DUNCKLEE
& DUNHAM

ENVIRONMENTAL GEOLOGISTS & ENGINEERS
511 KEISLER DRIVE – SUITE 102
CARY, NORTH CAROLINA 27518
OFFICE: (919) 858-9898
WWW.DUNCKLEEDUNHAM.COM

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NOV 07 2012
SUPERFUND SECTION

October 22, 2012

Mr. Grady Shields
Wyrick, Robbins, Yates & Ponton
4101 Lake Boone Trail, Suite 300
Raleigh, North Carolina 27607

Subject: **Letter Report of Soil Excavation and Well Abandonment**
**Wilmington Materials Plant #1**
**New Hanover County, North Carolina**

Dear Mr. Shields:

As authorized by your acceptance of our proposal dated September 17, 2012, Duncklee & Dunham, PC (Duncklee & Dunham) is pleased to submit this letter report that summarizes excavation of contaminated soil and abandonment of two water-supply wells at the above-referenced site. The objectives of our services were 1) to remove stained soil in the vicinity of the former waste-oil AST and in the vicinity of the fuel dispenser for the diesel-fuel AST, 2) to collect samples from the excavations and submit to a laboratory for analysis to verify that soil with analytes at concentrations that exceed the soil-to-groundwater Maximum Soil Contaminant Concentrations (MSCCs) has been removed, and 3) to abandon two, inactive, water-supply wells.

**Background Information**

The Wilmington Materials Plant #1 is located at 3612 North 421 Highway near Wilmington in New Hanover County, North Carolina (Figures 1 and 2). Wilmington Materials recycles concrete and asphalt, mines sand, grinds land clearing and inert debris (LCID) into mulch, recycles soil, and collects and recycles rebar. Sand mining at the site began in 1972. Potable water from the site is supplied by a water-supply well in a well house adjacent to the main office building.

Duncklee & Dunham conducted a Phase I Environmental Site Assessment (Phase I) at the subject site in May 2012. During our site visit, we observed stains on the side of an aboveground storage tank (AST) used to store waste oil, and fresh gravel beneath the stained end of the tank. The long history and use of petroleum products, including oils, lubricants, diesel fuel and mineral spirits, was an environmental concern. Subsequently, Duncklee & Dunham conducted a soil and groundwater assessment at the site. The laboratory results showed soil in the vicinity of the fillport end of the waste oil AST exhibited oil and grease at concentrations that exceed the action level, and one sample exhibited chromium at a concentration that exceeds the soil-to-groundwater MSCC. Groundwater samples from two temporary wells exhibited tetrachloroethene at concentrations that exceeded the North Carolina groundwater quality

standard. However, only one soil sample exhibited tetrachloroethene, and the groundwater sample from a temporary well constructed in that boring did not exhibit tetrachloroethene.

In June 2012, Duncklee & Dunham conducted additional soil and groundwater assessment at the subject site. The objectives of the additional assessment was to test soil in the vicinity of the maintenance/break buildings and canopy for the presence of chlorinated solvents, and test groundwater collected from permanent monitoring wells constructed adjacent to and east and south of the maintenance building. The laboratory detected tetrachloroethene in five soil samples but the concentrations did not exceed the soil-to-groundwater MSCC. Duncklee & Dunham constructed and sampled two permanent wells and one temporary well. Groundwater samples from the temporary well and downgradient permanent well did not exhibit tetrachloroethene or other volatile organic compounds (VOCs). Thus, these wells delineated the lateral extent of tetrachloroethene in groundwater to the east and south. The laboratory detected tetrachloroethene in the groundwater sample collected from MW-1 located at the maintenance building at a concentration that exceeded the groundwater quality standard.

We also observed an area of stained soil in the vicinity of the fuel pump to the diesel fuel AST near the maintenance building. The area of stained soil was larger than initially observed during our Phase I.

**Soil Excavation**

Duncklee & Dunham notified North Carolina One Call to locate underground utilities on the subject site and contracted a private utility locator to locate buried utilities in the proposed work areas prior to conducting the excavation activities. Duncklee & Dunham personnel mobilized to the site on September 24, 2012, to supervise soil excavations and collect post-excavation soil samples.

