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**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

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

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 5.48 | J | ug/L | 1 | 2.80 | 10.0 | 2K19023 | EPA 6010C | 11/21/12 11:47 | JDH | |

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**Description:** Pond Sample
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C213506-01
**Sampled:** 11/16/12 10:20
**Sampled By:** Tim Monroe

**Received:** 11/16/12 13:40
**Work Order:** C213506

## Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] ^ | 0.0049 | U | mg/L | 1 | 0.0049 | 0.010 | 2K16029 | SM3500-Cr D VI | 11/16/12 18:11 | JCS | |

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

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2K26007 - EPA 5030B_MS*

**Blank (2K26007-BLK1)** Prepared: 11/26/2012 08:29 Analyzed: 11/26/2012 13:07

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.17 | U | 1.0 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | 0.12 | U | 1.0 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 0.28 | U | 1.0 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | 0.14 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloroethane | 0.13 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloroethene | 0.21 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloropropene | 0.15 | U | 1.0 | ug/L | | | | | | | |
| 1,2,3-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 | | | | | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2K26007 - EPA 5030B_MS*

**Blank (2K26007-BLK1) Continued** Prepared: 11/26/2012 08:29 Analyzed: 11/26/2012 13:07

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 0.17 | U | 2.0 | ug/L | | | | | | | |
| 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 | | | | | | | |
| o-Xylene | 0.065 | 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 | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *53* | | | *ug/L* | *50.0* | | *106* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *51* | | | *ug/L* | *50.0* | | *101* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *51* | | | *ug/L* | *50.0* | | *103* | *67-127* | | | |

**LCS (2K26007-BS1)** Prepared: 11/26/2012 08:29 Analyzed: 11/26/2012 13:36

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 20 | | 1.0 | ug/L | 20.0 | | 98 | 75-133 | | | |
| Benzene | 18 | | 1.0 | ug/L | 20.0 | | 92 | 81-134 | | | |
| Chlorobenzene | 20 | | 1.0 | ug/L | 20.0 | | 99 | 83-117 | | | |
| Toluene | 19 | | 1.0 | ug/L | 20.0 | | 93 | 71-118 | | | |
| Trichloroethene | 21 | | 1.0 | ug/L | 20.0 | | 103 | 74-119 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *56* | | | *ug/L* | *50.0* | | *112* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *51* | | | *ug/L* | *50.0* | | *103* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *51* | | | *ug/L* | *50.0* | | *102* | *67-127* | | | |

**Matrix Spike (2K26007-MS1)** Prepared: 11/26/2012 08:29 Analyzed: 11/26/2012 14:06

**Source: C213814-03**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 19 | | 1.0 | ug/L | 20.0 | 0.21 U | 96 | 75-133 | | | |
| Benzene | 19 | | 1.0 | ug/L | 20.0 | 0.15 U | 95 | 81-134 | | | |
| Chlorobenzene | 20 | | 1.0 | ug/L | 20.0 | 0.17 U | 102 | 83-117 | | | |
| Toluene | 19 | | 1.0 | ug/L | 20.0 | 0.14 U | 93 | 71-118 | | | |
| Trichloroethene | 21 | | 1.0 | ug/L | 20.0 | 0.15 U | 104 | 74-119 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *57* | | | *ug/L* | *50.0* | | *113* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *51* | | | *ug/L* | *50.0* | | *102* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *51* | | | *ug/L* | *50.0* | | *103* | *67-127* | | | |

# QUALITY CONTROL

## Volatile Organic Compounds by GCMS - Quality Control

*Batch 2K26007 - EPA 5030B_MS*

**Matrix Spike Dup (2K26007-MSD1)** Prepared: 11/26/2012 08:29 Analyzed: 11/26/2012 14:36

**Source: C213814-03**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 20 | | 1.0 | ug/L | 20.0 | 0.21 U | 100 | 75-133 | 5 | 20 | |
| Benzene | 19 | | 1.0 | ug/L | 20.0 | 0.15 U | 96 | 81-134 | 1 | 17 | |
| Chlorobenzene | 20 | | 1.0 | ug/L | 20.0 | 0.17 U | 101 | 83-117 | 0.4 | 16 | |
| Toluene | 19 | | 1.0 | ug/L | 20.0 | 0.14 U | 93 | 71-118 | 0.1 | 17 | |
| Trichloroethene | 22 | | 1.0 | ug/L | 20.0 | 0.15 U | 109 | 74-119 | 5 | 22 | |
| *Surrogate: 4-Bromofluorobenzene* | *55* | | | *ug/L* | *50.0* | | *111* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *53* | | | *ug/L* | *50.0* | | *106* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *52* | | | *ug/L* | *50.0* | | *105* | *67-127* | | | |

## Tentatively Identified Compounds by Volatile GCMS - Quality Control

*Batch 2K26007 - EPA 5030B_MS*

**Blank (2K26007-BLK1)** Prepared: 11/26/2012 08:29 Analyzed: 11/26/2012 13:07

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Tentatively Identified Compounds** | **0.0** | **U** | | ug/L | | | | | | | |

## Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2K17001 - EPA 3510C_MS*

**Blank (2K17001-BLK1)** Prepared: 11/17/2012 07:43 Analyzed: 11/21/2012 19:09

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 1.2 | U | 10 | ug/L | | | | | | | |
| 1,2-Dichlorobenzene | 1.1 | U | 10 | ug/L | | | | | | | |
| 1,3-Dichlorobenzene | 1.1 | U | 10 | ug/L | | | | | | | |
| 1,4-Dichlorobenzene | 1.0 | U | 10 | ug/L | | | | | | | |
| 1-Methylnaphthalene | 1.7 | U | 10 | ug/L | | | | | | | |
| 2,4,5-Trichlorophenol | 1.0 | U | 10 | ug/L | | | | | | | |
| 2,4,6-Trichlorophenol | 1.1 | U | 10 | ug/L | | | | | | | |
| 2,4-Dichlorophenol | 1.4 | U | 10 | ug/L | | | | | | | |
| 2,4-Dimethylphenol | 1.3 | U | 10 | ug/L | | | | | | | |
| 2,4-Dinitrophenol | 2.6 | U | 10 | ug/L | | | | | | | |
| 2,4-Dinitrotoluene | 2.4 | U | 10 | ug/L | | | | | | | |
| 2,6-Dinitrotoluene | 1.5 | U | 10 | ug/L | | | | | | | |
| 2-Chloronaphthalene | 1.0 | U | 10 | ug/L | | | | | | | |
| 2-Chlorophenol | 1.2 | U | 10 | ug/L | | | | | | | |
| 2-Methyl-4,6-dinitrophenol | 2.9 | U | 10 | ug/L | | | | | | | |
| 2-Methylnaphthalene | 1.5 | U | 10 | ug/L | | | | | | | |
| 2-Methylphenol | 1.4 | U | 10 | ug/L | | | | | | | |
| 2-Nitroaniline | 1.5 | U | 10 | ug/L | | | | | | | |
| 2-Nitrophenol | 1.1 | U | 10 | ug/L | | | | | | | |
| 3 & 4-Methylphenol | 1.6 | U | 10 | ug/L | | | | | | | |
| 3,3'-Dichlorobenzidine | 3.3 | U | 10 | ug/L | | | | | | | |
| 3-Nitroaniline | 2.1 | U | 10 | ug/L | | | | | | | |
| 4-Bromophenyl-phenylether | 1.0 | U | 10 | ug/L | | | | | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2K17001 - EPA 3510C_MS*

**Blank (2K17001-BLK1) Continued** Prepared: 11/17/2012 07:43 Analyzed: 11/21/2012 19:09

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Chloro-3-methylphenol | 1.5 | U | 10 | ug/L | | | | | | | |
| 4-Chloroaniline | 1.2 | U | 10 | ug/L | | | | | | | |
| 4-Chlorophenyl-phenylether | 1.6 | U | 10 | ug/L | | | | | | | |
| 4-Nitroaniline | 3.2 | U | 10 | ug/L | | | | | | | |
| 4-Nitrophenol | 2.0 | U | 10 | ug/L | | | | | | | |
| Acenaphthene | 1.4 | U | 10 | ug/L | | | | | | | |
| Acenaphthylene | 1.2 | U | 10 | ug/L | | | | | | | |
| Anthracene | 1.6 | U | 10 | ug/L | | | | | | | |
| Benzidine | 1.6 | U | 10 | ug/L | | | | | | | |
| Benzo(a)anthracene | 1.3 | U | 10 | ug/L | | | | | | | |
| Benzo(a)pyrene | 1.3 | U | 10 | ug/L | | | | | | | |
| Benzo(b)fluoranthene | 1.0 | U | 10 | ug/L | | | | | | | |
| Benzo(g,h,i)perylene | 2.4 | U | 10 | ug/L | | | | | | | |
| Benzo(k)fluoranthene | 1.3 | U | 10 | ug/L | | | | | | | |
| Benzoic acid | 1.0 | U | 50 | ug/L | | | | | | | |
| Benzyl alcohol | 1.4 | U | 10 | ug/L | | | | | | | |
| Bis(2-chloroethoxy)methane | 1.4 | U | 10 | ug/L | | | | | | | |
| Bis(2-chloroethyl)ether | 1.2 | U | 10 | ug/L | | | | | | | |
| Bis(2-chloroisopropyl)ether | 1.3 | U | 10 | ug/L | | | | | | | |
| Bis(2-ethylhexyl)phthalate | 1.7 | U | 5.0 | ug/L | | | | | | | |
| Butylbenzylphthalate | 2.0 | U | 10 | ug/L | | | | | | | |
| Chrysene | 2.0 | U | 10 | ug/L | | | | | | | |
| Dibenzo(a,h)anthracene | 2.3 | U | 10 | ug/L | | | | | | | |
| Dibenzofuran | 1.4 | U | 10 | ug/L | | | | | | | |
| Diethylphthalate | 2.1 | U | 10 | ug/L | | | | | | | |
| Dimethylphthalate | 1.4 | U | 10 | ug/L | | | | | | | |
| Di-n-butylphthalate | 1.5 | U | 10 | ug/L | | | | | | | |
| Di-n-octylphthalate | 3.1 | U | 10 | ug/L | | | | | | | |
| Fluoranthene | 2.1 | U | 10 | ug/L | | | | | | | |
| Fluorene | 1.7 | U | 10 | ug/L | | | | | | | |
| Hexachlorobenzene | 1.0 | U | 10 | ug/L | | | | | | | |
| Hexachlorobutadiene | 1.2 | U | 10 | ug/L | | | | | | | |
| Hexachlorocyclopentadiene | 1.3 | U | 10 | ug/L | | | | | | | |
| Hexachloroethane | 1.1 | U | 10 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | U | 10 | ug/L | | | | | | | |
| Isophorone | 1.3 | U | 10 | ug/L | | | | | | | |
| Naphthalene | 1.3 | U | 10 | ug/L | | | | | | | |
| Nitrobenzene | 1.2 | U | 10 | ug/L | | | | | | | |
| N-Nitrosodimethylamine | 1.3 | U | 10 | ug/L | | | | | | | |
| N-Nitroso-di-n-propylamine | 1.5 | U | 10 | ug/L | | | | | | | |
| N-nitrosodiphenylamine/Diphenylamine | 2.1 | U | 10 | ug/L | | | | | | | |
| Pentachlorophenol | 1.8 | U | 10 | ug/L | | | | | | | |
| Phenanthrene | 1.4 | U | 10 | ug/L | | | | | | | |
| Phenol | 1.4 | U | 10 | ug/L | | | | | | | |
| Pyrene | 2.1 | U | 10 | ug/L | | | | | | | |
| Pyridine | 1.3 | U | 10 | ug/L | | | | | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *60* | | | *ug/L* | *100* | | *60* | *10-179* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *27* | | | *ug/L* | *50.0* | | *54* | *10-149* | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2K17001 - EPA 3510C_MS*

**Blank (2K17001-BLK1) Continued** Prepared: 11/17/2012 07:43 Analyzed: 11/21/2012 19:09

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorophenol* | *41* | | | *ug/L* | *100* | | *41* | *10-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *25* | | | *ug/L* | *50.0* | | *50* | *10-149* | | | |
| *Surrogate: Phenol-d5* | *33* | | | *ug/L* | *100* | | *33* | *10-88* | | | |
| *Surrogate: Terphenyl-d14* | *35* | | | *ug/L* | *50.0* | | *69* | *10-188* | | | |

**LCS (2K17001-BS1)** Prepared: 11/17/2012 07:43 Analyzed: 11/27/2012 14:33

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 30 | | 10 | ug/L | 50.0 | | 61 | 27-90 | | | |
| 1,4-Dichlorobenzene | 29 | | 10 | ug/L | 50.0 | | 57 | 23-84 | | | |
| 2,4-Dinitrotoluene | 39 | | 10 | ug/L | 50.0 | | 79 | 67-132 | | | |
| 2-Chlorophenol | 32 | | 10 | ug/L | 50.0 | | 64 | 40-109 | | | |
| 4-Chloro-3-methylphenol | 37 | | 10 | ug/L | 50.0 | | 73 | 58-121 | | | |
| 4-Nitrophenol | 27 | | 10 | ug/L | 50.0 | | 53 | 33-105 | | | |
| Acenaphthene | 34 | | 10 | ug/L | 50.0 | | 68 | 39-125 | | | |
| N-Nitroso-di-n-propylamine | 32 | | 10 | ug/L | 50.0 | | 63 | 48-126 | | | |
| Pentachlorophenol | 30 | | 10 | ug/L | 50.0 | | 61 | 51-135 | | | |
| Phenol | 23 | | 10 | ug/L | 50.0 | | 45 | 19-78 | | | |
| Pyrene | 35 | | 10 | ug/L | 50.0 | | 71 | 44-137 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *88* | | | *ug/L* | *100* | | *88* | *10-179* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *36* | | | *ug/L* | *50.0* | | *72* | *10-149* | | | |
| *Surrogate: 2-Fluorophenol* | *54* | | | *ug/L* | *100* | | *54* | *10-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *33* | | | *ug/L* | *50.0* | | *66* | *10-149* | | | |
| *Surrogate: Phenol-d5* | *43* | | | *ug/L* | *100* | | *43* | *10-88* | | | |
| *Surrogate: Terphenyl-d14* | *38* | | | *ug/L* | *50.0* | | *77* | *10-188* | | | |

**Matrix Spike (2K17001-MS1)** Prepared: 11/17/2012 07:43 Analyzed: 11/21/2012 20:09

**Source: C213374-06**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 30 | | 10 | ug/L | 50.0 | 1.2 U | 60 | 27-90 | | | |
| 1,4-Dichlorobenzene | 28 | | 10 | ug/L | 50.0 | 1.0 U | 56 | 23-84 | | | |
| 2,4-Dinitrotoluene | 37 | | 10 | ug/L | 50.0 | 2.4 U | 75 | 67-132 | | | |
| 2-Chlorophenol | 30 | | 10 | ug/L | 50.0 | 1.2 U | 60 | 40-109 | | | |
| 4-Chloro-3-methylphenol | 35 | | 10 | ug/L | 50.0 | 1.5 U | 69 | 58-121 | | | |
| 4-Nitrophenol | 26 | | 10 | ug/L | 50.0 | 2.0 U | 52 | 33-105 | | | |
| Acenaphthene | 32 | | 10 | ug/L | 50.0 | 1.4 U | 64 | 39-125 | | | |
| N-Nitroso-di-n-propylamine | 30 | | 10 | ug/L | 50.0 | 1.5 U | 60 | 48-126 | | | |
| Pentachlorophenol | 27 | | 10 | ug/L | 50.0 | 1.8 U | 53 | 51-135 | | | |
| Phenol | 22 | | 10 | ug/L | 50.0 | 1.4 U | 44 | 19-78 | | | |
| Pyrene | 36 | | 10 | ug/L | 50.0 | 2.1 U | 73 | 44-137 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *80* | | | *ug/L* | *100* | | *80* | *10-179* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *32* | | | *ug/L* | *50.0* | | *65* | *10-149* | | | |
| *Surrogate: 2-Fluorophenol* | *48* | | | *ug/L* | *100* | | *48* | *10-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *31* | | | *ug/L* | *50.0* | | *61* | *10-149* | | | |
| *Surrogate: Phenol-d5* | *39* | | | *ug/L* | *100* | | *39* | *10-88* | | | |
| *Surrogate: Terphenyl-d14* | *38* | | | *ug/L* | *50.0* | | *76* | *10-188* | | | |

# QUALITY CONTROL

## Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2K17001 - EPA 3510C_MS*

**Matrix Spike Dup (2K17001-MSD1)** Prepared: 11/17/2012 07:43 Analyzed: 11/21/2012 20:38

**Source: C213374-06**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 31 | | 10 | ug/L | 50.0 | 1.2 U | 62 | 27-90 | 4 | 43 | |
| 1,4-Dichlorobenzene | 29 | | 10 | ug/L | 50.0 | 1.0 U | 59 | 23-84 | 5 | 39 | |
| 2,4-Dinitrotoluene | 38 | | 10 | ug/L | 50.0 | 2.4 U | 76 | 67-132 | 2 | 17 | |
| 2-Chlorophenol | 30 | | 10 | ug/L | 50.0 | 1.2 U | 61 | 40-109 | 1 | 22 | |
| 4-Chloro-3-methylphenol | 35 | | 10 | ug/L | 50.0 | 1.5 U | 70 | 58-121 | 1 | 22 | |
| 4-Nitrophenol | 26 | | 10 | ug/L | 50.0 | 2.0 U | 52 | 33-105 | 1 | 27 | |
| Acenaphthene | 32 | | 10 | ug/L | 50.0 | 1.4 U | 64 | 39-125 | 0.2 | 25 | |
| N-Nitroso-di-n-propylamine | 31 | | 10 | ug/L | 50.0 | 1.5 U | 63 | 48-126 | 4 | 23 | |
| Pentachlorophenol | 27 | | 10 | ug/L | 50.0 | 1.8 U | 55 | 51-135 | 3 | 11 | |
| Phenol | 22 | | 10 | ug/L | 50.0 | 1.4 U | 44 | 19-78 | 0.8 | 18 | |
| Pyrene | 38 | | 10 | ug/L | 50.0 | 2.1 U | 75 | 44-137 | 3 | 24 | |
| *Surrogate: 2,4,6-Tribromophenol* | *77* | | | *ug/L* | *100* | | *77* | *10-179* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *33* | | | *ug/L* | *50.0* | | *66* | *10-149* | | | |
| *Surrogate: 2-Fluorophenol* | *49* | | | *ug/L* | *100* | | *49* | *10-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *31* | | | *ug/L* | *50.0* | | *62* | *10-149* | | | |
| *Surrogate: Phenol-d5* | *39* | | | *ug/L* | *100* | | *39* | *10-88* | | | |
| *Surrogate: Terphenyl-d14* | *39* | | | *ug/L* | *50.0* | | *78* | *10-188* | | | |

## Tentatively Identified Compounds by Semivolatile GCMS - Quality Control

*Batch 2K17001 - EPA 3510C_MS*

**Blank (2K17001-BLK1)** Prepared: 11/17/2012 07:43 Analyzed: 11/21/2012 19:09

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **3-Methoxy-5-nitrobenzotrifluor** | **22** | **J** | | ug/L | | | | | | | |

## Organochlorine Pesticides by GC - Quality Control

*Batch 2K21027 - EPA 3510C*

**Blank (2K21027-BLK1)** Prepared: 11/21/2012 14:37 Analyzed: 11/29/2012 11:32

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.044 | U | 0.050 | ug/L | | | | | | | |
| 4,4'-DDE | 0.048 | U | 0.050 | ug/L | | | | | | | |
| 4,4'-DDT | 0.049 | U | 0.050 | ug/L | | | | | | | |
| Aldrin | 0.041 | U | 0.050 | ug/L | | | | | | | |
| alpha-BHC | 0.036 | U | 0.050 | ug/L | | | | | | | |
| beta-BHC | 0.036 | U | 0.050 | ug/L | | | | | | | |
| Chlordane (tech) | 0.20 | U | 0.50 | ug/L | | | | | | | |
| Chlordane-alpha | 0.048 | U | 0.050 | ug/L | | | | | | | |
| Chlordane-gamma | 0.042 | U | 0.050 | ug/L | | | | | | | |
| delta-BHC | 0.048 | U | 0.050 | ug/L | | | | | | | |
| Dieldrin | 0.045 | U | 0.050 | ug/L | | | | | | | |
| Endosulfan I | 0.045 | U | 0.050 | ug/L | | | | | | | |
| Endosulfan II | 0.036 | U | 0.050 | ug/L | | | | | | | |
| Endosulfan sulfate | 0.032 | U | 0.050 | ug/L | | | | | | | |

## QUALITY CONTROL

### Organochlorine Pesticides by GC - Quality Control

*Batch 2K21027 - EPA 3510C*

**Blank (2K21027-BLK1) Continued** Prepared: 11/21/2012 14:37 Analyzed: 11/29/2012 11:32

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Endrin | 0.041 | U | 0.050 | ug/L | | | | | | | |
| Endrin aldehyde | 0.042 | U | 0.050 | ug/L | | | | | | | |
| Endrin ketone | 0.039 | U | 0.050 | ug/L | | | | | | | |
| gamma-BHC | 0.034 | U | 0.050 | ug/L | | | | | | | |
| Heptachlor | 0.030 | U | 0.050 | ug/L | | | | | | | |
| Heptachlor epoxide | 0.037 | U | 0.050 | ug/L | | | | | | | |
| Isodrin | 0.031 | U | 0.050 | ug/L | | | | | | | |
| Methoxychlor | 0.025 | U | 0.050 | ug/L | | | | | | | |
| Mirex | 0.044 | U | 0.050 | ug/L | | | | | | | |
| Toxaphene | 0.22 | U | 0.50 | ug/L | | | | | | | |
| *Surrogate: 2,4,5,6-TCMX* | *0.94* | | | *ug/L* | *1.00* | | *94* | *44-134* | | | |
| *Surrogate: Decachlorobiphenyl* | *1.0* | | | *ug/L* | *1.00* | | *102* | *37-149* | | | |

**LCS (2K21027-BS1)** Prepared: 11/21/2012 14:37 Analyzed: 11/29/2012 11:45

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.97 | | 0.050 | ug/L | 1.00 | | 97 | 37-139 | | | |
| Dieldrin | 0.97 | | 0.050 | ug/L | 1.00 | | 97 | 46-132 | | | |
| Endrin | 1.0 | | 0.050 | ug/L | 1.00 | | 100 | 43-133 | | | |
| *Surrogate: 2,4,5,6-TCMX* | *0.89* | | | *ug/L* | *1.00* | | *89* | *44-134* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.95* | | | *ug/L* | *1.00* | | *95* | *37-149* | | | |

**Matrix Spike (2K21027-MS1)** Prepared: 11/21/2012 14:37 Analyzed: 11/29/2012 11:58

**Source: C213702-10**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.96 | | 0.050 | ug/L | 1.00 | 0.049 U | 96 | 37-139 | | | |
| Dieldrin | 0.98 | | 0.050 | ug/L | 1.00 | 0.045 U | 98 | 46-132 | | | |
| Endrin | 1.0 | | 0.050 | ug/L | 1.00 | 0.041 U | 100 | 43-133 | | | |
| *Surrogate: 2,4,5,6-TCMX* | *0.94* | | | *ug/L* | *1.00* | | *94* | *44-134* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.98* | | | *ug/L* | *1.00* | | *98* | *37-149* | | | |

**Matrix Spike Dup (2K21027-MSD1)** Prepared: 11/21/2012 14:37 Analyzed: 11/29/2012 12:11

**Source: C213702-10**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.94 | | 0.050 | ug/L | 1.00 | 0.049 U | 94 | 37-139 | 2 | 26 | |
| Dieldrin | 0.96 | | 0.050 | ug/L | 1.00 | 0.045 U | 96 | 46-132 | 2 | 27 | |
| Endrin | 0.98 | | 0.050 | ug/L | 1.00 | 0.041 U | 98 | 43-133 | 2 | 26 | |
| *Surrogate: 2,4,5,6-TCMX* | *0.88* | | | *ug/L* | *1.00* | | *88* | *44-134* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.96* | | | *ug/L* | *1.00* | | *96* | *37-149* | | | |

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

*Batch 2K19023 - EPA 3005A*

**Blank (2K19023-BLK1)** Prepared: 11/19/2012 12:22 Analyzed: 11/21/2012 10:38

## QUALITY CONTROL

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

*Batch 2K19023 - EPA 3005A*

**Blank (2K19023-BLK1) Continued** Prepared: 11/19/2012 12:22 Analyzed: 11/21/2012 10:38

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.80 | U | 10.0 | ug/L | | | | | | | |

**LCS (2K19023-BS1)** Prepared: 11/19/2012 12:22 Analyzed: 11/21/2012 10:41

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 194 | | 10.0 | ug/L | 200 | | 97 | 80-120 | | | |

**Matrix Spike (2K19023-MS1)** Prepared: 11/19/2012 12:22 Analyzed: 11/21/2012 10:45

**Source: C213052-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 206 | | 10.0 | ug/L | 200 | 2.80 U | 103 | 75-125 | | | |

**Matrix Spike Dup (2K19023-MSD1)** Prepared: 11/19/2012 12:22 Analyzed: 11/21/2012 10:47

**Source: C213052-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 205 | | 10.0 | ug/L | 200 | 2.80 U | 103 | 75-125 | 0.7 | 20 | |

**Post Spike (2K19023-PS1)** Prepared: 11/19/2012 12:22 Analyzed: 11/21/2012 10:49

**Source: C213052-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.196 | | 0.0100 | mg/L | 0.200 | 0.00215 | 97 | 80-120 | | | |

### Classical Chemistry Parameters - Quality Control

*Batch 2K16029 - NO PREP*

**Blank (2K16029-BLK1)** Prepared: 11/16/2012 18:01 Analyzed: 11/16/2012 18:11

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.0049 | U | 0.010 | mg/L | | | | | | | |

**LCS (2K16029-BS1)** Prepared: 11/16/2012 18:01 Analyzed: 11/16/2012 18:11

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.25 | | 0.010 | mg/L | 0.249 | | 102 | 80-120 | | | |

**Matrix Spike (2K16029-MS1)** Prepared: 11/16/2012 18:01 Analyzed: 11/16/2012 18:11

**Source: C213506-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.26 | | 0.010 | mg/L | 0.249 | 0.0049 U | 106 | 75-125 | | | |

**Matrix Spike Dup (2K16029-MSD1)** Prepared: 11/16/2012 18:01 Analyzed: 11/16/2012 18:11

## QUALITY CONTROL

### Classical Chemistry Parameters - Quality Control

*Batch 2K16029 - NO PREP*

**Matrix Spike Dup (2K16029-MSD1) Continued** Prepared: 11/16/2012 18:01 Analyzed: 11/16/2012 18:11

**Source: C213506-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.25 | | 0.010 | mg/L | 0.249 | 0.0049 U | 100 | 75-125 | 5 | 20 | |

## FLAGS/NOTES AND DEFINITIONS

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

# ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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

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

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| | |
|---|---|
| Client Name: SENSINGER & GARRISON (BE012) | Project Number: 213912 |
| Address: PO BOX 14609 | Project Name/Desc: 213912 |
| City/ST/Zip: RTP, NC 27709- | PO # / Billing Info: 213912 |
| Tel: (919) 484-8536 Fax: (919) 484-8540 | Reporting Contact: Jack Garrison |
| Sampler(s) Name, Affiliation (Print): Tim Monroe | Billing Contact: Jack Garrison |
| Sampler(s) Signature: Tim Monroe | Site Location / Time Zone: |

Requested Analyses: 8081B,8270D,8270D TICs; 8260B,8260B TICs; As; CrVI

Requested Turnaround Times

Note: Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due 11/30/12

Lab Workorder: C213506

Preservation (See Codes) (Combine as necessary)

| Item # | Sample ID (Field Identification) | Collection Date | Collection Time | Comp / Grab | Matrix (see codes) | Total # of Containers | 8081B,8270D,8270D TICs | 8260B,8260B TICs | As | CrVI | | | | | | | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pond Sample | 11/16/12 | 10:20AM | G | WA | 7 | X | X | X | X | | | | | | | |

<-- Total # of Containers

| | | | | | |
|---|---|---|---|---|---|
| Sample Kit Prepared By | Date/Time | Relinquished By: Tim Monroe | Date/Time: 11/16/12 1:20pm | Received By: MC Stamper | Date/Time: 11/16/12 2340 |
| 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: C-830 2.1°C | | Condition Upon Receipt: ✓ Acceptable | Unacceptable |

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

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

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

Thursday, December 20, 2012

BENSINGER & GARRISON (BE012)

Attn: Jack Garrison

PO BOX 14609

RTP, NC 27709-

**RE: Laboratory Results for**
**Project Number: 213912, Project Name/Desc: 213912**
**ENCO Workorder(s): C214257**

Dear Jack Garrison,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, December 6, 2012.

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

Chuck Smith
Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 144.