Excavation at the Waste-Oil AST

Prior to excavation activities, the waste-oil AST was removed from the site and transported by facility personnel to a scrap yard for disposal. Contaminant Control, Incorporated (CCI) of Fayetteville, North Carolina, under contract to Duncklee & Dunham, excavated stained soil at the former location of the waste-oil AST. This soil was removed with a track-mounted excavator, loaded onto a truck, and transported to ES & J Enterprises, Inc. (ES & J), a licensed soil-disposal facility in Autryville, North Carolina. CCI removed 23.12 tons of impacted soil from this excavation. The waste manifest and weight ticket for this soil are attached.

The final dimensions of the excavation after the soil removal were approximately 11.5 feet by 27.5 feet, with depths ranging from one foot to three-and-a-half feet below land surface (BLS), as shown on Figure 3. Duncklee & Dunham collected soil samples SS-17 through SS-19 from the undisturbed soil at the base of the excavation. The locations of these soil samples are shown on Figure 4. We placed the soil samples into laboratory-provided containers and placed the containers into a cooler with ice. We screened the soil samples for volatile organic compounds (VOCs) with a photo-ionization detector (PID) and logged the results during sample collection. Table 1 summarizes the results of our field screening.

Once we completed sample collection, CCI backfilled the excavation with a sandy soil supplied by Wilmington Materials, and compacted the soil to approximately one foot below land surface. Wilmington Materials also provided the gravel that CCI placed in the upper foot of the excavation and compacted the gravel to match the surrounding grade.

Excavation at the Diesel-Fuel Dispenser

Under the direction of Duncklee & Dunham, CCI excavated stained soil in the vicinity of the diesel-fuel AST and dispenser that are north of the waste-oil AST. The soil was removed with a track-mounted excavator, loaded onto a truck, and transported to ES & J. Duncklee & Dunham screened a grab sample (named "Disposal Soil Sample") of excavated soil with a PID for the presence of VOCs, placed a similar sample in laboratory-supplied containers to be analyzed for waste characterization, and placed the jars in a cooler with ice. CCI removed 24.08 tons of impacted soil from this excavation. The waste manifest and weight ticket for this soil are attached.

The excavation wrapped around the perimeter of a concrete pad in an "L" shape; final dimensions of the excavation were approximately 4.5 feet by 16.5 feet by 17 feet with a depth that ranged from two to three feet BLS (Figure 3). Duncklee & Dunham collected samples SS-20 through SS-22 from the undisturbed soil at the base of the excavation. The locations of these soil samples are shown on Figure 4. We placed the soil samples into laboratory-provided containers and placed the containers into a cooler with ice. We screened the soil samples for VOCs with a PID and logged the results during sample collection. Table 1 summarizes the results of our field screening.

Once sample-collection activities were complete, CCI backfilled the excavation with the same type of materials used to backfill the waste-oil excavation, and compacted the gravel to match the surrounding grade. Duncklee & Dunham delivered the cooler under chain of custody to Environmental Conservation Laboratories, Inc. (ENCO) in Cary, North Carolina.

Laboratory Analytical Results

ENCO tested the soil samples from the waste-oil excavation for oil and grease according to EPA Method 9071B with silica gel cleanup, VOCs according to EPA Method 8260B, and chromium and lead according to EPA Method 6010C. ENCO tested the soil samples collected from the diesel-dispenser excavation for VOCs according to EPA Method 8260B and base-neutral, semi-volatile organic compounds according to EPA Method 8270D.

Table 1 and Figure 4 summarize the laboratory analytical results for the soil samples. The laboratory analytical report is attached. ENCO detected oil and grease at concentrations that do not exceed the action level of 250 milligrams per kilogram (mg/kg) in all three samples collected from the waste-oil AST excavation. ENCO detected chromium and lead in all three of the soil samples collected from the waste-oil AST excavation at concentrations that do not exceed the soil-to-groundwater MSCC. ENCO detected methylene chloride in soil sample SS-20 at a concentration that does not exceed the soil-to-groundwater MSCC.