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## SAMPLE SUMMARY/LABORATORY CHRONICLE

| Client ID: SS-1 | Lab ID: C214257-01 | Sampled: 12/04/12 08:45 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 06/02/13 | | 12/13/12 | 09:36 | 12/14/2012 13:07 |
| EPA 8081B | 12/18/12 | 01/15/13 | 12/06/12 | 11:14 | 12/7/2012 11:53 |
| EPA 8260B | 12/18/12 | | 12/10/12 | 09:35 | 12/10/2012 18:27 |
| EPA 8270D | 12/18/12 | 01/19/13 | 12/10/12 | 14:15 | 12/11/2012 05:59 |

| Client ID: SS-1 | Lab ID: C214257-01RE1 | Sampled: 12/04/12 08:45 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 7196A | 01/03/13 | 12/17/12 | 12/10/12 | 19:00 | 12/12/2012 21:40 |

| Client ID: SS-2 | Lab ID: C214257-02 | Sampled: 12/03/12 16:00 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 7196A | 01/02/13 | 12/17/12 | 12/10/12 | 19:00 | 12/12/2012 21:40 |
| EPA 6010C | 06/01/13 | | 12/13/12 | 09:36 | 12/14/2012 13:09 |
| EPA 8081B | 12/17/12 | 01/15/13 | 12/06/12 | 11:14 | 12/7/2012 12:06 |
| EPA 8260B | 12/17/12 | | 12/10/12 | 09:35 | 12/10/2012 18:56 |
| EPA 8270D | 12/17/12 | 01/19/13 | 12/10/12 | 14:15 | 12/11/2012 06:27 |

| Client ID: SS-3 | Lab ID: C214257-03 | Sampled: 12/03/12 16:45 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 7196A | 01/02/13 | 12/17/12 | 12/10/12 | 19:00 | 12/12/2012 21:40 |
| EPA 6010C | 06/01/13 | | 12/13/12 | 09:36 | 12/14/2012 13:11 |
| EPA 8081B | 12/17/12 | 01/15/13 | 12/06/12 | 11:14 | 12/7/2012 12:19 |
| EPA 8260B | 12/17/12 | | 12/10/12 | 11:56 | 12/10/2012 23:57 |
| EPA 8270D | 12/17/12 | 01/19/13 | 12/10/12 | 14:15 | 12/11/2012 06:56 |

| Client ID: SS-4 | Lab ID: C214257-04 | Sampled: 12/03/12 14:15 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 8081B | 12/17/12 | 01/15/13 | 12/06/12 | 11:14 | 12/7/2012 12:32 |

| Client ID: SS-5 | Lab ID: C214257-05 | Sampled: 12/04/12 11:15 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 7196A | 01/03/13 | 12/17/12 | 12/10/12 | 19:00 | 12/12/2012 21:40 |
| EPA 6010C | 06/02/13 | | 12/13/12 | 09:36 | 12/14/2012 13:13 |
| EPA 8081B | 12/18/12 | 01/15/13 | 12/06/12 | 11:14 | 12/7/2012 12:46 |

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| Client ID: SS-6 | Lab ID: C214257-06 | Sampled: 12/04/12 09:30 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 7196A | 01/03/13 | 12/17/12 | 12/10/12 | 19:00 | 12/12/2012 21:40 |
| EPA 6010C | 06/02/13 | | 12/13/12 | 09:36 | 12/14/2012 13:15 |
| EPA 8081B | 12/18/12 | 01/15/13 | 12/06/12 | 11:14 | 12/7/2012 12:59 |

| Client ID: SS-8-5 | Lab ID: C214257-07 | Sampled: 12/04/12 10:30 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 06/02/13 | | 12/13/12 | 09:36 | 12/14/2012 13:23 |
| EPA 8260B | 12/18/12 | | 12/10/12 | 11:56 | 12/11/2012 00:27 |
| EPA 8270D | 12/18/12 | 01/19/13 | 12/10/12 | 14:15 | 12/11/2012 07:25 |

| Client ID: MW-8 | Lab ID: C214257-08 | Sampled: 12/05/12 14:30 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 06/03/13 | | 12/07/12 | 08:57 | 12/10/2012 12:51 |
| EPA 8081B | 12/12/12 | 01/19/13 | 12/10/12 | 11:30 | 12/12/2012 13:47 |
| EPA 8260B | 12/19/12 | | 12/07/12 | 12:45 | 12/8/2012 19:54 |
| EPA 8270D | 12/12/12 | 01/21/13 | 12/12/12 | 11:43 | 12/13/2012 19:13 |
| MAEPH | 12/19/12 | 01/16/13 | 12/07/12 | 09:45 | 12/10/2012 11:59 |
| MAVPH | 12/19/12 | | 12/13/12 | 11:47 | 12/13/2012 21:53 |

| Client ID: PW-Old | Lab ID: C214257-09 | Sampled: 12/05/12 14:42 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 06/03/13 | | 12/07/12 | 08:57 | 12/10/2012 12:53 |
| EPA 8081B | 12/12/12 | 01/19/13 | 12/10/12 | 11:30 | 12/12/2012 14:00 |
| EPA 8260B | 12/19/12 | | 12/07/12 | 12:45 | 12/8/2012 20:24 |
| EPA 8270D | 12/12/12 | 01/21/13 | 12/12/12 | 11:43 | 12/13/2012 19:41 |
| SM3500-Cr D VI | 12/06/12 14:42 | | 12/06/12 | 11:14 | 12/6/2012 11:26 |

| Client ID: PW-New | Lab ID: C214257-10 | Sampled: 12/05/12 15:15 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 06/03/13 | | 12/07/12 | 08:57 | 12/10/2012 12:55 |
| EPA 8081B | 12/12/12 | 01/19/13 | 12/10/12 | 11:30 | 12/12/2012 14:13 |
| EPA 8260B | 12/19/12 | | 12/07/12 | 12:45 | 12/8/2012 20:54 |
| EPA 8270D | 12/12/12 | 01/21/13 | 12/12/12 | 11:43 | 12/13/2012 20:10 |
| SM3500-Cr D VI | 12/06/12 15:15 | | 12/06/12 | 11:14 | 12/6/2012 11:26 |

| Client ID: SS-10 | Lab ID: C214257-11 | Sampled: 12/04/12 16:30 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 7196A | 01/03/13 | 12/17/12 | 12/10/12 | 19:00 | 12/12/2012 21:40 |
| EPA 6010C | 06/02/13 | | 12/13/12 | 09:36 | 12/14/2012 13:25 |
| EPA 8081B | 12/18/12 | 01/15/13 | 12/06/12 | 11:14 | 12/7/2012 13:12 |
| EPA 8260B | 12/18/12 | | 12/10/12 | 11:56 | 12/10/2012 19:26 |
| EPA 8270D | 12/18/12 | 01/19/13 | 12/10/12 | 14:15 | 12/12/2012 19:58 |

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| Client ID: SS-11 | Lab ID: C214257-12 | Sampled: 12/04/12 17:00 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 7196A | 01/03/13 | 12/17/12 | 12/10/12 | 19:00 | 12/12/2012 21:40 |
| EPA 6010C | 06/02/13 | | 12/13/12 | 09:36 | 12/14/2012 13:27 |
| EPA 8081B | 12/18/12 | 01/15/13 | 12/06/12 | 11:14 | 12/7/2012 13:26 |
| EPA 8270D | 12/18/12 | 01/19/13 | 12/10/12 | 14:15 | 12/12/2012 20:26 |

| Client ID: SS-11 | Lab ID: C214257-12RE1 | Sampled: 12/04/12 17:00 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 8260B | 12/18/12 | | 12/17/12 | 06:46 | 12/17/2012 20:54 |

| Client ID: MW-13 | Lab ID: C214257-13 | Sampled: 12/05/12 16:00 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 06/03/13 | | 12/07/12 | 08:57 | 12/10/2012 12:57 |
| EPA 8081B | 12/12/12 | 01/19/13 | 12/10/12 | 11:30 | 12/12/2012 14:27 |
| EPA 8260B | 12/19/12 | | 12/07/12 | 12:45 | 12/8/2012 21:24 |
| EPA 8270D | 12/12/12 | 01/21/13 | 12/12/12 | 11:43 | 12/13/2012 20:38 |
| SM3500-Cr D VI | 12/06/12 16:00 | | 12/06/12 | 11:14 | 12/6/2012 11:26 |

| Client ID: MW-14 | Lab ID: C214257-14 | Sampled: 12/05/12 13:45 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 06/03/13 | | 12/07/12 | 08:57 | 12/10/2012 13:00 |
| EPA 8081B | 12/12/12 | 01/19/13 | 12/10/12 | 11:30 | 12/12/2012 14:40 |
| EPA 8260B | 12/19/12 | | 12/07/12 | 12:45 | 12/8/2012 21:54 |
| EPA 8270D | 12/12/12 | 01/21/13 | 12/12/12 | 11:43 | 12/13/2012 21:07 |
| SM3500-Cr D VI | 12/06/12 13:45 | | 12/06/12 | 11:14 | 12/6/2012 11:26 |

| Client ID: Trip Blank | Lab ID: C214257-15 | Sampled: 12/04/12 08:45 | Received: 12/06/12 10:35 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 8260B | 12/18/12 | | 12/11/12 | 09:42 | 12/13/2012 08:09 |

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## SAMPLE DETECTION SUMMARY

| Client ID: SS-1 | | | Lab ID: C214257-01 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| 2-Butanone | 0.022 | | 0.0013 | 0.0084 | mg/kg dry | EPA 8260B | |
| 9-Octadecenamide, (Z)- | 0.44 | J | | | mg/kg dry | EPA 8270D | |
| Acetone | 0.067 | | 0.0023 | 0.0084 | mg/kg dry | EPA 8260B | |
| Arsenic - Total | 0.580 | | 0.110 | 0.552 | mg/kg dry | EPA 6010C | |
| Cyclohexene | 0.33 | JB | | | mg/kg dry | EPA 8270D | B |
| Cyclopentasiloxane, decamet... | 0.0033 | J | | | mg/kg dry | EPA 8260B | |
| Cyclotetrasiloxane, octamet... | 0.0031 | J | | | mg/kg dry | EPA 8260B | |
| Ethane, 1,1,2,2-tetrachloro- | 0.43 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2-trichloro- | 0.17 | JB | | | mg/kg dry | EPA 8270D | B |
| Lead - Total | 5.38 | | 0.132 | 0.552 | mg/kg dry | EPA 6010C | |
| Unknown | 0.69 | JB | | | mg/kg dry | EPA 8270D | B |

| Client ID: SS-2 | | | Lab ID: C214257-02 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| 9-Octadecenamide, (Z)- | 0.23 | J | | | mg/kg dry | EPA 8270D | |
| Acetone | 0.049 | | 0.0011 | 0.0040 | mg/kg dry | EPA 8260B | |
| Arsenic - Total | 1.02 | | 0.111 | 0.553 | mg/kg dry | EPA 6010C | |
| Cyclohexene | 0.31 | JB | | | mg/kg dry | EPA 8270D | B |
| Cyclopentasiloxane, decamet... | 0.0012 | J | | | mg/kg dry | EPA 8260B | |
| Ethane, 1,1,2,2-tetrachloro- | 0.44 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2-trichloro- | 0.18 | JB | | | mg/kg dry | EPA 8270D | B |
| Lead - Total | 5.59 | | 0.133 | 0.553 | mg/kg dry | EPA 6010C | |
| Unknown | 0.68 | JB | | | mg/kg dry | EPA 8270D | B |

| Client ID: SS-3 | | | Lab ID: C214257-03 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| 7-Oxabicyclo[4.1.0]heptane | 0.17 | J | | | mg/kg dry | EPA 8270D | |
| 9-Octadecenamide, (Z)- | 0.32 | J | | | mg/kg dry | EPA 8270D | |
| Arsenic - Total | 1.59 | | 0.118 | 0.591 | mg/kg dry | EPA 6010C | |
| Cyclohexene | 0.38 | JB | | | mg/kg dry | EPA 8270D | B |
| Cyclopentasiloxane, decamet... | 0.0016 | J | | | mg/kg dry | EPA 8260B | |
| Ethane, 1,1,2,2-tetrachloro- | 0.46 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2-trichloro- | 0.19 | JB | | | mg/kg dry | EPA 8270D | B |
| Lead - Total | 6.75 | | 0.142 | 0.591 | mg/kg dry | EPA 6010C | |
| Unknown | 0.73 | JB | | | mg/kg dry | EPA 8270D | B |

| Client ID: SS-4 | | | Lab ID: C214257-04 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Dieldrin | 0.0029 | | 0.00081 | 0.0018 | mg/kg dry | EPA 8081B | |

| Client ID: SS-5 | | | Lab ID: C214257-05 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Arsenic - Total | 5.16 | | 0.110 | 0.549 | mg/kg dry | EPA 6010C | |
| Dieldrin | 0.0041 | | 0.00084 | 0.0019 | mg/kg dry | EPA 8081B | |

| Client ID: SS-6 | | | Lab ID: C214257-06 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Arsenic - Total | 0.655 | | 0.111 | 0.555 | mg/kg dry | EPA 6010C | |

| Client ID: SS-8-5 | | | Lab ID: C214257-07 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| 7-Oxabicyclo[4.1.0]heptane | 0.20 | J | | | mg/kg dry | EPA 8270D | |
| Acetone | 0.040 | | 0.0011 | 0.0038 | mg/kg dry | EPA 8260B | |
| Cyclohexene | 0.36 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2,2-tetrachloro- | 0.54 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2-trichloro- | 0.23 | JB | | | mg/kg dry | EPA 8270D | B |
| Lead - Total | 6.48 | | 0.142 | 0.591 | mg/kg dry | EPA 6010C | |
| Unknown | 0.78 | JB | | | mg/kg dry | EPA 8270D | B |

| Client ID: MW-8 | | | Lab ID: C214257-08 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Bromacil | 25 | J | | | ug/L | EPA 8270D | |
| Caprolactam | 4.1 | J | | | ug/L | EPA 8270D | |
| Chlorobenzene | 2.7 | | 0.17 | 1.0 | ug/L | EPA 8260B | |
| Cyclohexene | 15 | JB | | | ug/L | EPA 8270D | B |
| Lead - Total | 2.58 | J | 1.90 | 10.0 | ug/L | EPA 6010C | |
| Unknown | 11 | JB | | | ug/L | EPA 8270D | B |

| Client ID: PW-Old | | | Lab ID: C214257-09 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Cyclohexene | 18 | JB | | | ug/L | EPA 8270D | B |
| Hexavalent Chromium | 0.013 | | 0.0049 | 0.010 | mg/L | SM3500-Cr D VI | |
| Lead - Total | 427 | | 1.90 | 10.0 | ug/L | EPA 6010C | |
| Unknown | 12 | JB | | | ug/L | EPA 8270D | B |

| Client ID: PW-New | | | Lab ID: C214257-10 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Cyclohexene | 8.1 | JB | | | ug/L | EPA 8270D | B |
| Hexavalent Chromium | 0.0099 | J | 0.0049 | 0.010 | mg/L | SM3500-Cr D VI | |
| Unknown | 8.6 | JB | | | ug/L | EPA 8270D | B |

| Client ID: SS-10 | | | Lab ID: C214257-11 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Acetone | 0.27 | | 0.0065 | 0.023 | mg/kg dry | EPA 8260B | |
| Arsenic - Total | 26.9 | | 0.595 | 2.97 | mg/kg dry | EPA 6010C | |
| Cyclohexene | 1.4 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2,2-tetrachloro- | 2.7 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2-trichloro- | 1.2 | JB | | | mg/kg dry | EPA 8270D | B |
| Methylene Chloride | 0.0042 | J | 0.0034 | 0.0094 | mg/kg dry | EPA 8260B | |
| Unknown (01) | 3.6 | JB | | | mg/kg dry | EPA 8270D | B |
| Unknown (02) | 1.5 | J | | | mg/kg dry | EPA 8270D | |

| Client ID: SS-11 | | | Lab ID: C214257-12 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Arsenic - Total | 29.9 | | 0.694 | 3.47 | mg/kg dry | EPA 6010C | |
| Cyclohexene | 1.6 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2,2-tetrachloro- | 2.7 | JB | | | mg/kg dry | EPA 8270D | B |
| Ethane, 1,1,2-trichloro- | 1.1 | JB | | | mg/kg dry | EPA 8270D | B |
| Octadecane | 1.2 | J | | | mg/kg dry | EPA 8270D | |
| Tetracosane | 0.98 | J | | | mg/kg dry | EPA 8270D | |
| Unknown (01) | 4.1 | JB | | | mg/kg dry | EPA 8270D | B |

| Client ID: SS-11 | | | Lab ID: C214257-12 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Unknown (02) | 1.6 | J | | | mg/kg dry | EPA 8270D | |
| Unknown (03) | 3.5 | J | | | mg/kg dry | EPA 8270D | |
| Unknown (04) | 1.3 | J | | | mg/kg dry | EPA 8270D | |

| Client ID: SS-11 | | | Lab ID: C214257-12RE1 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| 2-Butanone | 0.11 | | 0.0092 | 0.059 | mg/kg dry | EPA 8260B | |
| Acetone | 0.28 | | 0.016 | 0.059 | mg/kg dry | EPA 8260B | |
| Carbon disulfide | 0.0052 | J | 0.0046 | 0.059 | mg/kg dry | EPA 8260B | |
| Cyclopentasiloxane, decamet... | 0.020 | J | | | mg/kg dry | EPA 8260B | |
| Methylene Chloride | 0.0088 | J | 0.0086 | 0.024 | mg/kg dry | EPA 8260B | |
| Tetrachloroethene | 0.0089 | JB | 0.0033 | 0.012 | mg/kg dry | EPA 8260B | |

| Client ID: MW-13 | | | Lab ID: C214257-13 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| 1-Adamantanol | 17 | J | | | ug/L | EPA 8270D | |
| Cyclohexene | 10 | JB | | | ug/L | EPA 8270D | B |
| Diethylphthalate | 4.2 | J | 2.1 | 10 | ug/L | EPA 8270D | |
| Di-n-butylphthalate | 1.6 | J | 1.5 | 10 | ug/L | EPA 8270D | |
| Hexavalent Chromium | 0.011 | | 0.0049 | 0.010 | mg/L | SM3500-Cr D VI | |
| Lead - Total | 5.18 | J | 1.90 | 10.0 | ug/L | EPA 6010C | |
| Unknown (01) | 13 | JB | | | ug/L | EPA 8270D | B |
| Unknown (02) | 7.9 | J | | | ug/L | EPA 8270D | |
| Unknown (03) | 8.1 | J | | | ug/L | EPA 8270D | |
| Unknown (04) | 8.3 | J | | | ug/L | EPA 8270D | |
| Unknown (05) | 12 | J | | | ug/L | EPA 8270D | |
| Unknown (06) | 8.5 | J | | | ug/L | EPA 8270D | |
| Unknown (07) | 8.4 | J | | | ug/L | EPA 8270D | |
| Unknown (08) | 8.2 | J | | | ug/L | EPA 8270D | |

| Client ID: MW-14 | | | Lab ID: C214257-14 | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
| Caprolactam | 4.6 | J | | | ug/L | EPA 8270D | |
| Chlorobenzene | 0.50 | J | 0.17 | 1.0 | ug/L | EPA 8260B | |
| Cyclohexene | 7.6 | JB | | | ug/L | EPA 8270D | B |
| Hexavalent Chromium | 0.019 | | 0.0049 | 0.010 | mg/L | SM3500-Cr D VI | |
| Lead - Total | 2.18 | J | 1.90 | 10.0 | ug/L | EPA 6010C | |
| Unknown | 6.8 | JB | | | ug/L | EPA 8270D | B |

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## ANALYTICAL RESULTS

**Description:** SS-1
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-01
**Sampled:** 12/04/12 08:45
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 90.6

### Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00050 | U | mg/kg dry | 1 | 0.00050 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00077 | U | mg/kg dry | 1 | 0.00077 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00069 | U | mg/kg dry | 1 | 0.00069 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00044 | U | mg/kg dry | 1 | 0.00044 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00049 | U | mg/kg dry | 1 | 0.00049 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00039 | U | mg/kg dry | 1 | 0.00039 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| **2-Butanone [78-93-3] ^** | **0.022** | | mg/kg dry | 1 | 0.0013 | 0.0084 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0084 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0084 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00044 | U | mg/kg dry | 1 | 0.00044 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00096 | U | mg/kg dry | 1 | 0.00096 | 0.0084 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| **Acetone [67-64-1] ^** | **0.067** | | mg/kg dry | 1 | 0.0023 | 0.0084 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Benzene [71-43-2] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00069 | U | mg/kg dry | 1 | 0.00069 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Bromoform [75-25-2] ^ | 0.00075 | U | mg/kg dry | 1 | 0.00075 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00054 | U | mg/kg dry | 1 | 0.00054 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00065 | U | mg/kg dry | 1 | 0.00065 | 0.0084 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Chloroform [67-66-3] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00035 | U | mg/kg dry | 1 | 0.00035 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00039 | U | mg/kg dry | 1 | 0.00039 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00059 | U | mg/kg dry | 1 | 0.00059 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00055 | U | mg/kg dry | 1 | 0.00055 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00075 | U | mg/kg dry | 1 | 0.00075 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00059 | U | mg/kg dry | 1 | 0.00059 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |

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**Description:** SS-1
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-01
**Sampled:** 12/04/12 08:45
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 90.6

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene [98-82-8] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00062 | U | mg/kg dry | 1 | 0.00062 | 0.0034 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0034 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.00050 | U | mg/kg dry | 1 | 0.00050 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.0016 | U | mg/kg dry | 1 | 0.0016 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Styrene [100-42-5] ^ | 0.0016 | U | mg/kg dry | 1 | 0.0016 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Toluene [108-88-3] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00062 | U | mg/kg dry | 1 | 0.00062 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00065 | U | mg/kg dry | 1 | 0.00065 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00054 | U | mg/kg dry | 1 | 0.00054 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00044 | U | mg/kg dry | 1 | 0.00044 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0017 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00094 | U | mg/kg dry | 1 | 0.00094 | 0.0050 | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *40* | *1* | *50.0* | *81 %* | *61-118* | *2L10001* | *EPA 8260B* | *12/10/12 18:27* | *JKG* | |
| *Dibromofluoromethane* | *41* | *1* | *50.0* | *81 %* | *66-114* | *2L10001* | *EPA 8260B* | *12/10/12 18:27* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *87 %* | *63-118* | *2L10001* | *EPA 8260B* | *12/10/12 18:27* | *JKG* | |

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| | | |
|---|---|---|
| **Description:** SS-1 | **Lab Sample ID:** C214257-01 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 08:45 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.6 |

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclopentasiloxane, decamet... [000541-02-6] | 0.0033 | J | mg/kg dry | 1 | | | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |
| Cyclotetrasiloxane, octamet... [000556-67-2] | 0.0031 | J | mg/kg dry | 1 | | | 2L10001 | EPA 8260B | 12/10/12 18:27 | JKG | |

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**Description:** SS-1
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-01
**Sampled:** 12/04/12 08:45
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 90.6

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.023 | U | mg/kg dry | 1 | 0.023 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 0.026 | U | mg/kg dry | 1 | 0.026 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 0.047 | U | mg/kg dry | 1 | 0.047 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 0.047 | U | mg/kg dry | 1 | 0.047 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.11 | U | mg/kg dry | 1 | 0.11 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.040 | U | mg/kg dry | 1 | 0.040 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.10 | U | mg/kg dry | 1 | 0.10 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.058 | U | mg/kg dry | 1 | 0.058 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Anthracene [120-12-7] ^ | 0.042 | U | mg/kg dry | 1 | 0.042 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Benzidine [92-87-5] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.020 | U | mg/kg dry | 1 | 0.020 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.052 | U | mg/kg dry | 1 | 0.052 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Benzoic acid [65-85-0] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 1.9 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 0.047 | U | mg/kg dry | 1 | 0.047 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.026 | U | mg/kg dry | 1 | 0.026 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.044 | U | mg/kg dry | 1 | 0.044 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Chrysene [218-01-9] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.056 | U | mg/kg dry | 1 | 0.056 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.045 | U | mg/kg dry | 1 | 0.045 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |

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|---|---|---|
| **Description:** SS-1 | **Lab Sample ID:** C214257-01 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 08:45 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.6 |

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 0.040 | U | mg/kg dry | 1 | 0.040 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Fluorene [86-73-7] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.043 | U | mg/kg dry | 1 | 0.043 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.023 | U | mg/kg dry | 1 | 0.023 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.052 | U | mg/kg dry | 1 | 0.052 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Isophorone [78-59-1] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Naphthalene [91-20-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.023 | U | mg/kg dry | 1 | 0.023 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.089 | U | mg/kg dry | 1 | 0.089 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.060 | U | mg/kg dry | 1 | 0.060 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Phenol [108-95-2] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Pyrene [129-00-0] ^ | 0.042 | U | mg/kg dry | 1 | 0.042 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Pyridine [110-86-1] ^ | 0.090 | U | mg/kg dry | 1 | 0.090 | 0.36 | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *3.5* | *1* | *3.68* | *95 %* | *28-130* | *2L10025* | *EPA 8270D* | *12/11/12 05:59* | *DFM* | |
| *2-Fluorobiphenyl* | *1.5* | *1* | *1.84* | *82 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/11/12 05:59* | *DFM* | |
| *2-Fluorophenol* | *2.8* | *1* | *3.68* | *76 %* | *49-126* | *2L10025* | *EPA 8270D* | *12/11/12 05:59* | *DFM* | |
| *Nitrobenzene-d5* | *1.5* | *1* | *1.84* | *81 %* | *50-117* | *2L10025* | *EPA 8270D* | *12/11/12 05:59* | *DFM* | |
| *Phenol-d5* | *3.1* | *1* | *3.68* | *84 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/11/12 05:59* | *DFM* | |
| *Terphenyl-d14* | *1.8* | *1* | *1.84* | *96 %* | *36-151* | *2L10025* | *EPA 8270D* | *12/11/12 05:59* | *DFM* | |

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| | | |
|---|---|---|
| **Description:** SS-1 | **Lab Sample ID:** C214257-01 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 08:45 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.6 |

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9-Octadecenamide, (Z)- [000301-02-0] | 0.44 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | |
| Cyclohexene [000110-83-8] | 0.33 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | B |
| Ethane, 1,1,2,2-tetrachloro- [000079-34-5] | 0.43 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | B |
| Ethane, 1,1,2-trichloro- [000079-00-5] | 0.17 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | B |
| Unknown [NA] | 0.69 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 05:59 | DFM | B |

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**Description:** SS-1 | **Lab Sample ID:** C214257-01 | **Received:** 12/06/12 10:35
**Matrix:** Soil | **Sampled:** 12/04/12 08:45 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.6

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.00085 | U | mg/kg dry | 1 | 0.00085 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.00088 | U | mg/kg dry | 1 | 0.00088 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Aldrin [309-00-2] ^ | 0.00089 | U | mg/kg dry | 1 | 0.00089 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.036 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.00068 | U | mg/kg dry | 1 | 0.00068 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.00093 | U | mg/kg dry | 1 | 0.00093 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Endrin [72-20-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.00088 | U | mg/kg dry | 1 | 0.00088 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.00083 | U | mg/kg dry | 1 | 0.00083 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.00087 | U | mg/kg dry | 1 | 0.00087 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.00083 | U | mg/kg dry | 1 | 0.00083 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Isodrin [465-73-6] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Mirex [2385-85-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.011 | U | mg/kg dry | 1 | 0.011 | 0.019 | 2L06020 | EPA 8081B | 12/07/12 11:53 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.031* | *1* | *0.0368* | *85 %* | *59-137* | *2L06020* | *EPA 8081B* | *12/07/12 11:53* | *MSZ* | |
| *Decachlorobiphenyl* | *0.039* | *1* | *0.0368* | *106 %* | *60-140* | *2L06020* | *EPA 8081B* | *12/07/12 11:53* | *MSZ* | |

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|---|---|---|
| **Description:** SS-1 | **Lab Sample ID:** C214257-01 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 08:45 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.6 |

## Metals by EPA 6000/7000 Series Methods

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic [7440-38-2] ^** | **0.580** | | mg/kg dry | 1 | 0.110 | 0.552 | 2L13015 | EPA 6010C | 12/14/12 13:07 | JDH | |
| **Lead [7439-92-1] ^** | **5.38** | | mg/kg dry | 1 | 0.132 | 0.552 | 2L13015 | EPA 6010C | 12/14/12 13:07 | JDH | |

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| | | |
|---|---|---|
| **Description:** SS-1 | **Lab Sample ID:** C214257-01 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 08:45 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.6 |

## Classical Chemistry Parameters

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] | 0.80 | U | mg/kg dry | 1 | 0.80 | 5.3 | 2L10033 | EPA 7196A | 12/12/12 21:40 | NP | R-01 |

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**Description:** SS-2 | **Lab Sample ID:** C214257-02 | **Received:** 12/06/12 10:35
**Matrix:** Soil | **Sampled:** 12/03/12 16:00 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.4

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00051 | U | mg/kg dry | 1 | 0.00051 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00063 | U | mg/kg dry | 1 | 0.00063 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00062 | U | mg/kg dry | 1 | 0.00062 | 0.0040 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.0040 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00060 | U | mg/kg dry | 1 | 0.00060 | 0.0040 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00046 | U | mg/kg dry | 1 | 0.00046 | 0.0040 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| **Acetone [67-64-1] ^** | **0.049** | | mg/kg dry | 1 | 0.0011 | 0.0040 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Benzene [71-43-2] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Bromoform [75-25-2] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0040 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Chloroform [67-66-3] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00012 | U | mg/kg dry | 1 | 0.00012 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0016 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.00058 | U | mg/kg dry | 1 | 0.00058 | 0.0016 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |

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**Description:** SS-2
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-02
**Sampled:** 12/03/12 16:00
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 90.4

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00010 | U | mg/kg dry | 1 | 0.00010 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.00076 | U | mg/kg dry | 1 | 0.00076 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Styrene [100-42-5] ^ | 0.00078 | U | mg/kg dry | 1 | 0.00078 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Toluene [108-88-3] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.00080 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0024 | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *42* | *1* | *50.0* | *84 %* | *61-118* | *2L10001* | *EPA 8260B* | *12/10/12 18:56* | *JKG* | |
| *Dibromofluoromethane* | *42* | *1* | *50.0* | *85 %* | *66-114* | *2L10001* | *EPA 8260B* | *12/10/12 18:56* | *JKG* | |
| *Toluene-d8* | *43* | *1* | *50.0* | *85 %* | *63-118* | *2L10001* | *EPA 8260B* | *12/10/12 18:56* | *JKG* | |