**Abandonment of Water-supply Wells**

Duncklee & Dunham supervised the abandonment of two, inactive, water-supply wells on the site. One supply well was located south of the maintenance building adjacent to the kiln and the second well was located west of the two-story office building (Figure 2). Mid-Atlantic Drilling (Mid-Atlantic) of Carolina Beach, North Carolina abandoned these wells in accordance with the well construction rules in North Carolina Administrative Code Title 15A Subchapter 2C Section .0113.

The water-supply well adjacent to the two-story office building was located in a well house constructed of cinder-block walls. Mid-Atlantic gained access to this well by removing the roof to the well house. The water-supply well near the kiln was buried approximately three to four feet below land surface. Mid-Atlantic gained access to this well by following the piping that led to the well and then removing the ground cover. Prior to abandonment of these wells, Mid-Atlantic removed the piping and screen to the pumps from the two-inch-diameter well casings. Mid-Atlantic measured the depth of each well as approximately 23.5 feet from the top of the well casing. They abandoned the wells by pouring bentonite pellets into the well casings from the base of the well to approximately one foot from the casing surface, and hydrating the pellets with water. Mid-Atlantic then filled the upper one foot of each casing with Portland cement grout. Mid-Atlantic covered the location of the supply well at the kiln once it had been abandoned. Mid-Atlantic sent the original well abandonment records to NCDENR. Copies of the well abandonment records are attached.

**Conclusions and Recommendations**

The waste oil AST was removed from the site and stained soil in the vicinity of the former waste oil AST and diesel-fuel dispenser has been removed from the property by excavation. Laboratory analytical results show targeted compounds are not present in the remaining soil at concentrations that exceed the respective soil-to-groundwater MSCCs. We do not have evidence to support the need for further assessment at either excavation.

Mid-Atlantic abandoned two water-supply wells in accordance with North Carolina well abandonment requirements.

Duncklee & Dunham recommends providing a copy of this report to the Wilmington Regional Office of NCDENR.

We appreciate the opportunity to provide our services to Wyrick Robbins. Please contact us if you have any questions.