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| | | |
|---|---|---|
| **Description:** SS-2 | **Lab Sample ID:** C214257-02 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/03/12 16:00 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.4 |

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclopentasiloxane, decamet... [000541-02-6] | 0.0012 | J | mg/kg dry | 1 | | | 2L10001 | EPA 8260B | 12/10/12 18:56 | JKG | |

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**Description:** SS-2 | **Lab Sample ID:** C214257-02 | **Received:** 12/06/12 10:35
**Matrix:** Soil | **Sampled:** 12/03/12 16:00 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.4

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.023 | U | mg/kg dry | 1 | 0.023 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 0.048 | U | mg/kg dry | 1 | 0.048 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 0.048 | U | mg/kg dry | 1 | 0.048 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.11 | U | mg/kg dry | 1 | 0.11 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.040 | U | mg/kg dry | 1 | 0.040 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.10 | U | mg/kg dry | 1 | 0.10 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.059 | U | mg/kg dry | 1 | 0.059 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Anthracene [120-12-7] ^ | 0.042 | U | mg/kg dry | 1 | 0.042 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Benzidine [92-87-5] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.020 | U | mg/kg dry | 1 | 0.020 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.052 | U | mg/kg dry | 1 | 0.052 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Benzoic acid [65-85-0] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 1.9 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 0.048 | U | mg/kg dry | 1 | 0.048 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.044 | U | mg/kg dry | 1 | 0.044 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Chrysene [218-01-9] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.056 | U | mg/kg dry | 1 | 0.056 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.045 | U | mg/kg dry | 1 | 0.045 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |

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**Description:** SS-2
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-02
**Sampled:** 12/03/12 16:00
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 90.4

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 0.040 | U | mg/kg dry | 1 | 0.040 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Fluorene [86-73-7] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.043 | U | mg/kg dry | 1 | 0.043 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.023 | U | mg/kg dry | 1 | 0.023 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.052 | U | mg/kg dry | 1 | 0.052 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Isophorone [78-59-1] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Naphthalene [91-20-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.023 | U | mg/kg dry | 1 | 0.023 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.090 | U | mg/kg dry | 1 | 0.090 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.060 | U | mg/kg dry | 1 | 0.060 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Phenol [108-95-2] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Pyrene [129-00-0] ^ | 0.042 | U | mg/kg dry | 1 | 0.042 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Pyridine [110-86-1] ^ | 0.091 | U | mg/kg dry | 1 | 0.091 | 0.37 | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *3.4* | *1* | *3.69* | *93 %* | *28-130* | *2L10025* | *EPA 8270D* | *12/11/12 06:27* | *DFM* | |
| *2-Fluorobiphenyl* | *1.5* | *1* | *1.84* | *81 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/11/12 06:27* | *DFM* | |
| *2-Fluorophenol* | *2.8* | *1* | *3.69* | *75 %* | *49-126* | *2L10025* | *EPA 8270D* | *12/11/12 06:27* | *DFM* | |
| *Nitrobenzene-d5* | *1.5* | *1* | *1.84* | *81 %* | *50-117* | *2L10025* | *EPA 8270D* | *12/11/12 06:27* | *DFM* | |
| *Phenol-d5* | *3.1* | *1* | *3.69* | *84 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/11/12 06:27* | *DFM* | |
| *Terphenyl-d14* | *1.7* | *1* | *1.84* | *93 %* | *36-151* | *2L10025* | *EPA 8270D* | *12/11/12 06:27* | *DFM* | |

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| | | |
|---|---|---|
| **Description:** SS-2 | **Lab Sample ID:** C214257-02 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/03/12 16:00 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.4 |

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9-Octadecenamide, (Z)- [000301-02-0] | 0.23 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | |
| Cyclohexene [000110-83-8] | 0.31 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | B |
| Ethane, 1,1,2,2-tetrachloro- [000079-34-5] | 0.44 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | B |
| Ethane, 1,1,2-trichloro- [000079-00-5] | 0.18 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | B |
| Unknown [NA] | 0.68 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:27 | DFM | B |

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**Description:** SS-2
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-02
**Sampled:** 12/03/12 16:00
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 90.4

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.00085 | U | mg/kg dry | 1 | 0.00085 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.00088 | U | mg/kg dry | 1 | 0.00088 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Aldrin [309-00-2] ^ | 0.00090 | U | mg/kg dry | 1 | 0.00090 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.037 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.00069 | U | mg/kg dry | 1 | 0.00069 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.00093 | U | mg/kg dry | 1 | 0.00093 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Endrin [72-20-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.00088 | U | mg/kg dry | 1 | 0.00088 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.00083 | U | mg/kg dry | 1 | 0.00083 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.00087 | U | mg/kg dry | 1 | 0.00087 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.00083 | U | mg/kg dry | 1 | 0.00083 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Isodrin [465-73-6] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Mirex [2385-85-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.011 | U | mg/kg dry | 1 | 0.011 | 0.019 | 2L06020 | EPA 8081B | 12/07/12 12:06 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.034* | *1* | *0.0369* | *91 %* | *59-137* | *2L06020* | *EPA 8081B* | *12/07/12 12:06* | *MSZ* | |
| *Decachlorobiphenyl* | *0.042* | *1* | *0.0369* | *113 %* | *60-140* | *2L06020* | *EPA 8081B* | *12/07/12 12:06* | *MSZ* | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-2 | **Lab Sample ID:** | C214257-02 | **Received:** | 12/06/12 10:35 |
| **Matrix:** | Soil | **Sampled:** | 12/03/12 16:00 | **Work Order:** | C214257 |
| **Project:** | 213912 | **Sampled By:** | Wes Brummer | **% Solids:** | 90.4 |

## Metals by EPA 6000/7000 Series Methods

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 1.02 | | mg/kg dry | 1 | 0.111 | 0.553 | 2L13015 | EPA 6010C | 12/14/12 13:09 | JDH | |
| Lead [7439-92-1] ^ | 5.59 | | mg/kg dry | 1 | 0.133 | 0.553 | 2L13015 | EPA 6010C | 12/14/12 13:09 | JDH | |

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| | | |
|---|---|---|
| **Description:** SS-2 | **Lab Sample ID:** C214257-02 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/03/12 16:00 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 90.4 |

## Classical Chemistry Parameters

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] | 0.17 | U | mg/kg dry | 1 | 0.17 | 1.1 | 2L10033 | EPA 7196A | 12/12/12 21:40 | NP | |

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

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**Description:** SS-3 | **Lab Sample ID:** C214257-03 | **Received:** 12/06/12 10:35
**Matrix:** Soil | **Sampled:** 12/03/12 16:45 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 84.6

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00063 | U | mg/kg dry | 1 | 0.00063 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00077 | U | mg/kg dry | 1 | 0.00077 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00076 | U | mg/kg dry | 1 | 0.00076 | 0.0049 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.0049 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00073 | U | mg/kg dry | 1 | 0.00073 | 0.0049 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00056 | U | mg/kg dry | 1 | 0.00056 | 0.0049 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Acetone [67-64-1] ^ | 0.0014 | U | mg/kg dry | 1 | 0.0014 | 0.0049 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Benzene [71-43-2] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Bromoform [75-25-2] ^ | 0.00044 | U | mg/kg dry | 1 | 0.00044 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.0049 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Chloroform [67-66-3] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00044 | U | mg/kg dry | 1 | 0.00044 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00015 | U | mg/kg dry | 1 | 0.00015 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0020 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.00071 | U | mg/kg dry | 1 | 0.00071 | 0.0020 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |

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**Description:** SS-3
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-03
**Sampled:** 12/03/12 16:45
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 84.6

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.00093 | U | mg/kg dry | 1 | 0.00093 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Styrene [100-42-5] ^ | 0.00096 | U | mg/kg dry | 1 | 0.00096 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Toluene [108-88-3] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.00098 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00055 | U | mg/kg dry | 1 | 0.00055 | 0.0029 | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *42* | *1* | *50.0* | *84 %* | *61-118* | *2L10020* | *EPA 8260B* | *12/10/12 23:57* | *JKG* | |
| *Dibromofluoromethane* | *43* | *1* | *50.0* | *86 %* | *66-114* | *2L10020* | *EPA 8260B* | *12/10/12 23:57* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *88 %* | *63-118* | *2L10020* | *EPA 8260B* | *12/10/12 23:57* | *JKG* | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-3 | **Lab Sample ID:** | C214257-03 | **Received:** | 12/06/12 10:35 |
| **Matrix:** | Soil | **Sampled:** | 12/03/12 16:45 | **Work Order:** | C214257 |
| **Project:** | 213912 | **Sampled By:** | Wes Brummer | **% Solids:** | 84.6 |

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclopentasiloxane, decamet... [000541-02-6] | 0.0016 | J | mg/kg dry | 1 | | | 2L10020 | EPA 8260B | 12/10/12 23:57 | JKG | |

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**Description:** SS-3 | **Lab Sample ID:** C214257-03 | **Received:** 12/06/12 10:35
**Matrix:** Soil | **Sampled:** 12/03/12 16:45 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 84.6

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 0.051 | U | mg/kg dry | 1 | 0.051 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 0.051 | U | mg/kg dry | 1 | 0.051 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.035 | U | mg/kg dry | 1 | 0.035 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.043 | U | mg/kg dry | 1 | 0.043 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.11 | U | mg/kg dry | 1 | 0.11 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.063 | U | mg/kg dry | 1 | 0.063 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Anthracene [120-12-7] ^ | 0.045 | U | mg/kg dry | 1 | 0.045 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Benzidine [92-87-5] ^ | 0.13 | U | mg/kg dry | 1 | 0.13 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.021 | U | mg/kg dry | 1 | 0.021 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.056 | U | mg/kg dry | 1 | 0.056 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Benzoic acid [65-85-0] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.0 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 0.051 | U | mg/kg dry | 1 | 0.051 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 0.041 | U | mg/kg dry | 1 | 0.041 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.047 | U | mg/kg dry | 1 | 0.047 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Chrysene [218-01-9] ^ | 0.035 | U | mg/kg dry | 1 | 0.035 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.060 | U | mg/kg dry | 1 | 0.060 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.048 | U | mg/kg dry | 1 | 0.048 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |

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**Description:** SS-3
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-03
**Sampled:** 12/03/12 16:45
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 84.6

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 0.043 | U | mg/kg dry | 1 | 0.043 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Fluorene [86-73-7] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.046 | U | mg/kg dry | 1 | 0.046 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.056 | U | mg/kg dry | 1 | 0.056 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Isophorone [78-59-1] ^ | 0.035 | U | mg/kg dry | 1 | 0.035 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Naphthalene [91-20-3] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.096 | U | mg/kg dry | 1 | 0.096 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.064 | U | mg/kg dry | 1 | 0.064 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Phenol [108-95-2] ^ | 0.026 | U | mg/kg dry | 1 | 0.026 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Pyrene [129-00-0] ^ | 0.045 | U | mg/kg dry | 1 | 0.045 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Pyridine [110-86-1] ^ | 0.097 | U | mg/kg dry | 1 | 0.097 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *3.7* | *1* | *3.94* | *93 %* | *28-130* | *2L10025* | *EPA 8270D* | *12/11/12 06:56* | *DFM* | |
| *2-Fluorobiphenyl* | *1.6* | *1* | *1.97* | *82 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/11/12 06:56* | *DFM* | |
| *2-Fluorophenol* | *2.9* | *1* | *3.94* | *74 %* | *49-126* | *2L10025* | *EPA 8270D* | *12/11/12 06:56* | *DFM* | |
| *Nitrobenzene-d5* | *1.6* | *1* | *1.97* | *81 %* | *50-117* | *2L10025* | *EPA 8270D* | *12/11/12 06:56* | *DFM* | |
| *Phenol-d5* | *3.3* | *1* | *3.94* | *84 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/11/12 06:56* | *DFM* | |
| *Terphenyl-d14* | *1.8* | *1* | *1.97* | *93 %* | *36-151* | *2L10025* | *EPA 8270D* | *12/11/12 06:56* | *DFM* | |

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**Description:** SS-3
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-03
**Sampled:** 12/03/12 16:45
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 84.6

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7-Oxabicyclo[4.1.0]heptane [000286-20-4] | 0.17 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| 9-Octadecenamide, (Z)- [000301-02-0] | 0.32 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | |
| Cyclohexene [000110-83-8] | 0.38 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | B |
| Ethane, 1,1,2,2-tetrachloro- [000079-34-5] | 0.46 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | B |
| Ethane, 1,1,2-trichloro- [000079-00-5] | 0.19 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | B |
| Unknown [NA] | 0.73 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 06:56 | DFM | B |

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**Description:** SS-3
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-03
**Sampled:** 12/03/12 16:45
**Sampled By:** Wes Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 84.6

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.00085 | U | mg/kg dry | 1 | 0.00085 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.00091 | U | mg/kg dry | 1 | 0.00091 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.00095 | U | mg/kg dry | 1 | 0.00095 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Aldrin [309-00-2] ^ | 0.00096 | U | mg/kg dry | 1 | 0.00096 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.0014 | U | mg/kg dry | 1 | 0.0014 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.0020 | U | mg/kg dry | 1 | 0.0020 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.039 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.00073 | U | mg/kg dry | 1 | 0.00073 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.00085 | U | mg/kg dry | 1 | 0.00085 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.00099 | U | mg/kg dry | 1 | 0.00099 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.00090 | U | mg/kg dry | 1 | 0.00090 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.00090 | U | mg/kg dry | 1 | 0.00090 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Endrin [72-20-8] ^ | 0.00090 | U | mg/kg dry | 1 | 0.00090 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.00095 | U | mg/kg dry | 1 | 0.00095 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.00089 | U | mg/kg dry | 1 | 0.00089 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.00093 | U | mg/kg dry | 1 | 0.00093 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.00089 | U | mg/kg dry | 1 | 0.00089 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Isodrin [465-73-6] ^ | 0.00085 | U | mg/kg dry | 1 | 0.00085 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Mirex [2385-85-5] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.012 | U | mg/kg dry | 1 | 0.012 | 0.020 | 2L06020 | EPA 8081B | 12/07/12 12:19 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.041* | *1* | *0.0394* | *105 %* | *59-137* | *2L06020* | *EPA 8081B* | *12/07/12 12:19* | *MSZ* | |
| *Decachlorobiphenyl* | *0.050* | *1* | *0.0394* | *128 %* | *60-140* | *2L06020* | *EPA 8081B* | *12/07/12 12:19* | *MSZ* | |

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| | | |
|---|---|---|
| **Description:** SS-3 | **Lab Sample ID:** C214257-03 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/03/12 16:45 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 84.6 |

## Metals by EPA 6000/7000 Series Methods

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic [7440-38-2] ^** | **1.59** | | mg/kg dry | 1 | 0.118 | 0.591 | 2L13015 | EPA 6010C | 12/14/12 13:11 | JDH | |
| **Lead [7439-92-1] ^** | **6.75** | | mg/kg dry | 1 | 0.142 | 0.591 | 2L13015 | EPA 6010C | 12/14/12 13:11 | JDH | |

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| | | |
|---|---|---|
| **Description:** SS-3 | **Lab Sample ID:** C214257-03 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/03/12 16:45 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wes Brummer | **% Solids:** 84.6 |

## Classical Chemistry Parameters

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] | 0.18 | U | mg/kg dry | 1 | 0.18 | 1.2 | 2L10033 | EPA 7196A | 12/12/12 21:40 | NP | |

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**Description:** SS-4
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-04
**Sampled:** 12/03/12 14:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 93.5

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.00077 | U | mg/kg dry | 1 | 0.00077 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.00082 | U | mg/kg dry | 1 | 0.00082 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.00086 | U | mg/kg dry | 1 | 0.00086 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Aldrin [309-00-2] ^ | 0.00087 | U | mg/kg dry | 1 | 0.00087 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.0018 | U | mg/kg dry | 1 | 0.0018 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.035 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.00066 | U | mg/kg dry | 1 | 0.00066 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.00077 | U | mg/kg dry | 1 | 0.00077 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.00090 | U | mg/kg dry | 1 | 0.00090 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| **Dieldrin [60-57-1] ^** | **0.0029** | | mg/kg dry | 1 | 0.00081 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.00081 | U | mg/kg dry | 1 | 0.00081 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.0010 | U | mg/kg dry | 1 | 0.0010 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Endrin [72-20-8] ^ | 0.00081 | U | mg/kg dry | 1 | 0.00081 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.00086 | U | mg/kg dry | 1 | 0.00086 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Isodrin [465-73-6] ^ | 0.00077 | U | mg/kg dry | 1 | 0.00077 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.0010 | U | mg/kg dry | 1 | 0.0010 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Mirex [2385-85-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.011 | U | mg/kg dry | 1 | 0.011 | 0.018 | 2L06020 | EPA 8081B | 12/07/12 12:32 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.030* | *1* | *0.0356* | *85 %* | *59-137* | *2L06020* | *EPA 8081B* | *12/07/12 12:32* | *MSZ* | |
| *Decachlorobiphenyl* | *0.036* | *1* | *0.0356* | *101 %* | *60-140* | *2L06020* | *EPA 8081B* | *12/07/12 12:32* | *MSZ* | |

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**Description:** SS-5
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-05
**Sampled:** 12/04/12 11:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 91.0

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.00085 | U | mg/kg dry | 1 | 0.00085 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.00088 | U | mg/kg dry | 1 | 0.00088 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Aldrin [309-00-2] ^ | 0.00089 | U | mg/kg dry | 1 | 0.00089 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.036 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.00068 | U | mg/kg dry | 1 | 0.00068 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.00092 | U | mg/kg dry | 1 | 0.00092 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| **Dieldrin [60-57-1] ^** | **0.0041** | | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Endrin [72-20-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.00088 | U | mg/kg dry | 1 | 0.00088 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.00082 | U | mg/kg dry | 1 | 0.00082 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.00087 | U | mg/kg dry | 1 | 0.00087 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.00082 | U | mg/kg dry | 1 | 0.00082 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Isodrin [465-73-6] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Mirex [2385-85-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.011 | U | mg/kg dry | 1 | 0.011 | 0.019 | 2L06020 | EPA 8081B | 12/07/12 12:46 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.033* | *1* | *0.0366* | *90 %* | *59-137* | *2L06020* | *EPA 8081B* | *12/07/12 12:46* | *MSZ* | |
| *Decachlorobiphenyl* | *0.035* | *1* | *0.0366* | *97 %* | *60-140* | *2L06020* | *EPA 8081B* | *12/07/12 12:46* | *MSZ* | |

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| | | |
|---|---|---|
| **Description:** SS-5 | **Lab Sample ID:** C214257-05 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 11:15 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 91.0 |

## Metals by EPA 6000/7000 Series Methods

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 5.16 | | mg/kg dry | 1 | 0.110 | 0.549 | 2L13015 | EPA 6010C | 12/14/12 13:13 | JDH | |

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| | | |
|---|---|---|
| **Description:** SS-5 | **Lab Sample ID:** C214257-05 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 11:15 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 91.0 |

## Classical Chemistry Parameters

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] | 0.16 | U | mg/kg dry | 1 | 0.16 | 1.1 | 2L10033 | EPA 7196A | 12/12/12 21:40 | NP | |

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**Description:** SS-6
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-06
**Sampled:** 12/04/12 09:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 90.1

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.00085 | U | mg/kg dry | 1 | 0.00085 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.00089 | U | mg/kg dry | 1 | 0.00089 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Aldrin [309-00-2] ^ | 0.00090 | U | mg/kg dry | 1 | 0.00090 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.037 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.00069 | U | mg/kg dry | 1 | 0.00069 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.00093 | U | mg/kg dry | 1 | 0.00093 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Endrin [72-20-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.00089 | U | mg/kg dry | 1 | 0.00089 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.00083 | U | mg/kg dry | 1 | 0.00083 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.00088 | U | mg/kg dry | 1 | 0.00088 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.00083 | U | mg/kg dry | 1 | 0.00083 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Isodrin [465-73-6] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Mirex [2385-85-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.011 | U | mg/kg dry | 1 | 0.011 | 0.019 | 2L06020 | EPA 8081B | 12/07/12 12:59 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.038* | *1* | *0.0370* | *103 %* | *59-137* | *2L06020* | *EPA 8081B* | *12/07/12 12:59* | *MSZ* | |
| *Decachlorobiphenyl* | *0.040* | *1* | *0.0370* | *107 %* | *60-140* | *2L06020* | *EPA 8081B* | *12/07/12 12:59* | *MSZ* | |

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| | | |
|---|---|---|
| **Description:** SS-6 | **Lab Sample ID:** C214257-06 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 09:30 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 90.1 |

## Metals by EPA 6000/7000 Series Methods

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 0.655 | | mg/kg dry | 1 | 0.111 | 0.555 | 2L13015 | EPA 6010C | 12/14/12 13:15 | JDH | |

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| | | |
|---|---|---|
| **Description:** SS-6 | **Lab Sample ID:** C214257-06 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 09:30 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 90.1 |

## Classical Chemistry Parameters

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] | 0.17 | U | mg/kg dry | 1 | 0.17 | 1.1 | 2L10033 | EPA 7196A | 12/12/12 21:40 | NP | |

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

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**Description:** SS-8-5
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-07
**Sampled:** 12/04/12 10:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 84.6

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.00012 | U | mg/kg dry | 1 | 0.00012 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00015 | U | mg/kg dry | 1 | 0.00015 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00012 | U | mg/kg dry | 1 | 0.00012 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00048 | U | mg/kg dry | 1 | 0.00048 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00059 | U | mg/kg dry | 1 | 0.00059 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00035 | U | mg/kg dry | 1 | 0.00035 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00015 | U | mg/kg dry | 1 | 0.00015 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00015 | U | mg/kg dry | 1 | 0.00015 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00059 | U | mg/kg dry | 1 | 0.00059 | 0.0038 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00012 | U | mg/kg dry | 1 | 0.00012 | 0.0038 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00056 | U | mg/kg dry | 1 | 0.00056 | 0.0038 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00012 | U | mg/kg dry | 1 | 0.00012 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00043 | U | mg/kg dry | 1 | 0.00043 | 0.0038 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| **Acetone [67-64-1] ^** | **0.040** | | mg/kg dry | 1 | 0.0011 | 0.0038 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Benzene [71-43-2] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Bromoform [75-25-2] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0038 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Chloroform [67-66-3] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00015 | U | mg/kg dry | 1 | 0.00015 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00011 | U | mg/kg dry | 1 | 0.00011 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0015 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.00055 | U | mg/kg dry | 1 | 0.00055 | 0.0015 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |

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**Description:** SS-8-5
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-07
**Sampled:** 12/04/12 10:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 84.6

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00010 | U | mg/kg dry | 1 | 0.00010 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00014 | U | mg/kg dry | 1 | 0.00014 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.00071 | U | mg/kg dry | 1 | 0.00071 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Styrene [100-42-5] ^ | 0.00074 | U | mg/kg dry | 1 | 0.00074 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Toluene [108-88-3] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.00075 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0023 | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *42* | *1* | *50.0* | *85 %* | *61-118* | *2L10020* | *EPA 8260B* | *12/11/12 00:27* | *JKG* | |
| *Dibromofluoromethane* | *43* | *1* | *50.0* | *85 %* | *66-114* | *2L10020* | *EPA 8260B* | *12/11/12 00:27* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *88 %* | *63-118* | *2L10020* | *EPA 8260B* | *12/11/12 00:27* | *JKG* | |

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| | | |
|---|---|---|
| **Description:** SS-8-5 | **Lab Sample ID:** C214257-07 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 10:30 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 84.6 |

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds [NA] | 0.0 | U | mg/kg dry | 1 | | | 2L10020 | EPA 8260B | 12/11/12 00:27 | JKG | |

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**Description:** SS-8-5 | **Lab Sample ID:** C214257-07 | **Received:** 12/06/12 10:35
**Matrix:** Soil | **Sampled:** 12/04/12 10:30 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 84.6

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 0.051 | U | mg/kg dry | 1 | 0.051 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 0.051 | U | mg/kg dry | 1 | 0.051 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.035 | U | mg/kg dry | 1 | 0.035 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.043 | U | mg/kg dry | 1 | 0.043 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.11 | U | mg/kg dry | 1 | 0.11 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.063 | U | mg/kg dry | 1 | 0.063 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Anthracene [120-12-7] ^ | 0.045 | U | mg/kg dry | 1 | 0.045 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Benzidine [92-87-5] ^ | 0.13 | U | mg/kg dry | 1 | 0.13 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.021 | U | mg/kg dry | 1 | 0.021 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.056 | U | mg/kg dry | 1 | 0.056 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Benzoic acid [65-85-0] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.0 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 0.051 | U | mg/kg dry | 1 | 0.051 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 0.041 | U | mg/kg dry | 1 | 0.041 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.047 | U | mg/kg dry | 1 | 0.047 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Chrysene [218-01-9] ^ | 0.035 | U | mg/kg dry | 1 | 0.035 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.060 | U | mg/kg dry | 1 | 0.060 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.048 | U | mg/kg dry | 1 | 0.048 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |

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**Description:** SS-8-5
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-07
**Sampled:** 12/04/12 10:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 84.6

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 0.043 | U | mg/kg dry | 1 | 0.043 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Fluorene [86-73-7] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.046 | U | mg/kg dry | 1 | 0.046 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.056 | U | mg/kg dry | 1 | 0.056 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Isophorone [78-59-1] ^ | 0.035 | U | mg/kg dry | 1 | 0.035 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Naphthalene [91-20-3] ^ | 0.033 | U | mg/kg dry | 1 | 0.033 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.096 | U | mg/kg dry | 1 | 0.096 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.064 | U | mg/kg dry | 1 | 0.064 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Phenol [108-95-2] ^ | 0.026 | U | mg/kg dry | 1 | 0.026 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Pyrene [129-00-0] ^ | 0.045 | U | mg/kg dry | 1 | 0.045 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Pyridine [110-86-1] ^ | 0.097 | U | mg/kg dry | 1 | 0.097 | 0.39 | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *3.9* | *1* | *3.94* | *100 %* | *28-130* | *2L10025* | *EPA 8270D* | *12/11/12 07:25* | *DFM* | |
| *2-Fluorobiphenyl* | *1.7* | *1* | *1.97* | *84 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/11/12 07:25* | *DFM* | |
| *2-Fluorophenol* | *3.1* | *1* | *3.94* | *79 %* | *49-126* | *2L10025* | *EPA 8270D* | *12/11/12 07:25* | *DFM* | |
| *Nitrobenzene-d5* | *1.7* | *1* | *1.97* | *87 %* | *50-117* | *2L10025* | *EPA 8270D* | *12/11/12 07:25* | *DFM* | |
| *Phenol-d5* | *3.4* | *1* | *3.94* | *87 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/11/12 07:25* | *DFM* | |
| *Terphenyl-d14* | *2.0* | *1* | *1.97* | *103 %* | *36-151* | *2L10025* | *EPA 8270D* | *12/11/12 07:25* | *DFM* | |

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**Description:** SS-8-5
**Matrix:** Soil
**Project:** 213912

**Lab Sample ID:** C214257-07
**Sampled:** 12/04/12 10:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 84.6

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7-Oxabicyclo[4.1.0]heptane [000286-20-4] | 0.20 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | |
| Cyclohexene [000110-83-8] | 0.36 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | B |
| Ethane, 1,1,2,2-tetrachloro- [000079-34-5] | 0.54 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | B |
| Ethane, 1,1,2-trichloro- [000079-00-5] | 0.23 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | B |
| Unknown [NA] | 0.78 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/11/12 07:25 | DFM | B |

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| | | |
|---|---|---|
| **Description:** SS-8-5 | **Lab Sample ID:** C214257-07 | **Received:** 12/06/12 10:35 |
| **Matrix:** Soil | **Sampled:** 12/04/12 10:30 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 84.6 |

## Metals by EPA 6000/7000 Series Methods

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [7439-92-1] ^ | 6.48 | | mg/kg dry | 1 | 0.142 | 0.591 | 2L13015 | EPA 6010C | 12/14/12 13:23 | JDH | |

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

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.012 | U | ug/L | 1 | 0.012 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.66 | U | ug/L | 1 | 0.66 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.30 | U | ug/L | 1 | 0.30 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 2-Butanone [78-93-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.081 | U | ug/L | 1 | 0.081 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.88 | U | ug/L | 1 | 0.88 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.068 | U | ug/L | 1 | 0.068 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.085 | U | ug/L | 1 | 0.085 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Acetone [67-64-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Benzene [71-43-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Bromoform [75-25-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Bromomethane [74-83-9] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Carbon disulfide [75-15-0] ^ | 1.5 | U | ug/L | 1 | 1.5 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Carbon tetrachloride [56-23-5] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| **Chlorobenzene [108-90-7] ^** | **2.7** | | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Chloroethane [75-00-3] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Chloroform [67-66-3] ^ | 0.18 | U | ug/L | 1 | 0.18 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Chloromethane [74-87-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.27 | U | ug/L | 1 | 0.27 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.17 | U | ug/L | 1 | 0.17 | 2.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Methylene chloride [75-09-2] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Naphthalene [91-20-3] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.058 | U | ug/L | 1 | 0.058 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| o-Xylene [95-47-6] ^ | 0.065 | U | ug/L | 1 | 0.065 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Styrene [100-42-5] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Toluene [108-88-3] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.24 | U | ug/L | 1 | 0.24 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.32 | U | ug/L | 1 | 0.32 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.45 | U | ug/L | 1 | 0.45 | 3.0 | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *45* | *1* | *50.0* | *89 %* | *51-122* | *2L07018* | *EPA 8260B* | *12/08/12 19:54* | *JKG* | |
| *Dibromofluoromethane* | *48* | *1* | *50.0* | *96 %* | *68-117* | *2L07018* | *EPA 8260B* | *12/08/12 19:54* | *JKG* | |
| *Toluene-d8* | *45* | *1* | *50.0* | *90 %* | *67-127* | *2L07018* | *EPA 8260B* | *12/08/12 19:54* | *JKG* | |

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds [NA] | 0.0 | U | ug/L | 1 | | | 2L07018 | EPA 8260B | 12/08/12 19:54 | JKG | |

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
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**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 2.6 | U | ug/L | 1 | 2.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 2.9 | U | ug/L | 1 | 2.9 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 3.3 | U | ug/L | 1 | 3.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 3.2 | U | ug/L | 1 | 3.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | QV-01 |
| Acenaphthene [83-32-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Acenaphthylene [208-96-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Anthracene [120-12-7] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Benzidine [92-87-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Benzoic acid [65-85-0] ^ | 1.0 | U | ug/L | 1 | 1.0 | 50 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 5.0 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Chrysene [218-01-9] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 2.3 | U | ug/L | 1 | 2.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Dibenzofuran [132-64-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Diethylphthalate [84-66-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 3.1 | U | ug/L | 1 | 3.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Fluorene [86-73-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Hexachloroethane [67-72-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 2.2 | U | ug/L | 1 | 2.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Isophorone [78-59-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Naphthalene [91-20-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Nitrobenzene [98-95-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 1.8 | U | ug/L | 1 | 1.8 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Phenanthrene [85-01-8] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Phenol [108-95-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Pyrene [129-00-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Pyridine [110-86-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *84* | *1* | *100* | *84 %* | *10-179* | *2L12017* | *EPA 8270D* | *12/13/12 19:13* | *DFM* | |
| *2-Fluorobiphenyl* | *39* | *1* | *50.0* | *77 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 19:13* | *DFM* | |
| *2-Fluorophenol* | *58* | *1* | *100* | *58 %* | *10-110* | *2L12017* | *EPA 8270D* | *12/13/12 19:13* | *DFM* | |
| *Nitrobenzene-d5* | *36* | *1* | *50.0* | *71 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 19:13* | *DFM* | |
| *Phenol-d5* | *52* | *1* | *100* | *52 %* | *10-88* | *2L12017* | *EPA 8270D* | *12/13/12 19:13* | *DFM* | |
| *Terphenyl-d14* | *43* | *1* | *50.0* | *86 %* | *10-188* | *2L12017* | *EPA 8270D* | *12/13/12 19:13* | *DFM* | |

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**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromacil [000314-40-9] | 25 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Caprolactam [105-60-2] | 4.1 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | |
| Cyclohexene [000110-83-8] | 15 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | B |
| Unknown [NA] | 11 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 19:13 | DFM | B |

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.049 | U | ug/L | 1 | 0.049 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Aldrin [309-00-2] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.20 | U | ug/L | 1 | 0.20 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.032 | U | ug/L | 1 | 0.032 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Endrin [72-20-8] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.039 | U | ug/L | 1 | 0.039 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.034 | U | ug/L | 1 | 0.034 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.030 | U | ug/L | 1 | 0.030 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.037 | U | ug/L | 1 | 0.037 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Isodrin [465-73-6] ^ | 0.031 | U | ug/L | 1 | 0.031 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.025 | U | ug/L | 1 | 0.025 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Mirex [2385-85-5] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 13:47 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.98* | *1* | *1.00* | *98 %* | *44-134* | *2L10018* | *EPA 8081B* | *12/12/12 13:47* | *MSZ* | |
| *Decachlorobiphenyl* | *1.1* | *1* | *1.00* | *107 %* | *37-149* | *2L10018* | *EPA 8081B* | *12/12/12 13:47* | *MSZ* | |

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Petroleum Hydrocarbons by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C5-C8 Aliphatics [ECL-0022] ^ | 4.7 | U | ug/L | 1 | 4.7 | 30.0 | 2L13024 | MAVPH | 12/13/12 21:53 | BJG | |
| C9-C10 Aromatics [ECL-0024] ^ | 1.9 | U | ug/L | 1 | 1.9 | 10 | 2L13024 | MAVPH | 12/13/12 21:53 | BJG | |
| C9-C12 Aliphatics [ECL-0025] ^ | 10.0 | U | ug/L | 1 | 10.0 | 30.0 | 2L13024 | MAVPH | 12/13/12 21:53 | BJG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,5-Dibromotoluene (FID)* | *76.6* | *1* | *100* | *77 %* | *70-130* | *2L13024* | *MAVPH* | *12/13/12 21:53* | *BJG* | |
| *2,5-Dibromotoluene (PID)* | *130* | *1* | *100* | *130 %* | *70-130* | *2L13024* | *MAVPH* | *12/13/12 21:53* | *BJG* | |

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Extractable Petroleum Hydrocarbons by GC

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C11-C22 Aromatics [ECL-0020] | 31 | U | ug/L | 1 | 31 | 100 | 2L06033 | MAEPH | 12/10/12 11:59 | MSZ | |
| C19-C36 Aliphatics [ECL-0021] | 50 | U | ug/L | 1 | 50 | 100 | 2L06033 | MAEPH | 12/10/12 11:59 | MSZ | |
| C9-C18 Aliphatics [ECL-0026] | 34 | U | ug/L | 1 | 34 | 100 | 2L06033 | MAEPH | 12/10/12 11:59 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *Chloro-octadecane* | *7.7* | *1* | *20.0* | *38 %* | *40-140* | *2L06033* | *MAEPH* | *12/10/12 11:59* | *MSZ* | *QS-03* |
| *o-Terphenyl* | *13* | *1* | *20.0* | *64 %* | *40-140* | *2L06033* | *MAEPH* | *12/10/12 11:59* | *MSZ* | |

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**Description:** MW-8
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-08
**Sampled:** 12/05/12 14:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

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

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [7439-92-1] ^ | 2.58 | J | ug/L | 1 | 1.90 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 12:51 | JDH | |

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

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.012 | U | ug/L | 1 | 0.012 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.66 | U | ug/L | 1 | 0.66 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.30 | U | ug/L | 1 | 0.30 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 2-Butanone [78-93-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.081 | U | ug/L | 1 | 0.081 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.88 | U | ug/L | 1 | 0.88 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.068 | U | ug/L | 1 | 0.068 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.085 | U | ug/L | 1 | 0.085 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Acetone [67-64-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Benzene [71-43-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Bromoform [75-25-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Bromomethane [74-83-9] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Carbon disulfide [75-15-0] ^ | 1.5 | U | ug/L | 1 | 1.5 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Carbon tetrachloride [56-23-5] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Chloroethane [75-00-3] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Chloroform [67-66-3] ^ | 0.18 | U | ug/L | 1 | 0.18 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Chloromethane [74-87-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.27 | U | ug/L | 1 | 0.27 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.17 | U | ug/L | 1 | 0.17 | 2.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Methylene chloride [75-09-2] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Naphthalene [91-20-3] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.058 | U | ug/L | 1 | 0.058 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| o-Xylene [95-47-6] ^ | 0.065 | U | ug/L | 1 | 0.065 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Styrene [100-42-5] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Toluene [108-88-3] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.24 | U | ug/L | 1 | 0.24 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.32 | U | ug/L | 1 | 0.32 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.45 | U | ug/L | 1 | 0.45 | 3.0 | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *43* | *1* | *50.0* | *86 %* | *51-122* | *2L07018* | *EPA 8260B* | *12/08/12 20:24* | *JKG* | |
| *Dibromofluoromethane* | *46* | *1* | *50.0* | *93 %* | *68-117* | *2L07018* | *EPA 8260B* | *12/08/12 20:24* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *87 %* | *67-127* | *2L07018* | *EPA 8260B* | *12/08/12 20:24* | *JKG* | |

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compounds* [NA] | 0.0 | U | ug/L | 1 | | | 2L07018 | EPA 8260B | 12/08/12 20:24 | JKG | |

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 2.6 | U | ug/L | 1 | 2.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 2.9 | U | ug/L | 1 | 2.9 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 3.3 | U | ug/L | 1 | 3.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 3.2 | U | ug/L | 1 | 3.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | QV-01 |
| Acenaphthene [83-32-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Acenaphthylene [208-96-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Anthracene [120-12-7] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Benzidine [92-87-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Benzoic acid [65-85-0] ^ | 1.0 | U | ug/L | 1 | 1.0 | 50 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 5.0 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Chrysene [218-01-9] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 2.3 | U | ug/L | 1 | 2.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Dibenzofuran [132-64-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Diethylphthalate [84-66-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 3.1 | U | ug/L | 1 | 3.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Fluorene [86-73-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Hexachloroethane [67-72-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 2.2 | U | ug/L | 1 | 2.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Isophorone [78-59-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Naphthalene [91-20-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Nitrobenzene [98-95-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 1.8 | U | ug/L | 1 | 1.8 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Phenanthrene [85-01-8] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Phenol [108-95-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Pyrene [129-00-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |
| Pyridine [110-86-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *82* | *1* | *100* | *82 %* | *10-179* | *2L12017* | *EPA 8270D* | *12/13/12 19:41* | *DFM* | |
| *2-Fluorobiphenyl* | *41* | *1* | *50.0* | *81 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 19:41* | *DFM* | |
| *2-Fluorophenol* | *57* | *1* | *100* | *57 %* | *10-110* | *2L12017* | *EPA 8270D* | *12/13/12 19:41* | *DFM* | |
| *Nitrobenzene-d5* | *38* | *1* | *50.0* | *76 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 19:41* | *DFM* | |
| *Phenol-d5* | *46* | *1* | *100* | *46 %* | *10-88* | *2L12017* | *EPA 8270D* | *12/13/12 19:41* | *DFM* | |
| *Terphenyl-d14* | *43* | *1* | *50.0* | *85 %* | *10-188* | *2L12017* | *EPA 8270D* | *12/13/12 19:41* | *DFM* | |

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclohexene [000110-83-8] | 18 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | B |
| Unknown [NA] | 12 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 19:41 | DFM | B |

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.049 | U | ug/L | 1 | 0.049 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Aldrin [309-00-2] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.20 | U | ug/L | 1 | 0.20 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.032 | U | ug/L | 1 | 0.032 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Endrin [72-20-8] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.039 | U | ug/L | 1 | 0.039 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.034 | U | ug/L | 1 | 0.034 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.030 | U | ug/L | 1 | 0.030 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.037 | U | ug/L | 1 | 0.037 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Isodrin [465-73-6] ^ | 0.031 | U | ug/L | 1 | 0.031 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.025 | U | ug/L | 1 | 0.025 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Mirex [2385-85-5] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 14:00 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.93* | *1* | *1.00* | *93 %* | *44-134* | *2L10018* | *EPA 8081B* | *12/12/12 14:00* | *MSZ* | |
| *Decachlorobiphenyl* | *1.0* | *1* | *1.00* | *104 %* | *37-149* | *2L10018* | *EPA 8081B* | *12/12/12 14:00* | *MSZ* | |

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

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

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 2.80 | U | ug/L | 1 | 2.80 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 12:53 | JDH | |
| **Lead [7439-92-1] ^** | **427** | | ug/L | 1 | 1.90 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 12:53 | JDH | |

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**Description:** PW-Old
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-09
**Sampled:** 12/05/12 14:42
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] ^ | 0.013 | | mg/L | 1 | 0.0049 | 0.010 | 2L06031 | SM3500-Cr D VI | 12/06/12 11:26 | AJB | |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.012 | U | ug/L | 1 | 0.012 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.66 | U | ug/L | 1 | 0.66 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.30 | U | ug/L | 1 | 0.30 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 2-Butanone [78-93-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.081 | U | ug/L | 1 | 0.081 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.88 | U | ug/L | 1 | 0.88 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.068 | U | ug/L | 1 | 0.068 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.085 | U | ug/L | 1 | 0.085 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Acetone [67-64-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Benzene [71-43-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Bromoform [75-25-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Bromomethane [74-83-9] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Carbon disulfide [75-15-0] ^ | 1.5 | U | ug/L | 1 | 1.5 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Carbon tetrachloride [56-23-5] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Chloroethane [75-00-3] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Chloroform [67-66-3] ^ | 0.18 | U | ug/L | 1 | 0.18 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Chloromethane [74-87-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.27 | U | ug/L | 1 | 0.27 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.17 | U | ug/L | 1 | 0.17 | 2.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Methylene chloride [75-09-2] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Naphthalene [91-20-3] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.058 | U | ug/L | 1 | 0.058 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| o-Xylene [95-47-6] ^ | 0.065 | U | ug/L | 1 | 0.065 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Styrene [100-42-5] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Toluene [108-88-3] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.24 | U | ug/L | 1 | 0.24 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.32 | U | ug/L | 1 | 0.32 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.45 | U | ug/L | 1 | 0.45 | 3.0 | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *42* | *1* | *50.0* | *84 %* | *51-122* | *2L07018* | *EPA 8260B* | *12/08/12 20:54* | *JKG* | |
| *Dibromofluoromethane* | *48* | *1* | *50.0* | *96 %* | *68-117* | *2L07018* | *EPA 8260B* | *12/08/12 20:54* | *JKG* | |
| *Toluene-d8* | *45* | *1* | *50.0* | *89 %* | *67-127* | *2L07018* | *EPA 8260B* | *12/08/12 20:54* | *JKG* | |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds [NA] | 0.0 | U | ug/L | 1 | | | 2L07018 | EPA 8260B | 12/08/12 20:54 | JKG | |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 2.6 | U | ug/L | 1 | 2.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 2.9 | U | ug/L | 1 | 2.9 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 3.3 | U | ug/L | 1 | 3.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 3.2 | U | ug/L | 1 | 3.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | QV-01 |
| Acenaphthene [83-32-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Acenaphthylene [208-96-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Anthracene [120-12-7] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Benzidine [92-87-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Benzoic acid [65-85-0] ^ | 1.0 | U | ug/L | 1 | 1.0 | 50 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 5.0 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Chrysene [218-01-9] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 2.3 | U | ug/L | 1 | 2.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Dibenzofuran [132-64-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Diethylphthalate [84-66-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 3.1 | U | ug/L | 1 | 3.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Fluorene [86-73-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Hexachloroethane [67-72-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 2.2 | U | ug/L | 1 | 2.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Isophorone [78-59-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Naphthalene [91-20-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Nitrobenzene [98-95-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 1.8 | U | ug/L | 1 | 1.8 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Phenanthrene [85-01-8] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Phenol [108-95-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Pyrene [129-00-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |
| Pyridine [110-86-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *76* | *1* | *100* | *76 %* | *10-179* | *2L12017* | *EPA 8270D* | *12/13/12 20:10* | *DFM* | |
| *2-Fluorobiphenyl* | *30* | *1* | *50.0* | *59 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 20:10* | *DFM* | |
| *2-Fluorophenol* | *40* | *1* | *100* | *40 %* | *10-110* | *2L12017* | *EPA 8270D* | *12/13/12 20:10* | *DFM* | |
| *Nitrobenzene-d5* | *27* | *1* | *50.0* | *55 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 20:10* | *DFM* | |
| *Phenol-d5* | *35* | *1* | *100* | *35 %* | *10-88* | *2L12017* | *EPA 8270D* | *12/13/12 20:10* | *DFM* | |
| *Terphenyl-d14* | *42* | *1* | *50.0* | *84 %* | *10-188* | *2L12017* | *EPA 8270D* | *12/13/12 20:10* | *DFM* | |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclohexene [000110-83-8] | 8.1 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | B |
| Unknown [NA] | 8.6 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:10 | DFM | B |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.049 | U | ug/L | 1 | 0.049 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Aldrin [309-00-2] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.20 | U | ug/L | 1 | 0.20 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.032 | U | ug/L | 1 | 0.032 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Endrin [72-20-8] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.039 | U | ug/L | 1 | 0.039 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.034 | U | ug/L | 1 | 0.034 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.030 | U | ug/L | 1 | 0.030 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.037 | U | ug/L | 1 | 0.037 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Isodrin [465-73-6] ^ | 0.031 | U | ug/L | 1 | 0.031 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.025 | U | ug/L | 1 | 0.025 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Mirex [2385-85-5] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 14:13 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.88* | *1* | *1.00* | *88 %* | *44-134* | *2L10018* | *EPA 8081B* | *12/12/12 14:13* | *MSZ* | |
| *Decachlorobiphenyl* | *1.0* | *1* | *1.00* | *102 %* | *37-149* | *2L10018* | *EPA 8081B* | *12/12/12 14:13* | *MSZ* | |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

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

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 2.80 | U | ug/L | 1 | 2.80 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 12:55 | JDH | |
| Lead [7439-92-1] ^ | 1.90 | U | ug/L | 1 | 1.90 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 12:55 | JDH | |

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**Description:** PW-New
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-10
**Sampled:** 12/05/12 15:15
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hexavalent Chromium [1854-02-99] ^** | **0.0099** | J | mg/L | 1 | 0.0049 | 0.010 | 2L06031 | SM3500-Cr D VI | 12/06/12 11:26 | AJB | |

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

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**Description:** SS-10
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-11
**Sampled:** 12/04/12 16:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 16.8

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.00075 | U | mg/kg dry | 1 | 0.00075 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00094 | U | mg/kg dry | 1 | 0.00094 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.0014 | U | mg/kg dry | 1 | 0.0014 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00075 | U | mg/kg dry | 1 | 0.00075 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.0030 | U | mg/kg dry | 1 | 0.0030 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.0037 | U | mg/kg dry | 1 | 0.0037 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.0022 | U | mg/kg dry | 1 | 0.0022 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00094 | U | mg/kg dry | 1 | 0.00094 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.0010 | U | mg/kg dry | 1 | 0.0010 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.0014 | U | mg/kg dry | 1 | 0.0014 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00094 | U | mg/kg dry | 1 | 0.00094 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.0036 | U | mg/kg dry | 1 | 0.0036 | 0.023 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00075 | U | mg/kg dry | 1 | 0.00075 | 0.023 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.0035 | U | mg/kg dry | 1 | 0.0035 | 0.023 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00075 | U | mg/kg dry | 1 | 0.00075 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.0027 | U | mg/kg dry | 1 | 0.0027 | 0.023 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| **Acetone [67-64-1] ^** | **0.27** | | mg/kg dry | 1 | 0.0065 | 0.023 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Benzene [71-43-2] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.0010 | U | mg/kg dry | 1 | 0.0010 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Bromoform [75-25-2] ^ | 0.0021 | U | mg/kg dry | 1 | 0.0021 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Bromomethane [74-83-9] ^ | 0.0015 | U | mg/kg dry | 1 | 0.0015 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.0018 | U | mg/kg dry | 1 | 0.0018 | 0.023 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.0010 | U | mg/kg dry | 1 | 0.0010 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Chloroethane [75-00-3] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Chloroform [67-66-3] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00098 | U | mg/kg dry | 1 | 0.00098 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.0016 | U | mg/kg dry | 1 | 0.0016 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.0015 | U | mg/kg dry | 1 | 0.0015 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.0021 | U | mg/kg dry | 1 | 0.0021 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00094 | U | mg/kg dry | 1 | 0.00094 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.0016 | U | mg/kg dry | 1 | 0.0016 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00070 | U | mg/kg dry | 1 | 0.00070 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.0017 | U | mg/kg dry | 1 | 0.0017 | 0.0094 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| **Methylene Chloride [75-09-2] ^** | **0.0042** | J | mg/kg dry | 1 | 0.0034 | 0.0094 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |

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**Description:** SS-10
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-11
**Sampled:** 12/04/12 16:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 16.8

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.0014 | U | mg/kg dry | 1 | 0.0014 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Naphthalene [91-20-3] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00061 | U | mg/kg dry | 1 | 0.00061 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00084 | U | mg/kg dry | 1 | 0.00084 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| o-Xylene [95-47-6] ^ | 0.0010 | U | mg/kg dry | 1 | 0.0010 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.0044 | U | mg/kg dry | 1 | 0.0044 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Styrene [100-42-5] ^ | 0.0046 | U | mg/kg dry | 1 | 0.0046 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00079 | U | mg/kg dry | 1 | 0.00079 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.0013 | U | mg/kg dry | 1 | 0.0013 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Toluene [108-88-3] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.0017 | U | mg/kg dry | 1 | 0.0017 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.0018 | U | mg/kg dry | 1 | 0.0018 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.0015 | U | mg/kg dry | 1 | 0.0015 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0047 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.0026 | U | mg/kg dry | 1 | 0.0026 | 0.014 | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *43* | *1* | *50.0* | *85 %* | *61-118* | *2L10001* | *EPA 8260B* | *12/10/12 19:26* | *JKG* | |
| *Dibromofluoromethane* | *42* | *1* | *50.0* | *84 %* | *66-114* | *2L10001* | *EPA 8260B* | *12/10/12 19:26* | *JKG* | |
| *Toluene-d8* | *43* | *1* | *50.0* | *86 %* | *63-118* | *2L10001* | *EPA 8260B* | *12/10/12 19:26* | *JKG* | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-10 | **Lab Sample ID:** | C214257-11 | **Received:** | 12/06/12 10:35 |
| **Matrix:** | Sediment | **Sampled:** | 12/04/12 16:30 | **Work Order:** | C214257 |
| **Project:** | 213912 | **Sampled By:** | Wesley Brummer | **% Solids:** | 16.8 |

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds [NA] | 0.0 | U | mg/kg dry | 1 | | | 2L10001 | EPA 8260B | 12/10/12 19:26 | JKG | |

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**Description:** SS-10 | **Lab Sample ID:** C214257-11 | **Received:** 12/06/12 10:35
**Matrix:** Sediment | **Sampled:** 12/04/12 16:30 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 16.8

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.14 | U | mg/kg dry | 1 | 0.14 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.16 | U | mg/kg dry | 1 | 0.16 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 0.16 | U | mg/kg dry | 1 | 0.16 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 0.16 | U | mg/kg dry | 1 | 0.16 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 0.14 | U | mg/kg dry | 1 | 0.14 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 0.26 | U | mg/kg dry | 1 | 0.26 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 0.26 | U | mg/kg dry | 1 | 0.26 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 0.20 | U | mg/kg dry | 1 | 0.20 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.58 | U | mg/kg dry | 1 | 0.58 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.21 | U | mg/kg dry | 1 | 0.21 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.16 | U | mg/kg dry | 1 | 0.16 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 0.20 | U | mg/kg dry | 1 | 0.20 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.55 | U | mg/kg dry | 1 | 0.55 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.32 | U | mg/kg dry | 1 | 0.32 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Anthracene [120-12-7] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Benzidine [92-87-5] ^ | 0.65 | U | mg/kg dry | 1 | 0.65 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.20 | U | mg/kg dry | 1 | 0.20 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.11 | U | mg/kg dry | 1 | 0.11 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.28 | U | mg/kg dry | 1 | 0.28 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.20 | U | mg/kg dry | 1 | 0.20 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Benzoic acid [65-85-0] ^ | 0.89 | U | mg/kg dry | 1 | 0.89 | 10 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.14 | U | mg/kg dry | 1 | 0.14 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 0.26 | U | mg/kg dry | 1 | 0.26 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.14 | U | mg/kg dry | 1 | 0.14 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 0.21 | U | mg/kg dry | 1 | 0.21 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.24 | U | mg/kg dry | 1 | 0.24 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Chrysene [218-01-9] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.30 | U | mg/kg dry | 1 | 0.30 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.16 | U | mg/kg dry | 1 | 0.16 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.20 | U | mg/kg dry | 1 | 0.20 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.24 | U | mg/kg dry | 1 | 0.24 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.20 | U | mg/kg dry | 1 | 0.20 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |

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**Description:** SS-10
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-11
**Sampled:** 12/04/12 16:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 16.8

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 0.21 | U | mg/kg dry | 1 | 0.21 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Fluorene [86-73-7] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.28 | U | mg/kg dry | 1 | 0.28 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Isophorone [78-59-1] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Naphthalene [91-20-3] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.48 | U | mg/kg dry | 1 | 0.48 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.32 | U | mg/kg dry | 1 | 0.32 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 0.20 | U | mg/kg dry | 1 | 0.20 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.16 | U | mg/kg dry | 1 | 0.16 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Phenol [108-95-2] ^ | 0.13 | U | mg/kg dry | 1 | 0.13 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Pyrene [129-00-0] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |
| Pyridine [110-86-1] ^ | 0.49 | U | mg/kg dry | 1 | 0.49 | 2.0 | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *19* | *1* | *19.8* | *96 %* | *28-130* | *2L10025* | *EPA 8270D* | *12/12/12 19:58* | *DFM* | |
| *2-Fluorobiphenyl* | *8.1* | *1* | *9.91* | *82 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/12/12 19:58* | *DFM* | |
| *2-Fluorophenol* | *14* | *1* | *19.8* | *71 %* | *49-126* | *2L10025* | *EPA 8270D* | *12/12/12 19:58* | *DFM* | |
| *Nitrobenzene-d5* | *7.9* | *1* | *9.91* | *80 %* | *50-117* | *2L10025* | *EPA 8270D* | *12/12/12 19:58* | *DFM* | |
| *Phenol-d5* | *16* | *1* | *19.8* | *79 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/12/12 19:58* | *DFM* | |
| *Terphenyl-d14* | *9.0* | *1* | *9.91* | *91 %* | *36-151* | *2L10025* | *EPA 8270D* | *12/12/12 19:58* | *DFM* | |

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**Description:** SS-10
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-11
**Sampled:** 12/04/12 16:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 16.8

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclohexene [000110-83-8] | 1.4 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | B |
| Ethane, 1,1,2,2-tetrachloro- [000079-34-5] | 2.7 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | B |
| Ethane, 1,1,2-trichloro- [000079-00-5] | 1.2 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | B |
| Unknown (01) [NA] | 3.6 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | B |
| Unknown (02) [NA] | 1.5 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 19:58 | DFM | |

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**Description:** SS-10
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-11
**Sampled:** 12/04/12 16:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 16.8

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.0043 | U | mg/kg dry | 1 | 0.0043 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.0046 | U | mg/kg dry | 1 | 0.0046 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.0048 | U | mg/kg dry | 1 | 0.0048 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Aldrin [309-00-2] ^ | 0.0048 | U | mg/kg dry | 1 | 0.0048 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.0071 | U | mg/kg dry | 1 | 0.0071 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.010 | U | mg/kg dry | 1 | 0.010 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.0067 | U | mg/kg dry | 1 | 0.0067 | 0.20 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.0037 | U | mg/kg dry | 1 | 0.0037 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.0043 | U | mg/kg dry | 1 | 0.0043 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.0050 | U | mg/kg dry | 1 | 0.0050 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.0045 | U | mg/kg dry | 1 | 0.0045 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.0045 | U | mg/kg dry | 1 | 0.0045 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.0057 | U | mg/kg dry | 1 | 0.0057 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.0059 | U | mg/kg dry | 1 | 0.0059 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Endrin [72-20-8] ^ | 0.0045 | U | mg/kg dry | 1 | 0.0045 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.0048 | U | mg/kg dry | 1 | 0.0048 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.0045 | U | mg/kg dry | 1 | 0.0045 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.0065 | U | mg/kg dry | 1 | 0.0065 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.0047 | U | mg/kg dry | 1 | 0.0047 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.0045 | U | mg/kg dry | 1 | 0.0045 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Isodrin [465-73-6] ^ | 0.0043 | U | mg/kg dry | 1 | 0.0043 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.0058 | U | mg/kg dry | 1 | 0.0058 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Mirex [2385-85-5] ^ | 0.0059 | U | mg/kg dry | 1 | 0.0059 | 0.010 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.060 | U | mg/kg dry | 1 | 0.060 | 0.10 | 2L06020 | EPA 8081B | 12/07/12 13:12 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.21* | *1* | *0.198* | *104 %* | *59-137* | *2L06020* | *EPA 8081B* | *12/07/12 13:12* | *MSZ* | |
| *Decachlorobiphenyl* | *0.24* | *1* | *0.198* | *119 %* | *60-140* | *2L06020* | *EPA 8081B* | *12/07/12 13:12* | *MSZ* | |

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**Description:** SS-10
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-11
**Sampled:** 12/04/12 16:30
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 16.8

## Metals by EPA 6000/7000 Series Methods

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 26.9 | | mg/kg dry | 1 | 0.595 | 2.97 | 2L13015 | EPA 6010C | 12/14/12 13:25 | JDH | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-10 | **Lab Sample ID:** | C214257-11 | **Received:** | 12/06/12 10:35 |
| **Matrix:** | Sediment | **Sampled:** | 12/04/12 16:30 | **Work Order:** | C214257 |
| **Project:** | 213912 | **Sampled By:** | Wesley Brummer | **% Solids:** | 16.8 |

## Classical Chemistry Parameters

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] | 0.89 | U | mg/kg dry | 1 | 0.89 | 5.9 | 2L10033 | EPA 7196A | 12/12/12 21:40 | NP | |

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

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**Description:** SS-11 | **Lab Sample ID:** C214257-12 | **Received:** 12/06/12 10:35
**Matrix:** Sediment | **Sampled:** 12/04/12 17:00 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 14.4