Sincerely,

**Duncklee & Dunham, P.C.**

Jayson A. Kilcoyne
Project Environmental Scientist II

Richard A. Kolb, L.G.
Senior Geologist

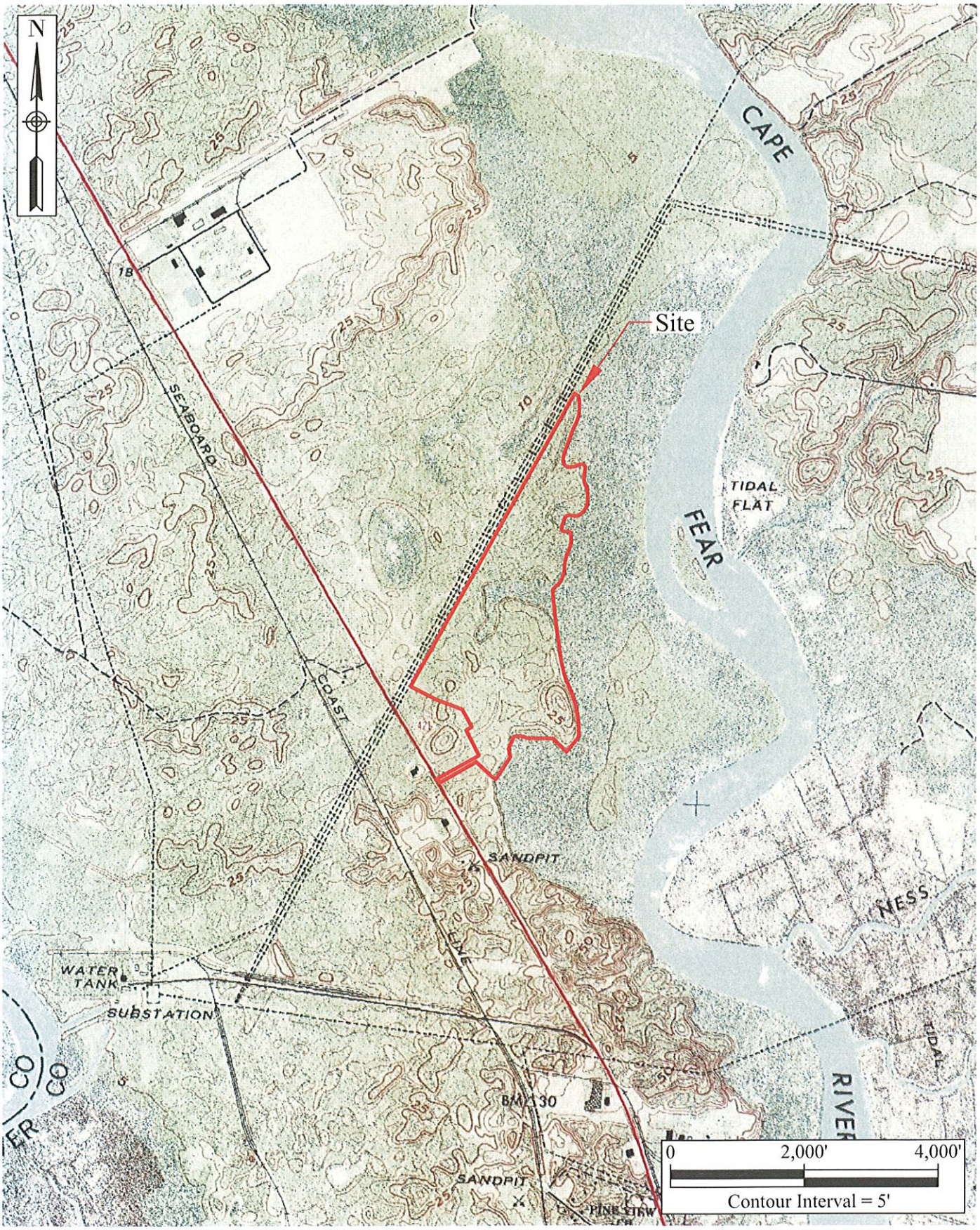
NORTH CAROLINA LICENSED SEAL 1153 GEOLOGIST RICHARD ALAN KOLB

*Senior Peer Review:*

David L. Duncklee, P.G., R.S.M.
Senior Hydrogeologist

Attachments: Figures 1 through 4
Table 1
Waste Manifests and Weight Tickets
Laboratory Analytical Report and Chain-of-Custody Record
Well Abandonment Records

P:\Wyrick Robbins\Wilmington Materials - 201237\Soil Excavation Report -12289.docx

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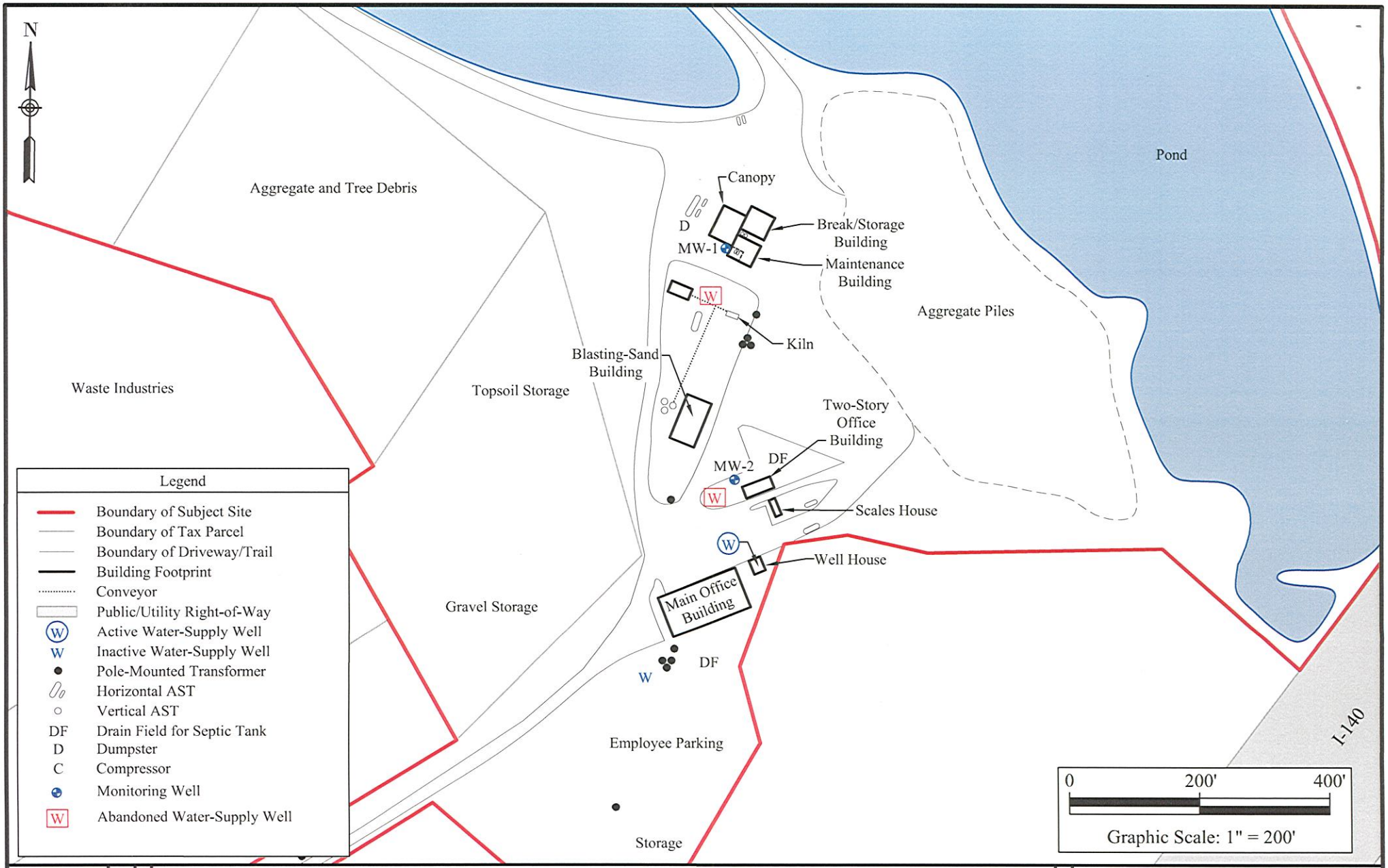
# Site Topographic Map

Wilmington Materials
New Hanover County, North Carolina

| Drawn By: | Checked By: | Project Number: | Date: | References: |
|---|---|---|---|---|
| wmf | JK | 201214 | March 2012 | MapCard: Castle Hayne, 1970 |
| **Scale:** | **Size:** | **Layers:** | **Filename:** | |
| 1" = 2,000' | 8.5" x 11" | 0,1,21 | P:\Wyrick Robbins\Wilmington Materials - 201214\CAD\Figure 1 | |

Figure

1




2

Figure

# Site Map with Abandoned Supply Well Locations

Wilmington Materials
New Hanover County, North Carolina

| Drawn By: | Checked By: | Project Number: | Date: | Reference: |
|---|---|---|---|---|
| wmf/jak/baj | JK | 201237 | October 2012 | New Hanover County GIS, Google Earth Aerial Photograph Dated 10/22/10, and Field Notes |
| Scale: | Size: | Layers: | Filename: | |
| 1" = 200' | 8.5" x 11" | 0,1,21,25,33,34 | P:\Wyrick Robbins\Wilmington Materials - 201214\CAD\Site Maps\200 Scale Site Map | |