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.0029 | U | mg/kg dry | 1 | 0.0029 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.0024 | U | mg/kg dry | 1 | 0.0024 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.0029 | U | mg/kg dry | 1 | 0.0029 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.0029 | U | mg/kg dry | 1 | 0.0029 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.0035 | U | mg/kg dry | 1 | 0.0035 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.0033 | U | mg/kg dry | 1 | 0.0033 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.0075 | U | mg/kg dry | 1 | 0.0075 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.0032 | U | mg/kg dry | 1 | 0.0032 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.0020 | U | mg/kg dry | 1 | 0.0020 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.0093 | U | mg/kg dry | 1 | 0.0093 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.0054 | U | mg/kg dry | 1 | 0.0054 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.0032 | U | mg/kg dry | 1 | 0.0032 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.0048 | U | mg/kg dry | 1 | 0.0048 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.0031 | U | mg/kg dry | 1 | 0.0031 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.0024 | U | mg/kg dry | 1 | 0.0024 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.0026 | U | mg/kg dry | 1 | 0.0026 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.0034 | U | mg/kg dry | 1 | 0.0034 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.0024 | U | mg/kg dry | 1 | 0.0024 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.0027 | U | mg/kg dry | 1 | 0.0027 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| **2-Butanone [78-93-3] ^** | **0.11** | | mg/kg dry | 1 | 0.0092 | 0.059 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.059 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.0021 | U | mg/kg dry | 1 | 0.0021 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.0088 | U | mg/kg dry | 1 | 0.0088 | 0.059 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.0031 | U | mg/kg dry | 1 | 0.0031 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.0019 | U | mg/kg dry | 1 | 0.0019 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.0067 | U | mg/kg dry | 1 | 0.0067 | 0.059 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| **Acetone [67-64-1] ^** | **0.28** | | mg/kg dry | 1 | 0.016 | 0.059 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Benzene [71-43-2] ^ | 0.0020 | U | mg/kg dry | 1 | 0.0020 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.0026 | U | mg/kg dry | 1 | 0.0026 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.0048 | U | mg/kg dry | 1 | 0.0048 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.0028 | U | mg/kg dry | 1 | 0.0028 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Bromoform [75-25-2] ^ | 0.0053 | U | mg/kg dry | 1 | 0.0053 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Bromomethane [74-83-9] ^ | 0.0038 | U | mg/kg dry | 1 | 0.0038 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| **Carbon disulfide [75-15-0] ^** | **0.0052** | J | mg/kg dry | 1 | 0.0046 | 0.059 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.0026 | U | mg/kg dry | 1 | 0.0026 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.0020 | U | mg/kg dry | 1 | 0.0020 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Chloroethane [75-00-3] ^ | 0.0029 | U | mg/kg dry | 1 | 0.0029 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Chloroform [67-66-3] ^ | 0.0021 | U | mg/kg dry | 1 | 0.0021 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Chloromethane [74-87-3] ^ | 0.0025 | U | mg/kg dry | 1 | 0.0025 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.0027 | U | mg/kg dry | 1 | 0.0027 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.0020 | U | mg/kg dry | 1 | 0.0020 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.0041 | U | mg/kg dry | 1 | 0.0041 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.0039 | U | mg/kg dry | 1 | 0.0039 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.0053 | U | mg/kg dry | 1 | 0.0053 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.0024 | U | mg/kg dry | 1 | 0.0024 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.0041 | U | mg/kg dry | 1 | 0.0041 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.0018 | U | mg/kg dry | 1 | 0.0018 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.0044 | U | mg/kg dry | 1 | 0.0044 | 0.024 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| **Methylene Chloride [75-09-2] ^** | **0.0088** | J | mg/kg dry | 1 | 0.0086 | 0.024 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |

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**Description:** SS-11
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-12
**Sampled:** 12/04/12 17:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 14.4

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.0035 | U | mg/kg dry | 1 | 0.0035 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Naphthalene [91-20-3] ^ | 0.0032 | U | mg/kg dry | 1 | 0.0032 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.0015 | U | mg/kg dry | 1 | 0.0015 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.0021 | U | mg/kg dry | 1 | 0.0021 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| o-Xylene [95-47-6] ^ | 0.0026 | U | mg/kg dry | 1 | 0.0026 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.011 | U | mg/kg dry | 1 | 0.011 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Styrene [100-42-5] ^ | 0.012 | U | mg/kg dry | 1 | 0.012 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.0020 | U | mg/kg dry | 1 | 0.0020 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| **Tetrachloroethene [127-18-4] ^** | **0.0089** | JB | mg/kg dry | 1 | 0.0033 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Toluene [108-88-3] ^ | 0.0028 | U | mg/kg dry | 1 | 0.0028 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.0044 | U | mg/kg dry | 1 | 0.0044 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.0046 | U | mg/kg dry | 1 | 0.0046 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.0038 | U | mg/kg dry | 1 | 0.0038 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.0031 | U | mg/kg dry | 1 | 0.0031 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.0028 | U | mg/kg dry | 1 | 0.0028 | 0.012 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.0066 | U | mg/kg dry | 1 | 0.0066 | 0.035 | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *41* | *1* | *50.0* | *82 %* | *61-118* | *2L17002* | *EPA 8260B* | *12/17/12 20:54* | *JKG* | |
| *Dibromofluoromethane* | *40* | *1* | *50.0* | *80 %* | *66-114* | *2L17002* | *EPA 8260B* | *12/17/12 20:54* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *88 %* | *63-118* | *2L17002* | *EPA 8260B* | *12/17/12 20:54* | *JKG* | |

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| | | |
|---|---|---|
| **Description:** SS-11 | **Lab Sample ID:** C214257-12 | **Received:** 12/06/12 10:35 |
| **Matrix:** Sediment | **Sampled:** 12/04/12 17:00 | **Work Order:** C214257 |
| **Project:** 213912 | **Sampled By:** Wesley Brummer | **% Solids:** 14.4 |

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclopentasiloxane, decamet... [000541-02-6] | 0.020 | J | mg/kg dry | 1 | | | 2L17002 | EPA 8260B | 12/17/12 20:54 | JKG | |

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**Description:** SS-11
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-12
**Sampled:** 12/04/12 17:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 14.4

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.16 | U | mg/kg dry | 1 | 0.16 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.14 | U | mg/kg dry | 1 | 0.14 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 0.30 | U | mg/kg dry | 1 | 0.30 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 0.30 | U | mg/kg dry | 1 | 0.30 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.22 | U | mg/kg dry | 1 | 0.22 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.21 | U | mg/kg dry | 1 | 0.21 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 0.22 | U | mg/kg dry | 1 | 0.22 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.68 | U | mg/kg dry | 1 | 0.68 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.25 | U | mg/kg dry | 1 | 0.25 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.65 | U | mg/kg dry | 1 | 0.65 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.37 | U | mg/kg dry | 1 | 0.37 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 0.22 | U | mg/kg dry | 1 | 0.22 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Anthracene [120-12-7] ^ | 0.26 | U | mg/kg dry | 1 | 0.26 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Benzidine [92-87-5] ^ | 0.76 | U | mg/kg dry | 1 | 0.76 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.12 | U | mg/kg dry | 1 | 0.12 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.33 | U | mg/kg dry | 1 | 0.33 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Benzoic acid [65-85-0] ^ | 1.0 | U | mg/kg dry | 1 | 1.0 | 12 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.16 | U | mg/kg dry | 1 | 0.16 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 0.30 | U | mg/kg dry | 1 | 0.30 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.17 | U | mg/kg dry | 1 | 0.17 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 0.24 | U | mg/kg dry | 1 | 0.24 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.28 | U | mg/kg dry | 1 | 0.28 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Chrysene [218-01-9] ^ | 0.21 | U | mg/kg dry | 1 | 0.21 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.35 | U | mg/kg dry | 1 | 0.35 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.28 | U | mg/kg dry | 1 | 0.28 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |

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**Description:** SS-11
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-12
**Sampled:** 12/04/12 17:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 14.4

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 0.25 | U | mg/kg dry | 1 | 0.25 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Fluorene [86-73-7] ^ | 0.20 | U | mg/kg dry | 1 | 0.20 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.27 | U | mg/kg dry | 1 | 0.27 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.33 | U | mg/kg dry | 1 | 0.33 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Isophorone [78-59-1] ^ | 0.21 | U | mg/kg dry | 1 | 0.21 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Naphthalene [91-20-3] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.18 | U | mg/kg dry | 1 | 0.18 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.56 | U | mg/kg dry | 1 | 0.56 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.37 | U | mg/kg dry | 1 | 0.37 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 0.23 | U | mg/kg dry | 1 | 0.23 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.19 | U | mg/kg dry | 1 | 0.19 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Phenol [108-95-2] ^ | 0.15 | U | mg/kg dry | 1 | 0.15 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Pyrene [129-00-0] ^ | 0.26 | U | mg/kg dry | 1 | 0.26 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Pyridine [110-86-1] ^ | 0.57 | U | mg/kg dry | 1 | 0.57 | 2.3 | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *22* | *1* | *23.1* | *96 %* | *28-130* | *2L10025* | *EPA 8270D* | *12/12/12 20:26* | *DFM* | |
| *2-Fluorobiphenyl* | *9.0* | *1* | *11.6* | *78 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/12/12 20:26* | *DFM* | |
| *2-Fluorophenol* | *16* | *1* | *23.1* | *68 %* | *49-126* | *2L10025* | *EPA 8270D* | *12/12/12 20:26* | *DFM* | |
| *Nitrobenzene-d5* | *8.7* | *1* | *11.6* | *75 %* | *50-117* | *2L10025* | *EPA 8270D* | *12/12/12 20:26* | *DFM* | |
| *Phenol-d5* | *18* | *1* | *23.1* | *76 %* | *56-120* | *2L10025* | *EPA 8270D* | *12/12/12 20:26* | *DFM* | |
| *Terphenyl-d14* | *11* | *1* | *11.6* | *92 %* | *36-151* | *2L10025* | *EPA 8270D* | *12/12/12 20:26* | *DFM* | |

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**Description:** SS-11
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-12
**Sampled:** 12/04/12 17:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 14.4

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclohexene [000110-83-8] | 1.6 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | B |
| Ethane, 1,1,2,2-tetrachloro- [000079-34-5] | 2.7 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | B |
| Ethane, 1,1,2-trichloro- [000079-00-5] | 1.1 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | B |
| Octadecane [000593-45-3] | 1.2 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Tetracosane [000646-31-1] | 0.98 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Unknown (01) [NA] | 4.1 | JB | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | B |
| Unknown (02) [NA] | 1.6 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Unknown (03) [NA] | 3.5 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |
| Unknown (04) [NA] | 1.3 | J | mg/kg dry | 1 | | | 2L10025 | EPA 8270D | 12/12/12 20:26 | DFM | |

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**Description:** SS-11
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-12
**Sampled:** 12/04/12 17:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 14.4

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.0050 | U | mg/kg dry | 1 | 0.0050 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.0053 | U | mg/kg dry | 1 | 0.0053 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.0056 | U | mg/kg dry | 1 | 0.0056 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Aldrin [309-00-2] ^ | 0.0056 | U | mg/kg dry | 1 | 0.0056 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.0083 | U | mg/kg dry | 1 | 0.0083 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.012 | U | mg/kg dry | 1 | 0.012 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.0078 | U | mg/kg dry | 1 | 0.0078 | 0.23 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.0043 | U | mg/kg dry | 1 | 0.0043 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.0050 | U | mg/kg dry | 1 | 0.0050 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.0058 | U | mg/kg dry | 1 | 0.0058 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.0053 | U | mg/kg dry | 1 | 0.0053 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.0053 | U | mg/kg dry | 1 | 0.0053 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.0067 | U | mg/kg dry | 1 | 0.0067 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.0069 | U | mg/kg dry | 1 | 0.0069 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Endrin [72-20-8] ^ | 0.0053 | U | mg/kg dry | 1 | 0.0053 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.0056 | U | mg/kg dry | 1 | 0.0056 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.0052 | U | mg/kg dry | 1 | 0.0052 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.0076 | U | mg/kg dry | 1 | 0.0076 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.0055 | U | mg/kg dry | 1 | 0.0055 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.0052 | U | mg/kg dry | 1 | 0.0052 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Isodrin [465-73-6] ^ | 0.0050 | U | mg/kg dry | 1 | 0.0050 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.0068 | U | mg/kg dry | 1 | 0.0068 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Mirex [2385-85-5] ^ | 0.0069 | U | mg/kg dry | 1 | 0.0069 | 0.012 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.070 | U | mg/kg dry | 1 | 0.070 | 0.12 | 2L06020 | EPA 8081B | 12/07/12 13:26 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.26* | *1* | *0.231* | *112 %* | *59-137* | *2L06020* | *EPA 8081B* | *12/07/12 13:26* | *MSZ* | |
| *Decachlorobiphenyl* | *0.27* | *1* | *0.231* | *116 %* | *60-140* | *2L06020* | *EPA 8081B* | *12/07/12 13:26* | *MSZ* | |

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**Description:** SS-11
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-12
**Sampled:** 12/04/12 17:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 14.4

## Metals by EPA 6000/7000 Series Methods

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 29.9 | | mg/kg dry | 1 | 0.694 | 3.47 | 2L13015 | EPA 6010C | 12/14/12 13:27 | JDH | |

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**Description:** SS-11
**Matrix:** Sediment
**Project:** 213912

**Lab Sample ID:** C214257-12
**Sampled:** 12/04/12 17:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257
**% Solids:** 14.4

## Classical Chemistry Parameters

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium [1854-02-99] | 1.0 | U | mg/kg dry | 1 | 1.0 | 6.9 | 2L10033 | EPA 7196A | 12/12/12 21:40 | NP | |

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

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**Description:** MW-13
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-13
**Sampled:** 12/05/12 16:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.012 | U | ug/L | 1 | 0.012 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.66 | U | ug/L | 1 | 0.66 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.30 | U | ug/L | 1 | 0.30 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 2-Butanone [78-93-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.081 | U | ug/L | 1 | 0.081 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.88 | U | ug/L | 1 | 0.88 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.068 | U | ug/L | 1 | 0.068 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.085 | U | ug/L | 1 | 0.085 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Acetone [67-64-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Benzene [71-43-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Bromoform [75-25-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Bromomethane [74-83-9] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Carbon disulfide [75-15-0] ^ | 1.5 | U | ug/L | 1 | 1.5 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Carbon tetrachloride [56-23-5] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Chloroethane [75-00-3] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Chloroform [67-66-3] ^ | 0.18 | U | ug/L | 1 | 0.18 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Chloromethane [74-87-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.27 | U | ug/L | 1 | 0.27 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.17 | U | ug/L | 1 | 0.17 | 2.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Methylene chloride [75-09-2] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |

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**Description:** MW-13
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-13
**Sampled:** 12/05/12 16:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Naphthalene [91-20-3] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.058 | U | ug/L | 1 | 0.058 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| o-Xylene [95-47-6] ^ | 0.065 | U | ug/L | 1 | 0.065 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Styrene [100-42-5] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Toluene [108-88-3] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.24 | U | ug/L | 1 | 0.24 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.32 | U | ug/L | 1 | 0.32 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.45 | U | ug/L | 1 | 0.45 | 3.0 | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *42* | *1* | *50.0* | *85 %* | *51-122* | *2L07018* | *EPA 8260B* | *12/08/12 21:24* | *JKG* | |
| *Dibromofluoromethane* | *48* | *1* | *50.0* | *95 %* | *68-117* | *2L07018* | *EPA 8260B* | *12/08/12 21:24* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *88 %* | *67-127* | *2L07018* | *EPA 8260B* | *12/08/12 21:24* | *JKG* | |

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**Description:** MW-13
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-13
**Sampled:** 12/05/12 16:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds [NA] | 0.0 | U | ug/L | 1 | | | 2L07018 | EPA 8260B | 12/08/12 21:24 | JKG | |

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**Description:** MW-13
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-13
**Sampled:** 12/05/12 16:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 2.6 | U | ug/L | 1 | 2.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 2.9 | U | ug/L | 1 | 2.9 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 3.3 | U | ug/L | 1 | 3.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 3.2 | U | ug/L | 1 | 3.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | QV-01 |
| Acenaphthene [83-32-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Acenaphthylene [208-96-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Anthracene [120-12-7] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Benzidine [92-87-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Benzoic acid [65-85-0] ^ | 1.0 | U | ug/L | 1 | 1.0 | 50 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 5.0 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Chrysene [218-01-9] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 2.3 | U | ug/L | 1 | 2.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Dibenzofuran [132-64-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| **Diethylphthalate [84-66-2] ^** | **4.2** | J | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| **Di-n-butylphthalate [84-74-2] ^** | **1.6** | J | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 3.1 | U | ug/L | 1 | 3.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |

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**Description:** MW-13 | **Lab Sample ID:** C214257-13 | **Received:** 12/06/12 10:35
**Matrix:** Ground Water | **Sampled:** 12/05/12 16:00 | **Work Order:** C214257
**Project:** 213912 | **Sampled By:** Wesley Brummer

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Fluorene [86-73-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Hexachloroethane [67-72-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 2.2 | U | ug/L | 1 | 2.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Isophorone [78-59-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Naphthalene [91-20-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Nitrobenzene [98-95-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 1.8 | U | ug/L | 1 | 1.8 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Phenanthrene [85-01-8] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Phenol [108-95-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Pyrene [129-00-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Pyridine [110-86-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *92* | *1* | *100* | *92 %* | *10-179* | *2L12017* | *EPA 8270D* | *12/13/12 20:38* | *DFM* | |
| *2-Fluorobiphenyl* | *42* | *1* | *50.0* | *84 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 20:38* | *DFM* | |
| *2-Fluorophenol* | *56* | *1* | *100* | *56 %* | *10-110* | *2L12017* | *EPA 8270D* | *12/13/12 20:38* | *DFM* | |
| *Nitrobenzene-d5* | *39* | *1* | *50.0* | *79 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 20:38* | *DFM* | |
| *Phenol-d5* | *45* | *1* | *100* | *45 %* | *10-88* | *2L12017* | *EPA 8270D* | *12/13/12 20:38* | *DFM* | |
| *Terphenyl-d14* | *46* | *1* | *50.0* | *92 %* | *10-188* | *2L12017* | *EPA 8270D* | *12/13/12 20:38* | *DFM* | |

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**Description:** MW-13
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-13
**Sampled:** 12/05/12 16:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Adamantanol [000768-95-6] | 17 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Cyclohexene [000110-83-8] | 10 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | B |
| Unknown (01) [NA] | 13 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | B |
| Unknown (02) [NA] | 7.9 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Unknown (03) [NA] | 8.1 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Unknown (04) [NA] | 8.3 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Unknown (05) [NA] | 12 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Unknown (06) [NA] | 8.5 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Unknown (07) [NA] | 8.4 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |
| Unknown (08) [NA] | 8.2 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 20:38 | DFM | |

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**Description:** MW-13
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-13
**Sampled:** 12/05/12 16:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.049 | U | ug/L | 1 | 0.049 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Aldrin [309-00-2] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.20 | U | ug/L | 1 | 0.20 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.032 | U | ug/L | 1 | 0.032 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Endrin [72-20-8] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.039 | U | ug/L | 1 | 0.039 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.034 | U | ug/L | 1 | 0.034 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.030 | U | ug/L | 1 | 0.030 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.037 | U | ug/L | 1 | 0.037 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Isodrin [465-73-6] ^ | 0.031 | U | ug/L | 1 | 0.031 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.025 | U | ug/L | 1 | 0.025 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Mirex [2385-85-5] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 14:27 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.84* | *1* | *1.00* | *84 %* | *44-134* | *2L10018* | *EPA 8081B* | *12/12/12 14:27* | *MSZ* | |
| *Decachlorobiphenyl* | *1.0* | *1* | *1.00* | *105 %* | *37-149* | *2L10018* | *EPA 8081B* | *12/12/12 14:27* | *MSZ* | |

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**Description:** MW-13
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-13
**Sampled:** 12/05/12 16:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

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

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 2.80 | U | ug/L | 1 | 2.80 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 12:57 | JDH | |
| **Lead [7439-92-1] ^** | **5.18** | J | ug/L | 1 | 1.90 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 12:57 | JDH | |

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**Description:** MW-13
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-13
**Sampled:** 12/05/12 16:00
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hexavalent Chromium [1854-02-99] ^** | **0.011** | | mg/L | 1 | 0.0049 | 0.010 | 2L06031 | SM3500-Cr D VI | 12/06/12 11:26 | AJB | |

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

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.012 | U | ug/L | 1 | 0.012 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.66 | U | ug/L | 1 | 0.66 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.30 | U | ug/L | 1 | 0.30 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 2-Butanone [78-93-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.081 | U | ug/L | 1 | 0.081 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.88 | U | ug/L | 1 | 0.88 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.068 | U | ug/L | 1 | 0.068 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.085 | U | ug/L | 1 | 0.085 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Acetone [67-64-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Benzene [71-43-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Bromoform [75-25-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Bromomethane [74-83-9] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Carbon disulfide [75-15-0] ^ | 1.5 | U | ug/L | 1 | 1.5 | 5.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Carbon tetrachloride [56-23-5] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| **Chlorobenzene [108-90-7] ^** | **0.50** | J | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Chloroethane [75-00-3] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Chloroform [67-66-3] ^ | 0.18 | U | ug/L | 1 | 0.18 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Chloromethane [74-87-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.27 | U | ug/L | 1 | 0.27 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.17 | U | ug/L | 1 | 0.17 | 2.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Methylene chloride [75-09-2] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Naphthalene [91-20-3] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.058 | U | ug/L | 1 | 0.058 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| o-Xylene [95-47-6] ^ | 0.065 | U | ug/L | 1 | 0.065 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Styrene [100-42-5] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Toluene [108-88-3] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.24 | U | ug/L | 1 | 0.24 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.32 | U | ug/L | 1 | 0.32 | 1.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.45 | U | ug/L | 1 | 0.45 | 3.0 | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *42* | *1* | *50.0* | *84 %* | *51-122* | *2L07018* | *EPA 8260B* | *12/08/12 21:54* | *JKG* | |
| *Dibromofluoromethane* | *46* | *1* | *50.0* | *93 %* | *68-117* | *2L07018* | *EPA 8260B* | *12/08/12 21:54* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *88 %* | *67-127* | *2L07018* | *EPA 8260B* | *12/08/12 21:54* | *JKG* | |

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds [NA] | 0.0 | U | ug/L | 1 | | | 2L07018 | EPA 8260B | 12/08/12 21:54 | JKG | |

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2,4,5-Trichlorophenol [95-95-4] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2,4,6-Trichlorophenol [88-06-2] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2,4-Dichlorophenol [120-83-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2,4-Dimethylphenol [105-67-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2,4-Dinitrophenol [51-28-5] ^ | 2.6 | U | ug/L | 1 | 2.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2-Chlorophenol [95-57-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2-Methyl-4,6-dinitrophenol [534-52-1] ^ | 2.9 | U | ug/L | 1 | 2.9 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2-Methylphenol [95-48-7] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 2-Nitrophenol [88-75-5] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 3 & 4-Methylphenol [108-39-4/106-44-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 3.3 | U | ug/L | 1 | 3.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 4-Chloro-3-methylphenol [59-50-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 3.2 | U | ug/L | 1 | 3.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| 4-Nitrophenol [100-02-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | QV-01 |
| Acenaphthene [83-32-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Acenaphthylene [208-96-8] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Anthracene [120-12-7] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Benzidine [92-87-5] ^ | 1.6 | U | ug/L | 1 | 1.6 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 2.4 | U | ug/L | 1 | 2.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Benzoic acid [65-85-0] ^ | 1.0 | U | ug/L | 1 | 1.0 | 50 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Bis(2-chloroethoxy)methane [111-91-1] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Bis(2-chloroethyl)ether [111-44-4] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Bis(2-ethylhexyl)phthalate [117-81-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 5.0 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Chrysene [218-01-9] ^ | 2.0 | U | ug/L | 1 | 2.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 2.3 | U | ug/L | 1 | 2.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Dibenzofuran [132-64-9] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Diethylphthalate [84-66-2] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 3.1 | U | ug/L | 1 | 3.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Semivolatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoranthene [206-44-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Fluorene [86-73-7] ^ | 1.7 | U | ug/L | 1 | 1.7 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 1.0 | U | ug/L | 1 | 1.0 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Hexachloroethane [67-72-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 2.2 | U | ug/L | 1 | 2.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Isophorone [78-59-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Naphthalene [91-20-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Nitrobenzene [98-95-3] ^ | 1.2 | U | ug/L | 1 | 1.2 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 1.5 | U | ug/L | 1 | 1.5 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Pentachlorophenol [87-86-5] ^ | 1.8 | U | ug/L | 1 | 1.8 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Phenanthrene [85-01-8] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Phenol [108-95-2] ^ | 1.4 | U | ug/L | 1 | 1.4 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Pyrene [129-00-0] ^ | 2.1 | U | ug/L | 1 | 2.1 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Pyridine [110-86-1] ^ | 1.3 | U | ug/L | 1 | 1.3 | 10 | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,6-Tribromophenol* | *80* | *1* | *100* | *80 %* | *10-179* | *2L12017* | *EPA 8270D* | *12/13/12 21:07* | *DFM* | |
| *2-Fluorobiphenyl* | *24* | *1* | *50.0* | *49 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 21:07* | *DFM* | |
| *2-Fluorophenol* | *34* | *1* | *100* | *34 %* | *10-110* | *2L12017* | *EPA 8270D* | *12/13/12 21:07* | *DFM* | |
| *Nitrobenzene-d5* | *23* | *1* | *50.0* | *46 %* | *10-149* | *2L12017* | *EPA 8270D* | *12/13/12 21:07* | *DFM* | |
| *Phenol-d5* | *28* | *1* | *100* | *28 %* | *10-88* | *2L12017* | *EPA 8270D* | *12/13/12 21:07* | *DFM* | |
| *Terphenyl-d14* | *44* | *1* | *50.0* | *88 %* | *10-188* | *2L12017* | *EPA 8270D* | *12/13/12 21:07* | *DFM* | |

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Semivolatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Caprolactam [105-60-2] | 4.6 | J | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | |
| Cyclohexene [000110-83-8] | 7.6 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | B |
| Unknown [NA] | 6.8 | JB | ug/L | 1 | | | 2L12017 | EPA 8270D | 12/13/12 21:07 | DFM | B |

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Organochlorine Pesticides by GC

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD [72-54-8] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| 4,4'-DDE [72-55-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| 4,4'-DDT [50-29-3] ^ | 0.049 | U | ug/L | 1 | 0.049 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Aldrin [309-00-2] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| alpha-BHC [319-84-6] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| beta-BHC [319-85-7] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Chlordane (tech) [12789-03-6] ^ | 0.20 | U | ug/L | 1 | 0.20 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Chlordane-alpha [5103-71-9] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Chlordane-gamma [5566-34-7] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| delta-BHC [319-86-8] ^ | 0.048 | U | ug/L | 1 | 0.048 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Dieldrin [60-57-1] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Endosulfan I [959-98-8] ^ | 0.045 | U | ug/L | 1 | 0.045 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Endosulfan II [33213-65-9] ^ | 0.036 | U | ug/L | 1 | 0.036 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Endosulfan sulfate [1031-07-8] ^ | 0.032 | U | ug/L | 1 | 0.032 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Endrin [72-20-8] ^ | 0.041 | U | ug/L | 1 | 0.041 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Endrin aldehyde [7421-93-4] ^ | 0.042 | U | ug/L | 1 | 0.042 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Endrin ketone [53494-70-5] ^ | 0.039 | U | ug/L | 1 | 0.039 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| gamma-BHC [58-89-9] ^ | 0.034 | U | ug/L | 1 | 0.034 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Heptachlor [76-44-8] ^ | 0.030 | U | ug/L | 1 | 0.030 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Heptachlor epoxide [1024-57-3] ^ | 0.037 | U | ug/L | 1 | 0.037 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Isodrin [465-73-6] ^ | 0.031 | U | ug/L | 1 | 0.031 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Methoxychlor [72-43-5] ^ | 0.025 | U | ug/L | 1 | 0.025 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Mirex [2385-85-5] ^ | 0.044 | U | ug/L | 1 | 0.044 | 0.050 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |
| Toxaphene [8001-35-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 0.50 | 2L10018 | EPA 8081B | 12/12/12 14:40 | MSZ | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2,4,5,6-TCMX* | *0.86* | *1* | *1.00* | *86 %* | *44-134* | *2L10018* | *EPA 8081B* | *12/12/12 14:40* | *MSZ* | |
| *Decachlorobiphenyl* | *0.37* | *1* | *1.00* | *37 %* | *37-149* | *2L10018* | *EPA 8081B* | *12/12/12 14:40* | *MSZ* | |

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

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

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic [7440-38-2] ^ | 2.80 | U | ug/L | 1 | 2.80 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 13:00 | JDH | |
| **Lead [7439-92-1] ^** | **2.18** | J | ug/L | 1 | 1.90 | 10.0 | 2L07006 | EPA 6010C | 12/10/12 13:00 | JDH | |

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**Description:** MW-14
**Matrix:** Ground Water
**Project:** 213912

**Lab Sample ID:** C214257-14
**Sampled:** 12/05/12 13:45
**Sampled By:** Wesley Brummer

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Classical Chemistry Parameters

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hexavalent Chromium [1854-02-99] ^** | **0.019** | | mg/L | 1 | 0.0049 | 0.010 | 2L06031 | SM3500-Cr D VI | 12/06/12 11:26 | AJB | |

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

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**Description:** Trip Blank
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C214257-15
**Sampled:** 12/04/12 08:45
**Sampled By:** ENCO

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane [630-20-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.012 | U | ug/L | 1 | 0.012 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.66 | U | ug/L | 1 | 0.66 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.30 | U | ug/L | 1 | 0.30 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 2-Butanone [78-93-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 5.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.081 | U | ug/L | 1 | 0.081 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.88 | U | ug/L | 1 | 0.88 | 5.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.068 | U | ug/L | 1 | 0.068 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.085 | U | ug/L | 1 | 0.085 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Acetone [67-64-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 5.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Benzene [71-43-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Bromoform [75-25-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Bromomethane [74-83-9] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Carbon disulfide [75-15-0] ^ | 1.5 | U | ug/L | 1 | 1.5 | 5.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Carbon tetrachloride [56-23-5] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Chloroethane [75-00-3] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Chloroform [67-66-3] ^ | 0.18 | U | ug/L | 1 | 0.18 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Chloromethane [74-87-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.27 | U | ug/L | 1 | 0.27 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.17 | U | ug/L | 1 | 0.17 | 2.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Methylene chloride [75-09-2] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |