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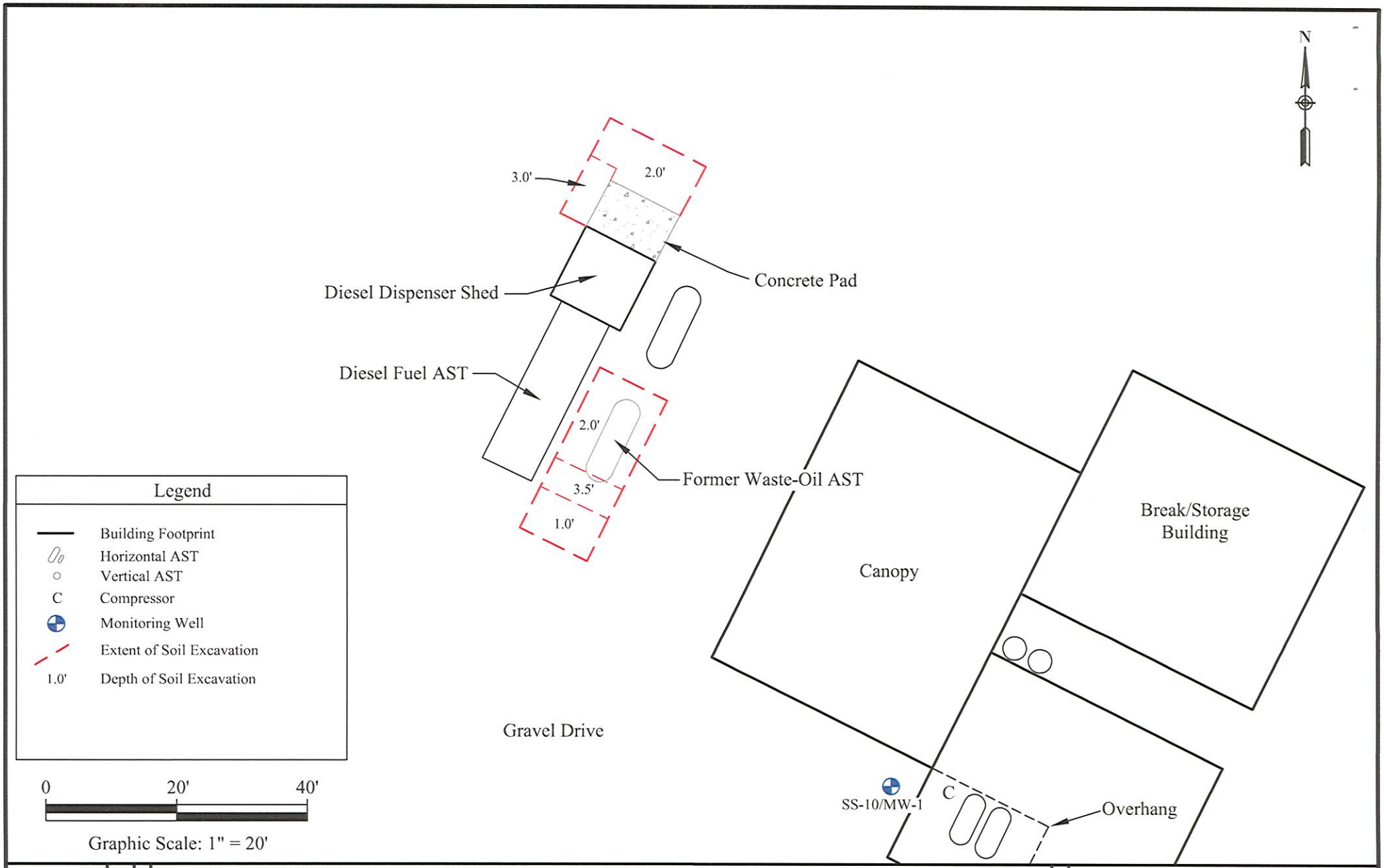


3

Figure

# Location of Soil Excavations

Wilmington Materials
New Hanover County, North Carolina

| Drawn By: | Checked By: | Project Number: | Date: | Reference: |
|---|---|---|---|---|
| wmf/jak | JK | 201237 | October 2012 | New Hanover County GIS, Google Earth Aerial Photograph Dated 10/22/10, and Field Notes |
| Scale: 1" = 20' | Size: 8.5" x 11" | Layers: 0,1,2,3,21,34,35,36 | Filename: P:\Wyrick Robbins\Wilmington Materials - 201214\CAD\Fig 3 - Ph II_soil excavations\soil excavations | |