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**Description:** Trip Blank
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C214257-15
**Sampled:** 12/04/12 08:45
**Sampled By:** ENCO

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Volatile Organic Compounds by GCMS

*^ - ENCO Cary certified analyte [NC 591]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Naphthalene [91-20-3] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.058 | U | ug/L | 1 | 0.058 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| o-Xylene [95-47-6] ^ | 0.065 | U | ug/L | 1 | 0.065 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Styrene [100-42-5] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Toluene [108-88-3] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.24 | U | ug/L | 1 | 0.24 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.32 | U | ug/L | 1 | 0.32 | 1.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | QV-01 |
| Xylenes (Total) [1330-20-7] ^ | 0.45 | U | ug/L | 1 | 0.45 | 3.0 | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *57* | *1* | *50.0* | *114 %* | *51-122* | *2L11015* | *EPA 8260B* | *12/13/12 08:09* | *JKG* | |
| *Dibromofluoromethane* | *62* | *1* | *50.0* | *124 %* | *68-117* | *2L11015* | *EPA 8260B* | *12/13/12 08:09* | *JKG* | *QS-03* |
| *Toluene-d8* | *60* | *1* | *50.0* | *120 %* | *67-127* | *2L11015* | *EPA 8260B* | *12/13/12 08:09* | *JKG* | |

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**Description:** Trip Blank
**Matrix:** Water
**Project:** 213912

**Lab Sample ID:** C214257-15
**Sampled:** 12/04/12 08:45
**Sampled By:** ENCO

**Received:** 12/06/12 10:35
**Work Order:** C214257

## Tentatively Identified Compounds by Volatile GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds [NA] | 0.0 | U | ug/L | 1 | | | 2L11015 | EPA 8260B | 12/13/12 08:09 | JKG | |

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

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## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L07018 - EPA 5030B_MS*

**Blank (2L07018-BLK1)** Prepared: 12/07/2012 12:45 Analyzed: 12/08/2012 14:52

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.17 | U | 1.0 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | 0.12 | U | 1.0 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 0.28 | U | 1.0 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | 0.14 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloroethane | 0.13 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloroethene | 0.21 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloropropene | 0.15 | U | 1.0 | ug/L | | | | | | | |
| 1,2,3-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 | | | | | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L07018 - EPA 5030B_MS*

**Blank (2L07018-BLK1) Continued** Prepared: 12/07/2012 12:45 Analyzed: 12/08/2012 14:52

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 0.17 | U | 2.0 | ug/L | | | | | | | |
| 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 | | | | | | | |
| o-Xylene | 0.065 | 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 | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *44* | | | *ug/L* | *50.0* | | *88* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *50* | | | *ug/L* | *50.0* | | *99* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *46* | | | *ug/L* | *50.0* | | *92* | *67-127* | | | |

**LCS (2L07018-BS1)** Prepared: 12/07/2012 12:45 Analyzed: 12/08/2012 15:22

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 20 | | 1.0 | ug/L | 20.0 | | 99 | 75-133 | | | |
| Benzene | 19 | | 1.0 | ug/L | 20.0 | | 96 | 81-134 | | | |
| Chlorobenzene | 19 | | 1.0 | ug/L | 20.0 | | 95 | 83-117 | | | |
| Toluene | 18 | | 1.0 | ug/L | 20.0 | | 90 | 71-118 | | | |
| Trichloroethene | 21 | | 1.0 | ug/L | 20.0 | | 107 | 74-119 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *43* | | | *ug/L* | *50.0* | | *87* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *48* | | | *ug/L* | *50.0* | | *95* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *45* | | | *ug/L* | *50.0* | | *91* | *67-127* | | | |

**Matrix Spike (2L07018-MS1)** Prepared: 12/07/2012 12:45 Analyzed: 12/08/2012 15:52

**Source: C214410-05**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 21 | | 1.0 | ug/L | 20.0 | 0.21 U | 104 | 75-133 | | | |
| Benzene | 19 | | 1.0 | ug/L | 20.0 | 0.15 U | 96 | 81-134 | | | |
| Chlorobenzene | 19 | | 1.0 | ug/L | 20.0 | 0.17 U | 94 | 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 | 110 | 74-119 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *42* | | | *ug/L* | *50.0* | | *85* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *47* | | | *ug/L* | *50.0* | | *94* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *46* | | | *ug/L* | *50.0* | | *92* | *67-127* | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L07018 - EPA 5030B_MS*

**Matrix Spike Dup (2L07018-MSD1)** Prepared: 12/07/2012 12:45 Analyzed: 12/08/2012 16:22

**Source: C214410-05**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 21 | | 1.0 | ug/L | 20.0 | 0.21 U | 105 | 75-133 | 1 | 20 | |
| Benzene | 20 | | 1.0 | ug/L | 20.0 | 0.15 U | 101 | 81-134 | 5 | 17 | |
| Chlorobenzene | 21 | | 1.0 | ug/L | 20.0 | 0.17 U | 104 | 83-117 | 10 | 16 | |
| Toluene | 19 | | 1.0 | ug/L | 20.0 | 0.14 U | 97 | 71-118 | 8 | 17 | |
| Trichloroethene | 23 | | 1.0 | ug/L | 20.0 | 0.15 U | 113 | 74-119 | 3 | 22 | |
| *Surrogate: 4-Bromofluorobenzene* | *44* | | | *ug/L* | *50.0* | | *88* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *45* | | | *ug/L* | *50.0* | | *91* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *46* | | | *ug/L* | *50.0* | | *92* | *67-127* | | | |

*Batch 2L10001 - EPA 5035_MS*

**Blank (2L10001-BLK1)** Prepared: 12/10/2012 06:50 Analyzed: 12/10/2012 08:59

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | 0.00030 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | 0.00028 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | 0.00064 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-chloropropane | 0.00079 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | 0.00046 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | 0.00041 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | 0.00029 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | 0.00023 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2-Butanone | 0.00078 | U | 0.0050 | mg/kg wet | | | | | | | |
| 2-Chloroethyl Vinyl Ether | 0.00016 | U | 0.0050 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2-Hexanone | 0.00075 | U | 0.0050 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 4-Methyl-2-pentanone | 0.00057 | U | 0.0050 | mg/kg wet | | | | | | | |
| Acetone | 0.0014 | U | 0.0050 | mg/kg wet | | | | | | | |
| Benzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromobenzene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromochloromethane | 0.00041 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromodichloromethane | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L10001 - EPA 5035_MS*

**Blank (2L10001-BLK1) Continued** Prepared: 12/10/2012 06:50 Analyzed: 12/10/2012 08:59

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromoform | 0.00045 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromomethane | 0.00032 | U | 0.0010 | mg/kg wet | | | | | | | |
| Carbon disulfide | 0.00039 | U | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chlorobenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloroform | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloromethane | 0.00021 | U | 0.0010 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | 0.00023 | U | 0.0010 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dibromochloromethane | 0.00035 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dibromomethane | 0.00033 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | 0.00045 | U | 0.0010 | mg/kg wet | | | | | | | |
| Ethylbenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | 0.00035 | U | 0.0010 | mg/kg wet | | | | | | | |
| Isopropylbenzene | 0.00015 | U | 0.0010 | mg/kg wet | | | | | | | |
| m,p-Xylenes | 0.00037 | U | 0.0020 | mg/kg wet | | | | | | | |
| Methylene Chloride | 0.00073 | U | 0.0020 | mg/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | 0.00030 | U | 0.0010 | mg/kg wet | | | | | | | |
| Naphthalene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |
| n-Butyl Benzene | 0.00013 | U | 0.0010 | mg/kg wet | | | | | | | |
| n-Propyl Benzene | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| o-Xylene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | 0.00095 | U | 0.0010 | mg/kg wet | | | | | | | |
| Styrene | 0.00098 | U | 0.0010 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Tetrachloroethene | 0.00028 | U | 0.0010 | mg/kg wet | | | | | | | |
| Toluene | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | 0.00037 | U | 0.0010 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | 0.00039 | U | 0.0010 | mg/kg wet | | | | | | | |
| Trichloroethene | 0.00032 | U | 0.0010 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| Vinyl chloride | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |
| Xylenes (Total) | 0.00056 | U | 0.0030 | mg/kg wet | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *40* | | | *ug/L* | *50.0* | | *80* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *41* | | | *ug/L* | *50.0* | | *83* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *43* | | | *ug/L* | *50.0* | | *86* | *63-118* | | | |

**LCS (2L10001-BS1)** Prepared: 12/10/2012 06:50 Analyzed: 12/10/2012 09:29

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | | 93 | 64-133 | | | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | | 94 | 79-129 | | | |
| Chlorobenzene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | | 101 | 79-121 | | | |
| Toluene | 0.021 | | 0.0010 | mg/kg wet | 0.0200 | | 103 | 77-120 | | | |
| Trichloroethene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | | 102 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *43* | | | *ug/L* | *50.0* | | *85* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *41* | | | *ug/L* | *50.0* | | *82* | *66-114* | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L10001 - EPA 5035_MS*

**LCS (2L10001-BS1) Continued** Prepared: 12/10/2012 06:50 Analyzed: 12/10/2012 09:29

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: Toluene-d8* | *45* | | | *ug/L* | *50.0* | | *91* | *63-118* | | | |

**Matrix Spike (2L10001-MS1)** Prepared: 12/10/2012 06:50 Analyzed: 12/10/2012 09:59

**Source: C214294-09**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00030 U | 94 | 64-133 | | | |
| Benzene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 91 | 79-129 | | | |
| Chlorobenzene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 99 | 79-121 | | | |
| Toluene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 98 | 77-120 | | | |
| Trichloroethene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 97 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *42* | | | *ug/L* | *50.0* | | *84* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *41* | | | *ug/L* | *50.0* | | *83* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *45* | | | *ug/L* | *50.0* | | *89* | *63-118* | | | |

**Matrix Spike Dup (2L10001-MSD1)** Prepared: 12/10/2012 06:50 Analyzed: 12/10/2012 10:29

**Source: C214294-09**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00030 U | 90 | 64-133 | 4 | 23 | |
| Benzene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 92 | 79-129 | 0.8 | 23 | |
| Chlorobenzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 94 | 79-121 | 5 | 25 | |
| Toluene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 94 | 77-120 | 5 | 23 | |
| Trichloroethene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 96 | 78-118 | 0.4 | 24 | |
| *Surrogate: 4-Bromofluorobenzene* | *40* | | | *ug/L* | *50.0* | | *80* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *39* | | | *ug/L* | *50.0* | | *79* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *44* | | | *ug/L* | *50.0* | | *87* | *63-118* | | | |

*Batch 2L10020 - EPA 5035_MS*

**Blank (2L10020-BLK1)** Prepared: 12/10/2012 11:56 Analyzed: 12/10/2012 21:27

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | 0.00030 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | 0.00028 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | 0.00064 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-chloropropane | 0.00079 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | 0.00046 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L10020 - EPA 5035_MS*

**Blank (2L10020-BLK1) Continued** Prepared: 12/10/2012 11:56 Analyzed: 12/10/2012 21:27

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 0.00041 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | 0.00029 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | 0.00023 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2-Butanone | 0.00078 | U | 0.0050 | mg/kg wet | | | | | | | |
| 2-Chloroethyl Vinyl Ether | 0.00016 | U | 0.0050 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2-Hexanone | 0.00075 | U | 0.0050 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 4-Methyl-2-pentanone | 0.00057 | U | 0.0050 | mg/kg wet | | | | | | | |
| Acetone | 0.0014 | U | 0.0050 | mg/kg wet | | | | | | | |
| Benzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromobenzene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromochloromethane | 0.00041 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromodichloromethane | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromoform | 0.00045 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromomethane | 0.00032 | U | 0.0010 | mg/kg wet | | | | | | | |
| Carbon disulfide | 0.00039 | U | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chlorobenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloroform | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloromethane | 0.00021 | U | 0.0010 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | 0.00023 | U | 0.0010 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dibromochloromethane | 0.00035 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dibromomethane | 0.00033 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | 0.00045 | U | 0.0010 | mg/kg wet | | | | | | | |
| Ethylbenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | 0.00035 | U | 0.0010 | mg/kg wet | | | | | | | |
| Isopropylbenzene | 0.00015 | U | 0.0010 | mg/kg wet | | | | | | | |
| m,p-Xylenes | 0.00037 | U | 0.0020 | mg/kg wet | | | | | | | |
| Methylene Chloride | 0.00073 | U | 0.0020 | mg/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | 0.00030 | U | 0.0010 | mg/kg wet | | | | | | | |
| Naphthalene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |
| n-Butyl Benzene | 0.00013 | U | 0.0010 | mg/kg wet | | | | | | | |
| n-Propyl Benzene | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| o-Xylene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | 0.00095 | U | 0.0010 | mg/kg wet | | | | | | | |
| Styrene | 0.00098 | U | 0.0010 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Tetrachloroethene | 0.00028 | U | 0.0010 | mg/kg wet | | | | | | | |
| Toluene | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | 0.00037 | U | 0.0010 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | 0.00039 | U | 0.0010 | mg/kg wet | | | | | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L10020 - EPA 5035_MS*

**Blank (2L10020-BLK1) Continued** Prepared: 12/10/2012 11:56 Analyzed: 12/10/2012 21:27

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | 0.00032 | U | 0.0010 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| Vinyl chloride | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |
| Xylenes (Total) | 0.00056 | U | 0.0030 | mg/kg wet | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *42* | | | *ug/L* | *50.0* | | *84* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *43* | | | *ug/L* | *50.0* | | *85* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *44* | | | *ug/L* | *50.0* | | *87* | *63-118* | | | |

**LCS (2L10020-BS1)** Prepared: 12/10/2012 11:56 Analyzed: 12/10/2012 21:57

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | | 99 | 64-133 | | | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | | 94 | 79-129 | | | |
| Chlorobenzene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | | 100 | 79-121 | | | |
| Toluene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | | 101 | 77-120 | | | |
| Trichloroethene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | | 100 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *42* | | | *ug/L* | *50.0* | | *84* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *41* | | | *ug/L* | *50.0* | | *83* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *44* | | | *ug/L* | *50.0* | | *89* | *63-118* | | | |

**Matrix Spike (2L10020-MS1)** Prepared: 12/10/2012 11:56 Analyzed: 12/10/2012 22:26

**Source: C214704-02**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00030 U | 100 | 64-133 | | | |
| Benzene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 98 | 79-129 | | | |
| Chlorobenzene | 0.021 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 104 | 79-121 | | | |
| Toluene | 0.021 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 107 | 77-120 | | | |
| Trichloroethene | 0.021 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 103 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *44* | | | *ug/L* | *50.0* | | *87* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *41* | | | *ug/L* | *50.0* | | *82* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *44* | | | *ug/L* | *50.0* | | *89* | *63-118* | | | |

**Matrix Spike Dup (2L10020-MSD1)** Prepared: 12/10/2012 11:56 Analyzed: 12/10/2012 22:56

**Source: C214704-02**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00030 U | 101 | 64-133 | 0.7 | 23 | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 95 | 79-129 | 3 | 23 | |
| Chlorobenzene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 100 | 79-121 | 4 | 25 | |
| Toluene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 101 | 77-120 | 5 | 23 | |
| Trichloroethene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 101 | 78-118 | 2 | 24 | |
| *Surrogate: 4-Bromofluorobenzene* | *43* | | | *ug/L* | *50.0* | | *85* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *41* | | | *ug/L* | *50.0* | | *83* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *45* | | | *ug/L* | *50.0* | | *90* | *63-118* | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L11015 - EPA 5030B_MS*

**Blank (2L11015-BLK1)** Prepared: 12/11/2012 09:42 Analyzed: 12/12/2012 23:51

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.17 | U | 1.0 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | 0.12 | U | 1.0 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 0.28 | U | 1.0 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | 0.14 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloroethane | 0.13 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloroethene | 0.21 | U | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloropropene | 0.15 | U | 1.0 | ug/L | | | | | | | |
| 1,2,3-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 | | | | | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L11015 - EPA 5030B_MS*

**Blank (2L11015-BLK1) Continued** Prepared: 12/11/2012 09:42 Analyzed: 12/12/2012 23:51

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylenes | 0.17 | U | 2.0 | ug/L | | | | | | | |
| 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 | | | | | | | |
| o-Xylene | 0.065 | 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 | | | | | | | QV-01 |
| Xylenes (Total) | 0.45 | U | 3.0 | ug/L | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *55* | | | *ug/L* | *50.0* | | *110* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *59* | | | *ug/L* | *50.0* | | *119* | *68-117* | | | *QS-03* |
| *Surrogate: Toluene-d8* | *57* | | | *ug/L* | *50.0* | | *113* | *67-127* | | | |

**LCS (2L11015-BS1)** Prepared: 12/11/2012 09:42 Analyzed: 12/13/2012 00:20

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 25 | | 1.0 | ug/L | 20.0 | | 127 | 75-133 | | | |
| Benzene | 25 | | 1.0 | ug/L | 20.0 | | 123 | 81-134 | | | |
| Chlorobenzene | 22 | | 1.0 | ug/L | 20.0 | | 112 | 83-117 | | | |
| Toluene | 23 | | 1.0 | ug/L | 20.0 | | 117 | 71-118 | | | |
| Trichloroethene | 23 | | 1.0 | ug/L | 20.0 | | 116 | 74-119 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *56* | | | *ug/L* | *50.0* | | *111* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *59* | | | *ug/L* | *50.0* | | *118* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *59* | | | *ug/L* | *50.0* | | *118* | *67-127* | | | |

**Matrix Spike (2L11015-MS1)** Prepared: 12/11/2012 09:42 Analyzed: 12/13/2012 00:50

**Source: C214410-07**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 23 | | 1.0 | ug/L | 20.0 | 0.21 U | 115 | 75-133 | | | |
| Benzene | 21 | | 1.0 | ug/L | 20.0 | 0.15 U | 107 | 81-134 | | | |
| Chlorobenzene | 21 | | 1.0 | ug/L | 20.0 | 0.17 U | 103 | 83-117 | | | |
| Toluene | 20 | | 1.0 | ug/L | 20.0 | 0.14 U | 102 | 71-118 | | | |
| Trichloroethene | 21 | | 1.0 | ug/L | 20.0 | 0.15 U | 106 | 74-119 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *56* | | | *ug/L* | *50.0* | | *112* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *59* | | | *ug/L* | *50.0* | | *119* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *58* | | | *ug/L* | *50.0* | | *117* | *67-127* | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L11015 - EPA 5030B_MS*

**Matrix Spike Dup (2L11015-MSD1)** Prepared: 12/11/2012 09:42 Analyzed: 12/13/2012 01:19

**Source: C214410-07**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 22 | | 1.0 | ug/L | 20.0 | 0.21 U | 109 | 75-133 | 5 | 20 | |
| Benzene | 23 | | 1.0 | ug/L | 20.0 | 0.15 U | 116 | 81-134 | 8 | 17 | |
| Chlorobenzene | 21 | | 1.0 | ug/L | 20.0 | 0.17 U | 107 | 83-117 | 4 | 16 | |
| Toluene | 22 | | 1.0 | ug/L | 20.0 | 0.14 U | 108 | 71-118 | 5 | 17 | |
| Trichloroethene | 21 | | 1.0 | ug/L | 20.0 | 0.15 U | 107 | 74-119 | 1 | 22 | |
| *Surrogate: 4-Bromofluorobenzene* | *57* | | | *ug/L* | *50.0* | | *114* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *59* | | | *ug/L* | *50.0* | | *117* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *59* | | | *ug/L* | *50.0* | | *118* | *67-127* | | | |

*Batch 2L17002 - EPA 5035_MS*

**Blank (2L17002-BLK1)** Prepared: 12/17/2012 06:46 Analyzed: 12/17/2012 20:25

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | 0.00030 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | 0.00028 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | 0.00064 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-chloropropane | 0.00079 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | 0.00046 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | 0.00041 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | 0.00029 | U | 0.0010 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | 0.00023 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2-Butanone | 0.00078 | U | 0.0050 | mg/kg wet | | | | | | | |
| 2-Chloroethyl Vinyl Ether | 0.00016 | U | 0.0050 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| 2-Hexanone | 0.00075 | U | 0.0050 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | 0.00016 | U | 0.0010 | mg/kg wet | | | | | | | |
| 4-Methyl-2-pentanone | 0.00057 | U | 0.0050 | mg/kg wet | | | | | | | |
| Acetone | 0.0014 | U | 0.0050 | mg/kg wet | | | | | | | |
| Benzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromobenzene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromochloromethane | 0.00041 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromodichloromethane | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L17002 - EPA 5035_MS*

**Blank (2L17002-BLK1) Continued** Prepared: 12/17/2012 06:46 Analyzed: 12/17/2012 20:25

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromoform | 0.00045 | U | 0.0010 | mg/kg wet | | | | | | | |
| Bromomethane | 0.00032 | U | 0.0010 | mg/kg wet | | | | | | | |
| Carbon disulfide | 0.00039 | U | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chlorobenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloroethane | 0.00025 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloroform | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| Chloromethane | 0.00021 | U | 0.0010 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | 0.00023 | U | 0.0010 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dibromochloromethane | 0.00035 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dibromomethane | 0.00033 | U | 0.0010 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | 0.00045 | U | 0.0010 | mg/kg wet | | | | | | | |
| Ethylbenzene | 0.00020 | U | 0.0010 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | 0.00035 | U | 0.0010 | mg/kg wet | | | | | | | |
| Isopropylbenzene | 0.00015 | U | 0.0010 | mg/kg wet | | | | | | | |
| m,p-Xylenes | 0.00037 | U | 0.0020 | mg/kg wet | | | | | | | |
| Methylene Chloride | 0.00073 | U | 0.0020 | mg/kg wet | | | | | | | |
| Methyl-tert-Butyl Ether | 0.00030 | U | 0.0010 | mg/kg wet | | | | | | | |
| Naphthalene | 0.00027 | U | 0.0010 | mg/kg wet | | | | | | | |
| n-Butyl Benzene | 0.00013 | U | 0.0010 | mg/kg wet | | | | | | | |
| n-Propyl Benzene | 0.00018 | U | 0.0010 | mg/kg wet | | | | | | | |
| o-Xylene | 0.00022 | U | 0.0010 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | 0.00095 | U | 0.0010 | mg/kg wet | | | | | | | |
| Styrene | 0.00098 | U | 0.0010 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | 0.00017 | U | 0.0010 | mg/kg wet | | | | | | | |
| **Tetrachloroethene** | **0.00069** | **J** | 0.0010 | mg/kg wet | | | | | | | |
| Toluene | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | 0.00037 | U | 0.0010 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | 0.00039 | U | 0.0010 | mg/kg wet | | | | | | | |
| Trichloroethene | 0.00032 | U | 0.0010 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | 0.00026 | U | 0.0010 | mg/kg wet | | | | | | | |
| Vinyl chloride | 0.00024 | U | 0.0010 | mg/kg wet | | | | | | | |
| Xylenes (Total) | 0.00056 | U | 0.0030 | mg/kg wet | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *42* | | | *ug/L* | *50.0* | | *85* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *40* | | | *ug/L* | *50.0* | | *80* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *44* | | | *ug/L* | *50.0* | | *89* | *63-118* | | | |

**LCS (2L17002-BS1)** Prepared: 12/17/2012 06:46 Analyzed: 12/17/2012 12:26

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.017 | | 0.0010 | mg/kg wet | 0.0200 | | 84 | 64-133 | | | |
| Benzene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | | 89 | 79-129 | | | |
| Chlorobenzene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | | 92 | 79-121 | | | |
| Toluene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | | 92 | 77-120 | | | |
| Trichloroethene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | | 96 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *40* | | | *ug/L* | *50.0* | | *80* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *38* | | | *ug/L* | *50.0* | | *77* | *66-114* | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2L17002 - EPA 5035_MS*

**LCS (2L17002-BS1) Continued** Prepared: 12/17/2012 06:46 Analyzed: 12/17/2012 12:26

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: Toluene-d8* | *44* | | | *ug/L* | *50.0* | | *89* | *63-118* | | | |

**Matrix Spike (2L17002-MS1)** Prepared: 12/17/2012 06:46 Analyzed: 12/17/2012 12:56

**Source: C214751-11**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00030 U | 90 | 64-133 | | | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 93 | 79-129 | | | |
| Chlorobenzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 95 | 79-121 | | | |
| Toluene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 97 | 77-120 | | | |
| Trichloroethene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 97 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *41* | | | *ug/L* | *50.0* | | *81* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *39* | | | *ug/L* | *50.0* | | *78* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *45* | | | *ug/L* | *50.0* | | *90* | *63-118* | | | |

**Matrix Spike Dup (2L17002-MSD1)** Prepared: 12/17/2012 06:46 Analyzed: 12/17/2012 13:26

**Source: C214751-11**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00030 U | 90 | 64-133 | 0.6 | 23 | |
| Benzene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 92 | 79-129 | 1 | 23 | |
| Chlorobenzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 97 | 79-121 | 2 | 25 | |
| Toluene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 98 | 77-120 | 2 | 23 | |
| Trichloroethene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 95 | 78-118 | 3 | 24 | |
| *Surrogate: 4-Bromofluorobenzene* | *42* | | | *ug/L* | *50.0* | | *84* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *38* | | | *ug/L* | *50.0* | | *76* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *44* | | | *ug/L* | *50.0* | | *89* | *63-118* | | | |

### Tentatively Identified Compounds by Volatile GCMS - Quality Control

*Batch 2L07018 - EPA 5030B_MS*

**Blank (2L07018-BLK1)** Prepared: 12/07/2012 12:45 Analyzed: 12/08/2012 14:52

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Tentatively Identified Compounds** | **0.0** | **U** | | ug/L | | | | | | | |

*Batch 2L10001 - EPA 5035_MS*

**Blank (2L10001-BLK1)** Prepared: 12/10/2012 06:50 Analyzed: 12/10/2012 08:59

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cyclopentasiloxane, decamet...** | **0.0016** | **J** | | mg/kg wet | | | | | | | |

*Batch 2L10020 - EPA 5035_MS*

**Blank (2L10020-BLK1)** Prepared: 12/10/2012 11:56 Analyzed: 12/10/2012 21:27

## QUALITY CONTROL

### Tentatively Identified Compounds by Volatile GCMS - Quality Control

*Batch 2L10020 - EPA 5035_MS*

**Blank (2L10020-BLK1) Continued** Prepared: 12/10/2012 11:56 Analyzed: 12/10/2012 21:27

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclopentasiloxane, decamet... | 0.0016 | J | | mg/kg wet | | | | | | | |

*Batch 2L11015 - EPA 5030B_MS*

**Blank (2L11015-BLK1)** Prepared: 12/11/2012 09:42 Analyzed: 12/12/2012 23:51

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compounds | 0.0 | U | | ug/L | | | | | | | |

*Batch 2L17002 - EPA 5035_MS*

**Blank (2L17002-BLK1)** Prepared: 12/17/2012 06:46 Analyzed: 12/17/2012 20:25

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyclopentasiloxane, decamet... | 0.0018 | J | | mg/kg wet | | | | | | | |
| Cyclotetrasiloxane, octamet... | 0.0018 | J | | mg/kg wet | | | | | | | |

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2L10025 - EPA 3550C_MS*

**Blank (2L10025-BLK1)** Prepared: 12/10/2012 14:15 Analyzed: 12/11/2012 04:04

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 0.026 | U | 0.33 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | 0.023 | U | 0.33 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | 0.020 | U | 0.33 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | 0.021 | U | 0.33 | mg/kg wet | | | | | | | |
| 1-Methylnaphthalene | 0.027 | U | 0.33 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | 0.027 | U | 0.33 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | 0.027 | U | 0.33 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | 0.024 | U | 0.33 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | 0.043 | U | 0.33 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | 0.043 | U | 0.33 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | 0.031 | U | 0.33 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | 0.025 | U | 0.33 | mg/kg wet | | | | | | | |
| 2-Methyl-4,6-dinitrophenol | 0.033 | U | 0.33 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| 2-Methylphenol | 0.025 | U | 0.33 | mg/kg wet | | | | | | | |
| 2-Nitroaniline | 0.030 | U | 0.33 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | 0.031 | U | 0.33 | mg/kg wet | | | | | | | |
| 3 & 4-Methylphenol | 0.026 | U | 0.33 | mg/kg wet | | | | | | | |
| 3,3'-Dichlorobenzidine | 0.098 | U | 0.33 | mg/kg wet | | | | | | | |
| 3-Nitroaniline | 0.036 | U | 0.33 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | 0.027 | U | 0.33 | mg/kg wet | | | | | | | |
| 4-Chloro-3-methylphenol | 0.033 | U | 0.33 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | 0.093 | U | 0.33 | mg/kg wet | | | | | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2L10025 - EPA 3550C_MS*

**Blank (2L10025-BLK1) Continued** Prepared: 12/10/2012 14:15 Analyzed: 12/11/2012 04:04

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Chlorophenyl-phenylether | 0.026 | U | 0.33 | mg/kg wet | | | | | | | |
| 4-Nitroaniline | 0.053 | U | 0.33 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | 0.031 | U | 0.33 | mg/kg wet | | | | | | | |
| Acenaphthene | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| Acenaphthylene | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| Anthracene | 0.038 | U | 0.33 | mg/kg wet | | | | | | | |
| Benzidine | 0.11 | U | 0.33 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | 0.033 | U | 0.33 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | 0.018 | U | 0.33 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | 0.047 | U | 0.33 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | 0.033 | U | 0.33 | mg/kg wet | | | | | | | |
| Benzoic acid | 0.15 | U | 1.7 | mg/kg wet | | | | | | | |
| Benzyl alcohol | 0.023 | U | 0.33 | mg/kg wet | | | | | | | |
| Bis(2-chloroethoxy)methane | 0.025 | U | 0.33 | mg/kg wet | | | | | | | |
| Bis(2-chloroethyl)ether | 0.043 | U | 0.33 | mg/kg wet | | | | | | | |
| Bis(2-chloroisopropyl)ether | 0.024 | U | 0.33 | mg/kg wet | | | | | | | |
| Bis(2-ethylhexyl)phthalate | 0.035 | U | 0.33 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | 0.040 | U | 0.33 | mg/kg wet | | | | | | | |
| Chrysene | 0.030 | U | 0.33 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)anthracene | 0.051 | U | 0.33 | mg/kg wet | | | | | | | |
| Dibenzofuran | 0.027 | U | 0.33 | mg/kg wet | | | | | | | |
| Diethylphthalate | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| Dimethylphthalate | 0.033 | U | 0.33 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | 0.041 | U | 0.33 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | 0.033 | U | 0.33 | mg/kg wet | | | | | | | |
| Fluoranthene | 0.036 | U | 0.33 | mg/kg wet | | | | | | | |
| Fluorene | 0.029 | U | 0.33 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | 0.026 | U | 0.33 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | 0.026 | U | 0.33 | mg/kg wet | | | | | | | |
| Hexachlorocyclopentadiene | 0.039 | U | 0.33 | mg/kg wet | | | | | | | |
| Hexachloroethane | 0.021 | U | 0.33 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 0.047 | U | 0.33 | mg/kg wet | | | | | | | |
| Isophorone | 0.030 | U | 0.33 | mg/kg wet | | | | | | | |
| Naphthalene | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| Nitrobenzene | 0.026 | U | 0.33 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | 0.021 | U | 0.33 | mg/kg wet | | | | | | | |
| N-Nitroso-di-n-propylamine | 0.081 | U | 0.33 | mg/kg wet | | | | | | | |
| N-nitrosodiphenylamine/Diphenylamine | 0.054 | U | 0.33 | mg/kg wet | | | | | | | |
| Pentachlorophenol | 0.033 | U | 0.33 | mg/kg wet | | | | | | | |
| Phenanthrene | 0.027 | U | 0.33 | mg/kg wet | | | | | | | |
| Phenol | 0.022 | U | 0.33 | mg/kg wet | | | | | | | |
| Pyrene | 0.038 | U | 0.33 | mg/kg wet | | | | | | | |
| Pyridine | 0.082 | U | 0.33 | mg/kg wet | | | | | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *2.8* | | | *mg/kg wet* | *3.33* | | *85* | *28-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.3* | | | *mg/kg wet* | *1.67* | | *79* | *56-120* | | | |
| *Surrogate: 2-Fluorophenol* | *2.4* | | | *mg/kg wet* | *3.33* | | *73* | *49-126* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.3* | | | *mg/kg wet* | *1.67* | | *79* | *50-117* | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2L10025 - EPA 3550C_MS*

**Blank (2L10025-BLK1) Continued** Prepared: 12/10/2012 14:15 Analyzed: 12/11/2012 04:04

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: Phenol-d5* | *2.7* | | | *mg/kg wet* | *3.33* | | *80* | *56-120* | | | |
| *Surrogate: Terphenyl-d14* | *1.5* | | | *mg/kg wet* | *1.67* | | *88* | *36-151* | | | |

**LCS (2L10025-BS1)** Prepared: 12/10/2012 14:15 Analyzed: 12/11/2012 04:33

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 1.4 | | 0.33 | mg/kg wet | 1.67 | | 82 | 51-121 | | | |
| 1,4-Dichlorobenzene | 1.3 | | 0.33 | mg/kg wet | 1.67 | | 78 | 48-118 | | | |
| 2,4-Dinitrotoluene | 1.6 | | 0.33 | mg/kg wet | 1.67 | | 93 | 63-127 | | | |
| 2-Chlorophenol | 1.4 | | 0.33 | mg/kg wet | 1.67 | | 83 | 56-120 | | | |
| 4-Chloro-3-methylphenol | 1.6 | | 0.33 | mg/kg wet | 1.67 | | 94 | 59-121 | | | |
| 4-Nitrophenol | 1.7 | | 0.33 | mg/kg wet | 1.67 | | 103 | 73-147 | | | |
| Acenaphthene | 1.4 | | 0.33 | mg/kg wet | 1.67 | | 87 | 64-131 | | | |
| N-Nitroso-di-n-propylamine | 1.5 | | 0.33 | mg/kg wet | 1.67 | | 91 | 55-135 | | | |
| Pentachlorophenol | 1.6 | | 0.33 | mg/kg wet | 1.67 | | 96 | 45-117 | | | |
| Phenol | 1.4 | | 0.33 | mg/kg wet | 1.67 | | 82 | 54-121 | | | |
| Pyrene | 1.5 | | 0.33 | mg/kg wet | 1.67 | | 91 | 65-146 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.0* | | | *mg/kg wet* | *3.33* | | *91* | *28-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.4* | | | *mg/kg wet* | *1.67* | | *82* | *56-120* | | | |
| *Surrogate: 2-Fluorophenol* | *2.6* | | | *mg/kg wet* | *3.33* | | *77* | *49-126* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.3* | | | *mg/kg wet* | *1.67* | | *80* | *50-117* | | | |
| *Surrogate: Phenol-d5* | *2.8* | | | *mg/kg wet* | *3.33* | | *84* | *56-120* | | | |
| *Surrogate: Terphenyl-d14* | *1.5* | | | *mg/kg wet* | *1.67* | | *90* | *36-151* | | | |

**Matrix Spike (2L10025-MS1)** Prepared: 12/10/2012 14:15 Analyzed: 12/11/2012 05:01

**Source: C214257-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 1.6 | | 0.36 | mg/kg dry | 1.84 | 0.029 U | 85 | 51-121 | | | |
| 1,4-Dichlorobenzene | 1.5 | | 0.36 | mg/kg dry | 1.84 | 0.023 U | 81 | 48-118 | | | |
| 2,4-Dinitrotoluene | 1.8 | | 0.36 | mg/kg dry | 1.84 | 0.031 U | 98 | 63-127 | | | |
| 2-Chlorophenol | 1.6 | | 0.36 | mg/kg dry | 1.84 | 0.028 U | 86 | 56-120 | | | |
| 4-Chloro-3-methylphenol | 1.8 | | 0.36 | mg/kg dry | 1.84 | 0.036 U | 96 | 59-121 | | | |
| 4-Nitrophenol | 2.0 | | 0.36 | mg/kg dry | 1.84 | 0.034 U | 110 | 73-147 | | | |
| Acenaphthene | 1.6 | | 0.36 | mg/kg dry | 1.84 | 0.031 U | 90 | 64-131 | | | |
| N-Nitroso-di-n-propylamine | 1.7 | | 0.36 | mg/kg dry | 1.84 | 0.089 U | 95 | 55-135 | | | |
| Pentachlorophenol | 1.9 | | 0.36 | mg/kg dry | 1.84 | 0.036 U | 103 | 45-117 | | | |
| Phenol | 1.6 | | 0.36 | mg/kg dry | 1.84 | 0.024 U | 87 | 54-121 | | | |
| Pyrene | 1.8 | | 0.36 | mg/kg dry | 1.84 | 0.042 U | 97 | 65-146 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.4* | | | *mg/kg dry* | *3.68* | | *93* | *28-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.5* | | | *mg/kg dry* | *1.84* | | *84* | *56-120* | | | |
| *Surrogate: 2-Fluorophenol* | *2.9* | | | *mg/kg dry* | *3.68* | | *79* | *49-126* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.5* | | | *mg/kg dry* | *1.84* | | *82* | *50-117* | | | |
| *Surrogate: Phenol-d5* | *3.1* | | | *mg/kg dry* | *3.68* | | *85* | *56-120* | | | |
| *Surrogate: Terphenyl-d14* | *1.7* | | | *mg/kg dry* | *1.84* | | *93* | *36-151* | | | |

**Matrix Spike Dup (2L10025-MSD1)** Prepared: 12/10/2012 14:15 Analyzed: 12/11/2012 05:30

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2L10025 - EPA 3550C_MS*

**Matrix Spike Dup (2L10025-MSD1) Continued** Prepared: 12/10/2012 14:15 Analyzed: 12/11/2012 05:30

**Source: C214257-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 1.5 | | 0.36 | mg/kg dry | 1.84 | 0.029 U | 83 | 51-121 | 3 | 10 | |
| 1,4-Dichlorobenzene | 1.5 | | 0.36 | mg/kg dry | 1.84 | 0.023 U | 79 | 48-118 | 2 | 13 | |
| 2,4-Dinitrotoluene | 1.8 | | 0.36 | mg/kg dry | 1.84 | 0.031 U | 97 | 63-127 | 0.5 | 10 | |
| 2-Chlorophenol | 1.6 | | 0.36 | mg/kg dry | 1.84 | 0.028 U | 85 | 56-120 | 2 | 11 | |
| 4-Chloro-3-methylphenol | 1.8 | | 0.36 | mg/kg dry | 1.84 | 0.036 U | 96 | 59-121 | 0.5 | 10 | |
| 4-Nitrophenol | 2.0 | | 0.36 | mg/kg dry | 1.84 | 0.034 U | 111 | 73-147 | 0.7 | 10 | |
| Acenaphthene | 1.7 | | 0.36 | mg/kg dry | 1.84 | 0.031 U | 90 | 64-131 | 0.4 | 19 | |
| N-Nitroso-di-n-propylamine | 1.8 | | 0.36 | mg/kg dry | 1.84 | 0.089 U | 95 | 55-135 | 0.6 | 10 | |
| Pentachlorophenol | 1.9 | | 0.36 | mg/kg dry | 1.84 | 0.036 U | 102 | 45-117 | 0.6 | 10 | |
| Phenol | 1.6 | | 0.36 | mg/kg dry | 1.84 | 0.024 U | 85 | 54-121 | 2 | 13 | |
| Pyrene | 1.8 | | 0.36 | mg/kg dry | 1.84 | 0.042 U | 96 | 65-146 | 0.8 | 50 | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.5* | | | *mg/kg dry* | *3.68* | | *95* | *28-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.5* | | | *mg/kg dry* | *1.84* | | *84* | *56-120* | | | |
| *Surrogate: 2-Fluorophenol* | *2.9* | | | *mg/kg dry* | *3.68* | | *78* | *49-126* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.5* | | | *mg/kg dry* | *1.84* | | *82* | *50-117* | | | |
| *Surrogate: Phenol-d5* | *3.1* | | | *mg/kg dry* | *3.68* | | *85* | *56-120* | | | |
| *Surrogate: Terphenyl-d14* | *1.7* | | | *mg/kg dry* | *1.84* | | *93* | *36-151* | | | |

*Batch 2L12017 - EPA 3510C_MS*

**Blank (2L12017-BLK1)** Prepared: 12/12/2012 11:43 Analyzed: 12/13/2012 15:26

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 1.2 | U | 10 | ug/L | | | | | | | |
| 1,2-Dichlorobenzene | 1.1 | U | 10 | ug/L | | | | | | | |
| 1,3-Dichlorobenzene | 1.1 | U | 10 | ug/L | | | | | | | |
| 1,4-Dichlorobenzene | 1.0 | U | 10 | ug/L | | | | | | | |
| 1-Methylnaphthalene | 1.7 | U | 10 | ug/L | | | | | | | |
| 2,4,5-Trichlorophenol | 1.0 | U | 10 | ug/L | | | | | | | |
| 2,4,6-Trichlorophenol | 1.1 | U | 10 | ug/L | | | | | | | |
| 2,4-Dichlorophenol | 1.4 | U | 10 | ug/L | | | | | | | |
| 2,4-Dimethylphenol | 1.3 | U | 10 | ug/L | | | | | | | |
| 2,4-Dinitrophenol | 2.6 | U | 10 | ug/L | | | | | | | |
| 2,4-Dinitrotoluene | 2.4 | U | 10 | ug/L | | | | | | | |
| 2,6-Dinitrotoluene | 1.5 | U | 10 | ug/L | | | | | | | |
| 2-Chloronaphthalene | 1.0 | U | 10 | ug/L | | | | | | | |
| 2-Chlorophenol | 1.2 | U | 10 | ug/L | | | | | | | |
| 2-Methyl-4,6-dinitrophenol | 2.9 | U | 10 | ug/L | | | | | | | |
| 2-Methylnaphthalene | 1.5 | U | 10 | ug/L | | | | | | | |
| 2-Methylphenol | 1.4 | U | 10 | ug/L | | | | | | | |
| 2-Nitroaniline | 1.5 | U | 10 | ug/L | | | | | | | |
| 2-Nitrophenol | 1.1 | U | 10 | ug/L | | | | | | | |
| 3 & 4-Methylphenol | 1.6 | U | 10 | ug/L | | | | | | | |
| 3,3'-Dichlorobenzidine | 3.3 | U | 10 | ug/L | | | | | | | |
| 3-Nitroaniline | 2.1 | U | 10 | ug/L | | | | | | | |
| 4-Bromophenyl-phenylether | 1.0 | U | 10 | ug/L | | | | | | | |
| 4-Chloro-3-methylphenol | 1.5 | U | 10 | ug/L | | | | | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2L12017 - EPA 3510C_MS*

**Blank (2L12017-BLK1) Continued** Prepared: 12/12/2012 11:43 Analyzed: 12/13/2012 15:26

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Chloroaniline | 1.2 | U | 10 | ug/L | | | | | | | |
| 4-Chlorophenyl-phenylether | 1.6 | U | 10 | ug/L | | | | | | | |
| 4-Nitroaniline | 3.2 | U | 10 | ug/L | | | | | | | |
| 4-Nitrophenol | 2.0 | U | 10 | ug/L | | | | | | | QV-01 |
| Acenaphthene | 1.4 | U | 10 | ug/L | | | | | | | |
| Acenaphthylene | 1.2 | U | 10 | ug/L | | | | | | | |
| Anthracene | 1.6 | U | 10 | ug/L | | | | | | | |
| Benzidine | 1.6 | U | 10 | ug/L | | | | | | | |
| Benzo(a)anthracene | 1.3 | U | 10 | ug/L | | | | | | | |
| Benzo(a)pyrene | 1.3 | U | 10 | ug/L | | | | | | | |
| Benzo(b)fluoranthene | 1.0 | U | 10 | ug/L | | | | | | | |
| Benzo(g,h,i)perylene | 2.4 | U | 10 | ug/L | | | | | | | |
| Benzo(k)fluoranthene | 1.3 | U | 10 | ug/L | | | | | | | |
| Benzoic acid | 1.0 | U | 50 | ug/L | | | | | | | |
| Benzyl alcohol | 1.4 | U | 10 | ug/L | | | | | | | |
| Bis(2-chloroethoxy)methane | 1.4 | U | 10 | ug/L | | | | | | | |
| Bis(2-chloroethyl)ether | 1.2 | U | 10 | ug/L | | | | | | | |
| Bis(2-chloroisopropyl)ether | 1.3 | U | 10 | ug/L | | | | | | | |
| Bis(2-ethylhexyl)phthalate | 1.7 | U | 5.0 | ug/L | | | | | | | |
| Butylbenzylphthalate | 2.0 | U | 10 | ug/L | | | | | | | |
| Chrysene | 2.0 | U | 10 | ug/L | | | | | | | |
| Dibenzo(a,h)anthracene | 2.3 | U | 10 | ug/L | | | | | | | |
| Dibenzofuran | 1.4 | U | 10 | ug/L | | | | | | | |
| Diethylphthalate | 2.1 | U | 10 | ug/L | | | | | | | |
| Dimethylphthalate | 1.4 | U | 10 | ug/L | | | | | | | |
| Di-n-butylphthalate | 1.5 | U | 10 | ug/L | | | | | | | |
| Di-n-octylphthalate | 3.1 | U | 10 | ug/L | | | | | | | |
| Fluoranthene | 2.1 | U | 10 | ug/L | | | | | | | |
| Fluorene | 1.7 | U | 10 | ug/L | | | | | | | |
| Hexachlorobenzene | 1.0 | U | 10 | ug/L | | | | | | | |
| Hexachlorobutadiene | 1.2 | U | 10 | ug/L | | | | | | | |
| Hexachlorocyclopentadiene | 1.3 | U | 10 | ug/L | | | | | | | |
| Hexachloroethane | 1.1 | U | 10 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | U | 10 | ug/L | | | | | | | |
| Isophorone | 1.3 | U | 10 | ug/L | | | | | | | |
| Naphthalene | 1.3 | U | 10 | ug/L | | | | | | | |
| Nitrobenzene | 1.2 | U | 10 | ug/L | | | | | | | |
| N-Nitrosodimethylamine | 1.3 | U | 10 | ug/L | | | | | | | |
| N-Nitroso-di-n-propylamine | 1.5 | U | 10 | ug/L | | | | | | | |
| N-nitrosodiphenylamine/Diphenylamine | 2.1 | U | 10 | ug/L | | | | | | | |
| Pentachlorophenol | 1.8 | U | 10 | ug/L | | | | | | | |
| Phenanthrene | 1.4 | U | 10 | ug/L | | | | | | | |
| Phenol | 1.4 | U | 10 | ug/L | | | | | | | |
| Pyrene | 2.1 | U | 10 | ug/L | | | | | | | |
| Pyridine | 1.3 | U | 10 | ug/L | | | | | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *83* | | | *ug/L* | *100* | | *83* | *10-179* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *42* | | | *ug/L* | *50.0* | | *85* | *10-149* | | | |
| *Surrogate: 2-Fluorophenol* | *60* | | | *ug/L* | *100* | | *60* | *10-110* | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2L12017 - EPA 3510C_MS*

**Blank (2L12017-BLK1) Continued** Prepared: 12/12/2012 11:43 Analyzed: 12/13/2012 15:26

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: Nitrobenzene-d5* | *41* | | | *ug/L* | *50.0* | | *82* | *10-149* | | | |
| *Surrogate: Phenol-d5* | *45* | | | *ug/L* | *100* | | *45* | *10-83* | | | |
| *Surrogate: Terphenyl-d14* | *45* | | | *ug/L* | *50.0* | | *90* | *10-188* | | | |

**LCS (2L12017-BS1)** Prepared: 12/12/2012 11:43 Analyzed: 12/13/2012 15:54

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 42 | | 10 | ug/L | 50.0 | | 84 | 27-90 | | | |
| 1,4-Dichlorobenzene | 40 | | 10 | ug/L | 50.0 | | 79 | 23-84 | | | |
| 2,4-Dinitrotoluene | 46 | | 10 | ug/L | 50.0 | | 93 | 67-132 | | | |
| 2-Chlorophenol | 41 | | 10 | ug/L | 50.0 | | 81 | 40-109 | | | |
| 4-Chloro-3-methylphenol | 46 | | 10 | ug/L | 50.0 | | 92 | 58-121 | | | |
| 4-Nitrophenol | 34 | | 10 | ug/L | 50.0 | | 68 | 33-105 | | | |
| Acenaphthene | 45 | | 10 | ug/L | 50.0 | | 90 | 39-125 | | | |
| N-Nitroso-di-n-propylamine | 46 | | 10 | ug/L | 50.0 | | 92 | 48-126 | | | |
| Pentachlorophenol | 42 | | 10 | ug/L | 50.0 | | 84 | 51-135 | | | |
| Phenol | 23 | | 10 | ug/L | 50.0 | | 46 | 19-78 | | | |
| Pyrene | 49 | | 10 | ug/L | 50.0 | | 97 | 44-137 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *95* | | | *ug/L* | *100* | | *95* | *10-179* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *43* | | | *ug/L* | *50.0* | | *86* | *10-149* | | | |
| *Surrogate: 2-Fluorophenol* | *62* | | | *ug/L* | *100* | | *62* | *10-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *42* | | | *ug/L* | *50.0* | | *84* | *10-149* | | | |
| *Surrogate: Phenol-d5* | *46* | | | *ug/L* | *100* | | *46* | *10-88* | | | |
| *Surrogate: Terphenyl-d14* | *48* | | | *ug/L* | *50.0* | | *96* | *10-188* | | | |

**Matrix Spike (2L12017-MS1)** Prepared: 12/12/2012 11:43 Analyzed: 12/13/2012 16:23

**Source: C214751-02**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 43 | | 10 | ug/L | 50.0 | 1.2 U | 85 | 27-90 | | | |
| 1,4-Dichlorobenzene | 40 | | 10 | ug/L | 50.0 | 1.0 U | 79 | 23-84 | | | |
| 2,4-Dinitrotoluene | 48 | | 10 | ug/L | 50.0 | 2.4 U | 95 | 67-132 | | | |
| 2-Chlorophenol | 41 | | 10 | ug/L | 50.0 | 1.2 U | 81 | 40-109 | | | |
| 4-Chloro-3-methylphenol | 46 | | 10 | ug/L | 50.0 | 1.5 U | 92 | 58-121 | | | |
| 4-Nitrophenol | 36 | | 10 | ug/L | 50.0 | 2.0 U | 73 | 33-105 | | | |
| Acenaphthene | 45 | | 10 | ug/L | 50.0 | 1.4 U | 91 | 39-125 | | | |
| N-Nitroso-di-n-propylamine | 46 | | 10 | ug/L | 50.0 | 1.5 U | 92 | 48-126 | | | |
| Pentachlorophenol | 44 | | 10 | ug/L | 50.0 | 1.8 U | 88 | 51-135 | | | |
| Phenol | 24 | | 10 | ug/L | 50.0 | 1.4 U | 48 | 19-78 | | | |
| Pyrene | 47 | | 10 | ug/L | 50.0 | 2.1 U | 94 | 44-137 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *94* | | | *ug/L* | *100* | | *94* | *10-179* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *42* | | | *ug/L* | *50.0* | | *85* | *10-149* | | | |
| *Surrogate: 2-Fluorophenol* | *60* | | | *ug/L* | *100* | | *60* | *10-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *41* | | | *ug/L* | *50.0* | | *81* | *10-149* | | | |
| *Surrogate: Phenol-d5* | *47* | | | *ug/L* | *100* | | *47* | *10-88* | | | |
| *Surrogate: Terphenyl-d14* | *45* | | | *ug/L* | *50.0* | | *91* | *10-188* | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2L12017 - EPA 3510C_MS*

**Matrix Spike Dup (2L12017-MSD1)** Prepared: 12/12/2012 11:43 Analyzed: 12/13/2012 16:51

**Source: C214751-02**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 46 | | 10 | ug/L | 50.0 | 1.2 U | 91 | 27-90 | 7 | 43 | QM-07 |
| 1,4-Dichlorobenzene | 43 | | 10 | ug/L | 50.0 | 1.0 U | 86 | 23-84 | 8 | 39 | QM-07 |
| 2,4-Dinitrotoluene | 48 | | 10 | ug/L | 50.0 | 2.4 U | 97 | 67-132 | 1 | 17 | |
| 2-Chlorophenol | 44 | | 10 | ug/L | 50.0 | 1.2 U | 88 | 40-109 | 8 | 22 | |
| 4-Chloro-3-methylphenol | 49 | | 10 | ug/L | 50.0 | 1.5 U | 99 | 58-121 | 7 | 22 | |
| 4-Nitrophenol | 38 | | 10 | ug/L | 50.0 | 2.0 U | 76 | 33-105 | 4 | 27 | |
| Acenaphthene | 49 | | 10 | ug/L | 50.0 | 1.4 U | 98 | 39-125 | 7 | 25 | |
| N-Nitroso-di-n-propylamine | 49 | | 10 | ug/L | 50.0 | 1.5 U | 98 | 48-126 | 6 | 23 | |
| Pentachlorophenol | 48 | | 10 | ug/L | 50.0 | 1.8 U | 96 | 51-135 | 9 | 11 | |
| Phenol | 27 | | 10 | ug/L | 50.0 | 1.4 U | 53 | 19-78 | 12 | 18 | |
| Pyrene | 51 | | 10 | ug/L | 50.0 | 2.1 U | 101 | 44-137 | 7 | 24 | |
| *Surrogate: 2,4,6-Tribromophenol* | *98* | | | *ug/L* | *100* | | *98* | *10-179* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *47* | | | *ug/L* | *50.0* | | *94* | *10-149* | | | |
| *Surrogate: 2-Fluorophenol* | *68* | | | *ug/L* | *100* | | *68* | *10-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *45* | | | *ug/L* | *50.0* | | *89* | *10-149* | | | |
| *Surrogate: Phenol-d5* | *53* | | | *ug/L* | *100* | | *53* | *10-88* | | | |
| *Surrogate: Terphenyl-d14* | *49* | | | *ug/L* | *50.0* | | *98* | *10-188* | | | |

### Tentatively Identified Compounds by Semivolatile GCMS - Quality Control

*Batch 2L10025 - EPA 3550C_MS*

**Blank (2L10025-BLK1)** Prepared: 12/10/2012 14:15 Analyzed: 12/11/2012 04:04

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **2-Chlorocyclohexanol** | **0.21** | **J** | | mg/kg wet | | | | | | | |
| **Cyclohexene** | **0.26** | **J** | | mg/kg wet | | | | | | | |
| **Ethane, 1,1,2,2-tetrachloro-** | **0.48** | **J** | | mg/kg wet | | | | | | | |
| **Ethane, 1,1,2-trichloro-** | **0.20** | **J** | | mg/kg wet | | | | | | | |
| **Unknown** | **0.63** | **J** | | mg/kg wet | | | | | | | |

*Batch 2L12017 - EPA 3510C_MS*

**Blank (2L12017-BLK1)** Prepared: 12/12/2012 11:43 Analyzed: 12/13/2012 15:26

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cyclohexene** | **20** | **J** | | ug/L | | | | | | | |
| **Unknown** | **13** | **J** | | ug/L | | | | | | | |

### Organochlorine Pesticides by GC - Quality Control

*Batch 2L06020 - EPA 3550C*

**Blank (2L06020-BLK1)** Prepared: 12/06/2012 11:14 Analyzed: 12/07/2012 11:00

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.00072 | U | 0.0017 | mg/kg wet | | | | | | | |
| 4,4'-DDE | 0.00077 | U | 0.0017 | mg/kg wet | | | | | | | |

## QUALITY CONTROL

### Organochlorine Pesticides by GC - Quality Control

*Batch 2L06020 - EPA 3550C*

**Blank (2L06020-BLK1) Continued** Prepared: 12/06/2012 11:14 Analyzed: 12/07/2012 11:00

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.00080 | U | 0.0017 | mg/kg wet | | | | | | | |
| Aldrin | 0.00081 | U | 0.0017 | mg/kg wet | | | | | | | |
| alpha-BHC | 0.0012 | U | 0.0017 | mg/kg wet | | | | | | | |
| beta-BHC | 0.0017 | U | 0.0017 | mg/kg wet | | | | | | | |
| Chlordane (tech) | 0.0011 | U | 0.033 | mg/kg wet | | | | | | | |
| Chlordane-alpha | 0.00062 | U | 0.0017 | mg/kg wet | | | | | | | |
| Chlordane-gamma | 0.00072 | U | 0.0017 | mg/kg wet | | | | | | | |
| delta-BHC | 0.00084 | U | 0.0017 | mg/kg wet | | | | | | | |
| Dieldrin | 0.00076 | U | 0.0017 | mg/kg wet | | | | | | | |
| Endosulfan I | 0.00076 | U | 0.0017 | mg/kg wet | | | | | | | |
| Endosulfan II | 0.00096 | U | 0.0017 | mg/kg wet | | | | | | | |
| Endosulfan sulfate | 0.0010 | U | 0.0017 | mg/kg wet | | | | | | | |
| Endrin | 0.00076 | U | 0.0017 | mg/kg wet | | | | | | | |
| Endrin aldehyde | 0.00080 | U | 0.0017 | mg/kg wet | | | | | | | |
| Endrin ketone | 0.00075 | U | 0.0017 | mg/kg wet | | | | | | | |
| gamma-BHC | 0.0011 | U | 0.0017 | mg/kg wet | | | | | | | |
| Heptachlor | 0.00079 | U | 0.0017 | mg/kg wet | | | | | | | |
| Heptachlor epoxide | 0.00075 | U | 0.0017 | mg/kg wet | | | | | | | |
| Isodrin | 0.00072 | U | 0.0017 | mg/kg wet | | | | | | | |
| Methoxychlor | 0.00098 | U | 0.0017 | mg/kg wet | | | | | | | |
| Mirex | 0.0010 | U | 0.0017 | mg/kg wet | | | | | | | |
| Toxaphene | 0.010 | U | 0.017 | mg/kg wet | | | | | | | |
| *Surrogate: 2,4,5,6-TCMX* | *0.039* | | | *mg/kg wet* | *0.0333* | | *117* | *59-137* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.043* | | | *mg/kg wet* | *0.0333* | | *130* | *60-140* | | | |

**LCS (2L06020-BS1)** Prepared: 12/06/2012 11:14 Analyzed: 12/07/2012 11:13

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.037 | | 0.0017 | mg/kg wet | 0.0333 | | 111 | 38-142 | | | |
| Dieldrin | 0.033 | | 0.0017 | mg/kg wet | 0.0333 | | 100 | 51-129 | | | |
| Endrin | 0.036 | | 0.0017 | mg/kg wet | 0.0333 | | 107 | 51-126 | | | |
| *Surrogate: 2,4,5,6-TCMX* | *0.036* | | | *mg/kg wet* | *0.0333* | | *109* | *59-137* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.042* | | | *mg/kg wet* | *0.0333* | | *124* | *60-140* | | | |

**Matrix Spike (2L06020-MS1)** Prepared: 12/06/2012 11:14 Analyzed: 12/07/2012 11:26

**Source: C214257-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.039 | | 0.0019 | mg/kg dry | 0.0368 | 0.00088 U | 105 | 38-142 | | | |
| Dieldrin | 0.035 | | 0.0019 | mg/kg dry | 0.0368 | 0.00084 U | 96 | 51-129 | | | |
| Endrin | 0.037 | | 0.0019 | mg/kg dry | 0.0368 | 0.00084 U | 102 | 51-126 | | | |
| *Surrogate: 2,4,5,6-TCMX* | *0.038* | | | *mg/kg dry* | *0.0368* | | *103* | *59-137* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.043* | | | *mg/kg dry* | *0.0368* | | *117* | *60-140* | | | |

**Matrix Spike Dup (2L06020-MSD1)** Prepared: 12/06/2012 11:14 Analyzed: 12/07/2012 11:39

**Source: C214257-01**

## QUALITY CONTROL

### Organochlorine Pesticides by GC - Quality Control

*Batch 2L06020 - EPA 3550C*

**Matrix Spike Dup (2L06020-MSD1) Continued** Prepared: 12/06/2012 11:14 Analyzed: 12/07/2012 11:39

**Source: C214257-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.029 | | 0.0019 | mg/kg dry | 0.0368 | 0.00088 U | 79 | 38-142 | 28 | 42 | |
| Dieldrin | 0.029 | | 0.0019 | mg/kg dry | 0.0368 | 0.00084 U | 78 | 51-129 | 20 | 40 | |
| Endrin | 0.028 | | 0.0019 | mg/kg dry | 0.0368 | 0.00084 U | 77 | 51-126 | 27 | 33 | |
| *Surrogate: 2,4,5,6-TCMX* | *0.037* | | | *mg/kg dry* | *0.0368* | | *101* | *59-137* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.043* | | | *mg/kg dry* | *0.0368* | | *116* | *60-140* | | | |

*Batch 2L10018 - EPA 3510C*

**Blank (2L10018-BLK1)** Prepared: 12/10/2012 11:30 Analyzed: 12/12/2012 11:08

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.044 | U | 0.050 | ug/L | | | | | | | |
| 4,4'-DDE | 0.048 | U | 0.050 | ug/L | | | | | | | |
| 4,4'-DDT | 0.049 | U | 0.050 | ug/L | | | | | | | |
| Aldrin | 0.041 | U | 0.050 | ug/L | | | | | | | |
| alpha-BHC | 0.036 | U | 0.050 | ug/L | | | | | | | |
| beta-BHC | 0.036 | U | 0.050 | ug/L | | | | | | | |
| Chlordane (tech) | 0.20 | U | 0.50 | ug/L | | | | | | | |
| Chlordane-alpha | 0.048 | U | 0.050 | ug/L | | | | | | | |
| Chlordane-gamma | 0.042 | U | 0.050 | ug/L | | | | | | | |
| delta-BHC | 0.048 | U | 0.050 | ug/L | | | | | | | |
| Dieldrin | 0.045 | U | 0.050 | ug/L | | | | | | | |
| Endosulfan I | 0.045 | U | 0.050 | ug/L | | | | | | | |
| Endosulfan II | 0.036 | U | 0.050 | ug/L | | | | | | | |
| Endosulfan sulfate | 0.032 | U | 0.050 | ug/L | | | | | | | |
| Endrin | 0.041 | U | 0.050 | ug/L | | | | | | | |
| Endrin aldehyde | 0.042 | U | 0.050 | ug/L | | | | | | | |
| Endrin ketone | 0.039 | U | 0.050 | ug/L | | | | | | | |
| gamma-BHC | 0.034 | U | 0.050 | ug/L | | | | | | | |
| Heptachlor | 0.030 | U | 0.050 | ug/L | | | | | | | |
| Heptachlor epoxide | 0.037 | U | 0.050 | ug/L | | | | | | | |
| Isodrin | 0.031 | U | 0.050 | ug/L | | | | | | | |
| Methoxychlor | 0.025 | U | 0.050 | ug/L | | | | | | | |
| Mirex | 0.044 | U | 0.050 | ug/L | | | | | | | |
| Toxaphene | 0.22 | U | 0.50 | ug/L | | | | | | | |
| *Surrogate: 2,4,5,6-TCMX* | *1.0* | | | *ug/L* | *1.00* | | *102* | *44-134* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.99* | | | *ug/L* | *1.00* | | *99* | *37-149* | | | |

**LCS (2L10018-BS1)** Prepared: 12/10/2012 11:30 Analyzed: 12/12/2012 11:21

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 1.1 | | 0.050 | ug/L | 1.00 | | 110 | 37-139 | | | |
| Dieldrin | 1.0 | | 0.050 | ug/L | 1.00 | | 105 | 46-132 | | | |
| Endrin | 1.1 | | 0.050 | ug/L | 1.00 | | 110 | 43-133 | | | |
| *Surrogate: 2,4,5,6-TCMX* | *1.1* | | | *ug/L* | *1.00* | | *109* | *44-134* | | | |
| *Surrogate: Decachlorobiphenyl* | *1.0* | | | *ug/L* | *1.00* | | *104* | *37-149* | | | |

# QUALITY CONTROL

## Organochlorine Pesticides by GC - Quality Control

*Batch 2L10018 - EPA 3510C*

**Matrix Spike (2L10018-MS1)** Prepared: 12/10/2012 11:30 Analyzed: 12/12/2012 11:34

**Source: C214704-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 1.1 | | 0.050 | ug/L | 1.00 | 0.049 U | 106 | 37-139 | | | |
| Dieldrin | 1.0 | | 0.050 | ug/L | 1.00 | 0.045 U | 104 | 46-132 | | | |
| Endrin | 1.1 | | 0.050 | ug/L | 1.00 | 0.041 U | 106 | 43-133 | | | |
| *Surrogate: 2,4,5,6-TCMX* | *1.0* | | | *ug/L* | *1.00* | | *102* | *44-134* | | | |
| *Surrogate: Decachlorobiphenyl* | *1.0* | | | *ug/L* | *1.00* | | *101* | *37-149* | | | |

**Matrix Spike Dup (2L10018-MSD1)** Prepared: 12/10/2012 11:30 Analyzed: 12/12/2012 11:48

**Source: C214704-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 0.94 | | 0.050 | ug/L | 1.00 | 0.049 U | 94 | 37-139 | 12 | 26 | |
| Dieldrin | 0.90 | | 0.050 | ug/L | 1.00 | 0.045 U | 90 | 46-132 | 13 | 27 | |
| Endrin | 0.92 | | 0.050 | ug/L | 1.00 | 0.041 U | 92 | 43-133 | 13 | 26 | |
| *Surrogate: 2,4,5,6-TCMX* | *0.86* | | | *ug/L* | *1.00* | | *86* | *44-134* | | | |
| *Surrogate: Decachlorobiphenyl* | *0.94* | | | *ug/L* | *1.00* | | *94* | *37-149* | | | |

## Volatile Petroleum Hydrocarbons by GC - Quality Control

*Batch 2L13024 - EPA 5030B*

**Blank (2L13024-BLK1)** Prepared: 12/13/2012 11:47 Analyzed: 12/13/2012 13:52

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C5-C8 Aliphatics | 4.7 | U | 30.0 | ug/L | | | | | | | |
| C9-C10 Aromatics | 1.9 | U | 10 | ug/L | | | | | | | |
| C9-C12 Aliphatics | 10.0 | U | 30.0 | ug/L | | | | | | | |
| *Surrogate: 2,5-Dibromotoluene (FID)* | *116* | | | *ug/L* | *100* | | *116* | *70-130* | | | |
| *Surrogate: 2,5-Dibromotoluene (PID)* | *110* | | | *ug/L* | *100* | | *114* | *70-130* | | | |

**LCS (2L13024-BS1)** Prepared: 12/13/2012 11:47 Analyzed: 12/13/2012 12:52

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C5-C8 Aliphatics | 95.3 | | 30.0 | ug/L | 120 | | 79 | 70-130 | | | |
| C9-C10 Aromatics | 43 | | 10 | ug/L | 40.0 | | 108 | 70-130 | | | |
| C9-C12 Aliphatics | 132 | | 30.0 | ug/L | 120 | | 110 | 70-130 | | | |
| *Surrogate: 2,5-Dibromotoluene (FID)* | *125* | | | *ug/L* | *100* | | *125* | *70-130* | | | |
| *Surrogate: 2,5-Dibromotoluene (PID)* | *120* | | | *ug/L* | *100* | | *117* | *70-130* | | | |

**LCS Dup (2L13024-BSD1)** Prepared: 12/13/2012 11:47 Analyzed: 12/13/2012 13:22

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C5-C8 Aliphatics | 90.3 | | 30.0 | ug/L | 120 | | 75 | 70-130 | 5 | 25 | |
| C9-C10 Aromatics | 48 | | 10 | ug/L | 40.0 | | 119 | 70-130 | 10 | 25 | |
| C9-C12 Aliphatics | 129 | | 30.0 | ug/L | 120 | | 107 | 70-130 | 3 | 25 | |
| *Surrogate: 2,5-Dibromotoluene (FID)* | *104* | | | *ug/L* | *100* | | *104* | *70-130* | | | |

## QUALITY CONTROL

### Volatile Petroleum Hydrocarbons by GC - Quality Control

*Batch 2L13024 - EPA 5030B*

**LCS Dup (2L13024-BSD1) Continued** Prepared: 12/13/2012 11:47 Analyzed: 12/13/2012 13:22

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,5-Dibromotoluene (PID)* | *110* | | | *ug/L* | *100* | | *111* | *70-130* | | | |

### Extractable Petroleum Hydrocarbons by GC - Quality Control

*Batch 2L06033 - EPA 3510C*

**Blank (2L06033-BLK1)** Prepared: 12/06/2012 16:29 Analyzed: 12/10/2012 10:21

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C11-C22 Aromatics | 31 | U | 100 | ug/L | | | | | | | |
| C19-C36 Aliphatics | 50 | U | 100 | ug/L | | | | | | | |
| C9-C18 Aliphatics | 34 | U | 100 | ug/L | | | | | | | |
| *Surrogate: Chloro-octadecane* | *14* | | | *ug/L* | *20.0* | | *68* | *40-140* | | | |
| *Surrogate: o-Terphenyl* | *13* | | | *ug/L* | *20.0* | | *65* | *40-140* | | | |

**LCS (2L06033-BS1)** Prepared: 12/06/2012 16:29 Analyzed: 12/10/2012 10:45

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C11-C22 Aromatics | 200 | | 100 | ug/L | 340 | | 60 | 40-140 | | | |
| C19-C36 Aliphatics | 210 | | 100 | ug/L | 320 | | 66 | 40-140 | | | |
| C9-C18 Aliphatics | 120 | | 100 | ug/L | 240 | | 50 | 40-140 | | | |
| *Surrogate: Chloro-octadecane* | *14* | | | *ug/L* | *20.0* | | *68* | *40-140* | | | |
| *Surrogate: o-Terphenyl* | *13* | | | *ug/L* | *20.0* | | *65* | *40-140* | | | |

**LCS Dup (2L06033-BSD1)** Prepared: 12/06/2012 16:29 Analyzed: 12/10/2012 11:10

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C11-C22 Aromatics | 220 | | 100 | ug/L | 340 | | 66 | 40-140 | 9 | 25 | |
| C19-C36 Aliphatics | 240 | | 100 | ug/L | 320 | | 75 | 40-140 | 13 | 25 | |
| C9-C18 Aliphatics | 130 | | 100 | ug/L | 240 | | 56 | 40-140 | 10 | 25 | |
| *Surrogate: Chloro-octadecane* | *15* | | | *ug/L* | *20.0* | | *75* | *40-140* | | | |
| *Surrogate: o-Terphenyl* | *14* | | | *ug/L* | *20.0* | | *70* | *40-140* | | | |

### Metals by EPA 6000/7000 Series Methods - Quality Control

*Batch 2L13015 - EPA 3050B*

**Blank (2L13015-BLK1)** Prepared: 12/13/2012 09:36 Analyzed: 12/14/2012 12:41

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | U | 0.500 | mg/kg wet | | | | | | | |
| Lead | 0.120 | U | 0.500 | mg/kg wet | | | | | | | |

**LCS (2L13015-BS1)** Prepared: 12/13/2012 09:36 Analyzed: 12/14/2012 12:48

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.44 | | 0.500 | mg/kg wet | 9.90 | | 95 | 80-120 | | | |
| Lead | 9.73 | | 0.500 | mg/kg wet | 9.90 | | 98 | 80-120 | | | |

## QUALITY CONTROL

### Metals by EPA 6000/7000 Series Methods - Quality Control

*Batch 2L13015 - EPA 3050B*

**Matrix Spike (2L13015-MS1)** Prepared: 12/13/2012 09:36 Analyzed: 12/14/2012 12:59

**Source: C214556-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 1030 | | 54.7 | mg/kg dry | 1090 | 28.5 | 92 | 75-125 | | | |
| Lead | 1060 | | 54.7 | mg/kg dry | 1090 | 13.1 U | 97 | 75-125 | | | |

**Matrix Spike Dup (2L13015-MSD1)** Prepared: 12/13/2012 09:36 Analyzed: 12/14/2012 13:01

**Source: C214556-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 994 | | 54.7 | mg/kg dry | 1100 | 28.5 | 87 | 75-125 | 4 | 20 | |
| Lead | 1050 | | 54.7 | mg/kg dry | 1100 | 13.1 U | 95 | 75-125 | 0.7 | 20 | |

**Post Spike (2L13015-PS1)** Prepared: 12/13/2012 09:36 Analyzed: 12/14/2012 13:03

**Source: C214556-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.202 | | 0.0100 | mg/L | 0.200 | 0.00536 | 98 | 80-120 | | | |
| Lead | 0.201 | | 0.0100 | mg/L | 0.200 | 0.00241 | 99 | 80-120 | | | |

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

*Batch 2L07006 - EPA 3005A*

**Blank (2L07006-BLK1)** Prepared: 12/07/2012 08:57 Analyzed: 12/10/2012 11:19

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.80 | U | 10.0 | ug/L | | | | | | | |
| Lead | 1.90 | U | 10.0 | ug/L | | | | | | | |

**LCS (2L07006-BS1)** Prepared: 12/07/2012 08:57 Analyzed: 12/10/2012 11:21

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 217 | | 10.0 | ug/L | 200 | | 108 | 80-120 | | | |
| Lead | 219 | | 10.0 | ug/L | 200 | | 110 | 80-120 | | | |

**Matrix Spike (2L07006-MS1)** Prepared: 12/07/2012 08:57 Analyzed: 12/10/2012 11:27

**Source: C211537-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 223 | | 10.0 | ug/L | 200 | 2.80 U | 112 | 75-125 | | | |
| Lead | 217 | | 10.0 | ug/L | 200 | 1.90 U | 108 | 75-125 | | | |

**Matrix Spike Dup (2L07006-MSD1)** Prepared: 12/07/2012 08:57 Analyzed: 12/10/2012 11:29

**Source: C211537-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 220 | | 10.0 | ug/L | 200 | 2.80 U | 110 | 75-125 | 2 | 20 | |

## QUALITY CONTROL

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

*Batch 2L07006 - EPA 3005A*

**Matrix Spike Dup (2L07006-MSD1) Continued** Prepared: 12/07/2012 08:57 Analyzed: 12/10/2012 11:29

**Source: C211537-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead | 211 | | 10.0 | ug/L | 200 | 1.90 U | 105 | 75-125 | 3 | 20 | |

**Post Spike (2L07006-PS1)** Prepared: 12/07/2012 08:57 Analyzed: 12/10/2012 11:32

**Source: C211537-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.223 | | 0.0100 | mg/L | 0.200 | -0.00206 | 112 | 80-120 | | | |
| Lead | 0.210 | | 0.0100 | mg/L | 0.200 | 0.00126 | 104 | 80-120 | | | |

### Classical Chemistry Parameters - Quality Control

*Batch 2L06031 - NO PREP*

**Blank (2L06031-BLK1)** Prepared: 12/06/2012 11:14 Analyzed: 12/06/2012 11:26

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.0049 | U | 0.010 | mg/L | | | | | | | |

**LCS (2L06031-BS1)** Prepared: 12/06/2012 11:14 Analyzed: 12/06/2012 11:26

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.28 | | 0.010 | mg/L | 0.249 | | 114 | 80-120 | | | |

**Matrix Spike (2L06031-MS1)** Prepared: 12/06/2012 11:14 Analyzed: 12/06/2012 11:26

**Source: C214257-09**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.29 | | 0.010 | mg/L | 0.249 | 0.013 | 110 | 75-125 | | | |

**Matrix Spike Dup (2L06031-MSD1)** Prepared: 12/06/2012 11:14 Analyzed: 12/06/2012 11:26

**Source: C214257-09**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.30 | | 0.010 | mg/L | 0.249 | 0.013 | 116 | 75-125 | 5 | 20 | |

## QUALITY CONTROL

### Classical Chemistry Parameters - Quality Control

*Batch 2L10033 - NO PREP*

**Blank (2L10033-BLK1)** Prepared: 12/10/2012 19:00 Analyzed: 12/12/2012 21:40

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.15 | U | 1.0 | mg/kg wet | | | | | | | |

**LCS (2L10033-BS1)** Prepared: 12/10/2012 19:00 Analyzed: 12/12/2012 21:40

## QUALITY CONTROL

### Classical Chemistry Parameters - Quality Control

*Batch 2L10033 - NO PREP*

**LCS (2L10033-BS1) Continued** Prepared: 12/10/2012 19:00 Analyzed: 12/12/2012 21:40

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.8 | | 1.0 | mg/kg wet | 9.73 | | 90 | 84-124 | | | |

**Matrix Spike (2L10033-MS1)** Prepared: 12/10/2012 19:00 Analyzed: 12/12/2012 21:40

**Source: C214257-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.0 | | 1.1 | mg/kg dry | 10.9 | 0.17 U | 73 | 84-124 | | | QM-14 |

**Matrix Spike (2L10033-MS2)** Prepared: 12/10/2012 19:00 Analyzed: 12/12/2012 21:40

**Source: C214257-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 50 | | 5.5 | mg/kg dry | 55.2 | 0.83 U | 91 | 84-124 | | | |

**Matrix Spike Dup (2L10033-MSD1)** Prepared: 12/10/2012 19:00 Analyzed: 12/12/2012 21:40

**Source: C214257-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.0 | | 1.1 | mg/kg dry | 10.9 | 0.17 U | 74 | 84-124 | 0.1 | 11 | QM-14 |

**Matrix Spike Dup (2L10033-MSD2)** Prepared: 12/10/2012 19:00 Analyzed: 12/12/2012 21:40

**Source: C214257-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 52 | | 5.5 | mg/kg dry | 55.2 | 0.83 U | 93 | 84-124 | 2 | 11 | |

## 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. |
| QL-02 | The associated laboratory control sample exhibited high bias; since the result is ND, the impact on data quality is minimal. |
| 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-14 | Confirmed matrix effects |
| QS-03 | Surrogate recovery outside acceptance limits |
| QV-01 | The associated continuing calibration verification standard exhibited high bias; since the result is ND, the impact on data quality is minimal. |
| R-01 | The Reporting Limit for this analyte has been raised to account for matrix interference. |

# ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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

4810 Executive Park Court, Suite 211
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

1015 Passport Way
Cary, NC 27513
(919) 677-1669 Fax (919) 677-9846

Page 1 of 2

| | |
|---|---|
| Client Name: Bensinger + Garrison Environmental | Project Number: 213912 |
| Address: P.O. Box 14609 | Project Name/Desc: |
| City/ST/Zip: RTP, NC 27709 | PO # / Billing Info: |
| Tel: 919-484-8536 Fax: 919-484-8540 | Reporting Contact: Jack Garrison |
| Sampler(s) Name, Affiliation (Print): Wesley Brummer, BAG | Billing Contact: Jack Garrison |
| Sampler(s) Signature: Wesley Brummer | Facility # (if required): |

Requested Analyses

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

X Standard

___ Expedited

Due __/__/__

Lab Workorder: C214257

Preservation (See Codes) (Combine as necessary)

| Item # | Sample ID (Field Identification) | Collection Date | Collection Time | Comp / Grab | Matrix (see codes) | Total # of Containers | 8081 | 8260(b) | 8270(d) | Total Arsenic | Chromium Hexavalent | Lead | EPH | VPH | | | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SS-1 | 12-4-12 | 8:45 AM | Grab | SO | 9 | X | X | X | X | X | X | | | | | |
| | SS-2 | 12-3-12 | 4:00PM | ↓ | ↓ | 9 | X | X | X | X | X | X | | | | | |
| | SS-3 | 12-3-12 | 4:45PM | | | 9 | X | X | X | X | X | X | | | | | |
| | SS-4 | 12-3-12 | 2:15PM | | | 1 | X | | | | | | | | | | |
| | SS-5 | 12-4-12 | 11:15AM | | | 3 | X | | | X | X | | | | | | |
| | SS-6 | 12-4-12 | 9:30A | | | 3 | X | | | X | X | | | | | | |
| | SS-8-5 | 12-4-12 | 10:30A | ↓ | ↓ | 6 | | X | X | | | X | | | | | |
| | MW-8 | 12-5-12 | 2:30P | Grab | GW | 8 | X | X | X | | | X | X | X | | | |
| | PW-Old | 12-5-12 | 2:45P | Grab | GW | 7 | X | X | X | X | X | X | | | | | |
| | PW-New | 12-5-12 | 3:15P | Grab | GW | 7 | X | X | X | X | X | X | | | | | |
| | SS-10 | 12-4-12 | 4:30PM | Grab | SE | 8 | X | X | X | X | X | | | | | | Pond Sludge |
| | SS-11 | 12-4-12 | 5:00PM | Grab | SE | 8 | X | X | X | X | X | | | | | | Pond Sludge |
| | | | | | | 78 | <-- Total # of Containers | | | | | | | | | | |

| Sample Kit Prepared By | Date/Time | Relinquished By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|---|
| | | Wesley Brummer | 12 6 12 | [signature] | 12/6/12 1055 |
| Comments | | Relinquished By | Date/Time | Received By | Date/Time |
| | | Relinquished By | Date/Time | Received By | Date/Time |
| | | Cooler #'s & Temps on Receipt: 1.2°C 1.4°C | | Condition Upon Receipt: X Acceptable ___ Unacceptable | |

Matrix : GW-Groundwater SO-Soil 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

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# ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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

4810 Executive Park Court, Suite 211
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

1015 Passport Way
Cary, NC 27513
(919) 677-1669 Fax (919) 677-9346

Page 2 of 2

| | |
|---|---|
| Client Name: Bensinger Garrison Environmental | Project Number: 217912 |
| Address: P.O Box 14609 | Project Name/Desc: |
| City/ST/Zip: RTP, NC 27609 | PO # / Billing Info: |
| Tel: 919 484-8536 Fax: 919 484-8548 | Reporting Contact: Jack Garrison |
| Sampler(s) Name, Affiliation (Print): Weslee Brummer, BTG | Billing Contact: Jack Garrison |
| Sampler(s) Signature: Wesley E Brummer | Facility # (if required): |

Requested Analyses

Requested Turnaround Times

Note: Rush requests subject to acceptance by the facility

X Standard

___ Expedited

Due __/__/__

Lab Workorder: C214257

Preservation (See Codes) (Combine as necessary)

| Item # | Sample ID (Field Identification) | Collection Date | Collection Time | Comp / Grab | Matrix (see codes) | Total # of Containers | 8081 | 8260 (6) | 8270 (2) | Total Arsenic | Hexavalent Cr | Lead | | | | | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-13 | 12-5-12 | 4:00PM | 6 grab | GW | 7 | X | X | X | X | X | X | | | | | |
| | MW-14 | 12-5-12 | 1:45PM | 6 grab | GW | 7 | X | X | X | X | X | X | | | | | |
| | | | | | | 14 | <-- Total # of Containers | | | | | | | | | | |

| Sample Kit Prepared By | Date/Time | Relinquished By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|---|
| | | Wesley E Brummer | | M E Stamper | 12/6/12 1035 |
| Comments | | Relinquished By | Date/Time | Received By | Date/Time |
| | | Relinquished By | Date/Time | Received By | Date/Time |
| | | Cooler #'s & Temps on Receipt: 1.2°C 1.4°C | | Condition Upon Receipt: X Acceptable ___ Unacceptable | |

Matrix: GW-Groundwater SO-Soil 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

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# APPENDIX 5:

# STANDARD PROCEDURES

## STANDARD PROCEDURES

1. Soil Sampling

   A. Sampling equipment for soil (split spoon samples, stainless steel hand auger, etc.) is decontaminated and wrapped in aluminum foil for transport prior to and after each use by washing with phosphate–free soapy water followed by a distilled water rinse, then an isopropyl alcohol rinse, followed by a triple rinse using distilled water.

   B. Soil samples are collected in laboratory–provided containers. Samples are stored and transported on ice according to EPA SW–846 protocol to a USEPA Drinking Water Certified laboratory under chain–of–custody procedures. A new pair of disposable medical gloves is worn each time a sample is collected.

2. Sample Handling and Shipping

   A. Immediately after sample collection, sampler will check the label for completeness. Samples will be placed into a cooler containing bagged ice.

   B. Chain–of–custody form will be completed and kept with the samples at all times inside the cooler in a plastic bag.

   C. Custody shall be maintained by the sampler until the coolers are prepared for transport and shipped.

   D. Glass sample bottles will be wrapped in bubble wrap packaging to eliminate the possibility of breakage. All sample containers will be placed upright in the cooler. Packaging materials of bubble wrap or Styrofoam peanuts will be used.

   E. Cooler will be taped shut and drain plug will be securely taped.

   F. Samples will be shipped or delivered to the laboratory within the specified holding time.

   G. Labs should be notified of the expected arrival. They will need to know: how many samples, analysis required, and expected arrival time.

## WATER LEVELS

1. Take cap off well, allow well to vent.

2. Test the indicator by placing the bottom in water. The light should come on. Replace the battery if necessary. Attach water level indicator to surveyor's tape.

3. Unreel the tape slowly down the well and watch for the light to indicate the probe is in the water.

4. Pull the tape up about 2 inches.

5. Lower the tape down the well a tenth at a time until you see the light. Mark the point with a marker, clip, or finger.

6. The depth to water is the length indicated on the tape plus 12 inches.

7. Record the depth to water in the field notes.

8. Record the inside diameter of well in field notes.

9. Decontaminate probe and tape.

# PURGING WELLS

Items Needed to Purge:

| | |
|---|---|
| Bucket, known volume | Depth to well bottom measurement |
| Disposable Gloves | Field Notes |
| Water Levels | |

1. Determining Amount of Water to Remove from Well

   A. Subtract water level from depth to bottom.

   B. Multiply the number from Step A. by 0.163 for a 2 inch I.D. well.

   C. Multiply the number from Step B by 3. This number is equal to 3 well volumes in gallons, the minimum needed to properly purge the well. For instance, if the well is a 2 inch I.D. well that is 30 feet deep, and the depth to water is 20 feet, the number of gallons needed to purge the well is:

      A. (30–20) = 10
      B. 10 x .163 = 1.63
      C. 3 x 1.63 = 4.89 gallons

2. Bailing Method (using dedicated or disposable bailer)

   A. Place bucket near well.

   B. Wear Disposable Gloves.

      1. Change and discard between wells.

   C. Lower bailer down well, pull up, pour into bucket.

   D. Remove required volume and note time after each well volume.

   E. After each well volume is removed, measurements of pH, temperature, and specific conductance will be taken. If after 3 well volumes these measurements are not stable ( $\pm$ 10%) purging will continue. Consecutive stable measurement must be recorded before purging will be considered complete. These values, times, and corresponding volumes will be recorded.

   F. Record the volume removed and method used in field notes.

   G. It is important to make note of the color, odor, and amount of sediment, if any in the water, in the field notes.

# SAMPLING OF WELLS

Items Needed to Sample:

| | |
|---|---|
| Sample Bottles | Disposable Gloves |
| pH Meter | Conductivity Meter |
| Thermometer | Field Notes |

1. Take conductivity measurement.

   A. Standardize meter according to manufacturer's instructions.
   B. Lower probe into the water that is collected in a beaker.
   C. Take 2 conductivity readings (or until stable), record in field notes.
   D. Rinse probe with distilled water.

2. Take pH temperature measurements.

   A. Standardize meter according to manufacturer's instructions.
   B. Lower probe into the water that is collected in a beaker.
   C. Record temperature reading from display in field book.
   D. Take 2 pH readings (or until stable).
   E. Rinse probe with distilled water.

3. Label sample bottles with sample ID, date/time, project #, collector, and preservative used.

4. Wear disposable gloves.
   Change and discard between samples.

5. Lower bailer down well.

6. Discard the first bailer of water.

7. Pour water directly from bailer into sample bottles that do not require filtering.

8. Continue bailing until adequate water volume has been collected.

## SAMPLE HANDLING AND SHIPPING

1. Immediately after sample collection, sampler will check the label for completeness. Samples will be placed into a cooler containing bagged ice.

2. Chain–of–custody form will be completed and kept with the samples at all times inside the cooler in a plastic bag.

3. Custody shall be maintained by the sampler until the coolers are prepared for transport and shipped.

4. Glass sample bottles will be wrapped in bubble wrap packaging to eliminate the possibility of breakage. All sample containers will be placed upright in the cooler. Packaging materials of bubble wrap or Styrofoam peanuts will be used.

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