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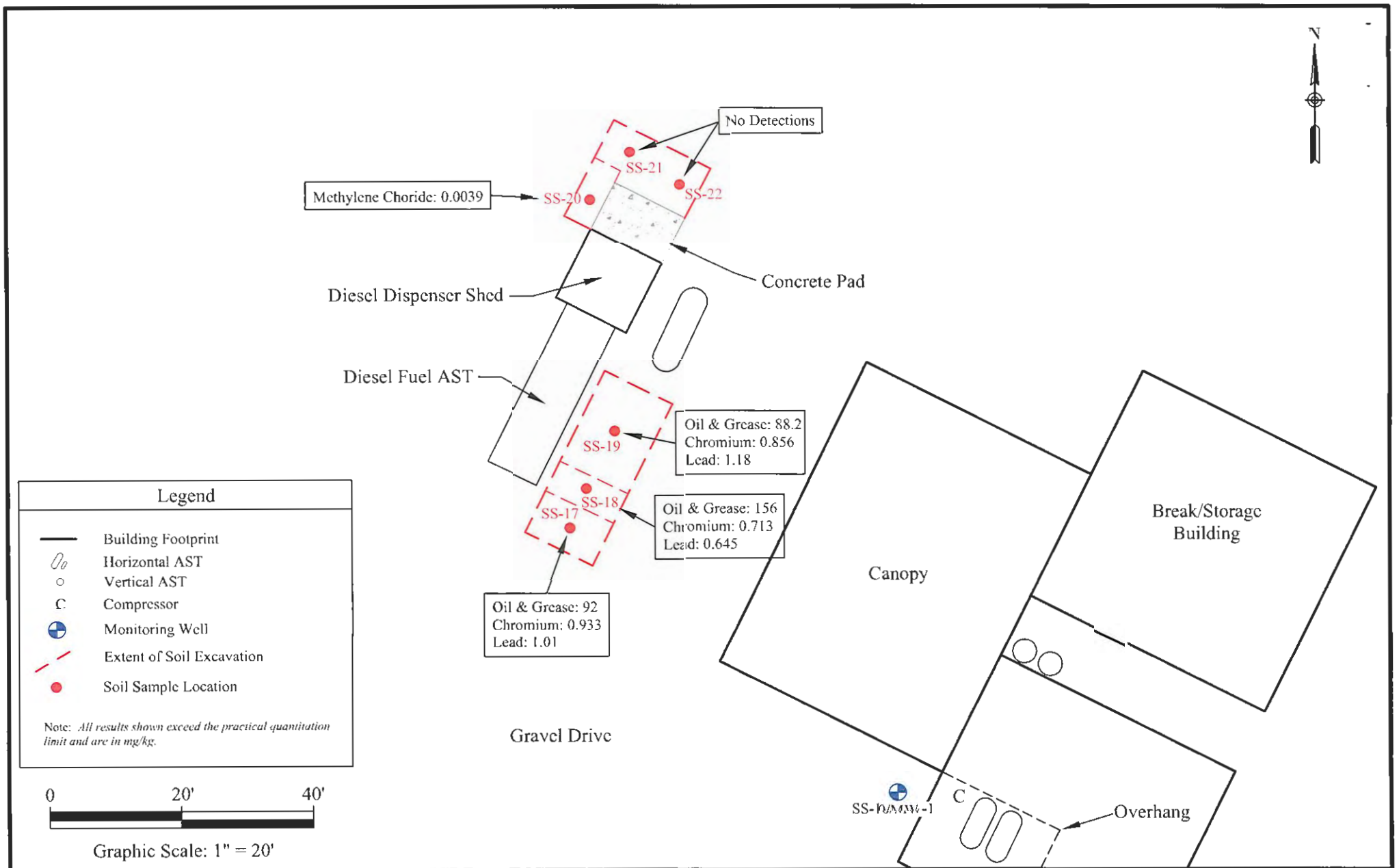


4

Figure

# Soil Sample Locations and Analytical Results

Wilmington Materials
New Hanover County, North Carolina

| Drawn By: | Checked By: | Project Number: | Date: | Reference: |
|---|---|---|---|---|
| wmf/jak | SK | 201237 | October 2012 | New Hanover County GIS, Google Earth Aerial Photograph Dated 10/22/10, Field Notes, Laboratory Test Results |
| Scale: | Size: | Layers: | Filename: | |
| 1" = 20' | 8.5" x 11" | 0,1,2,21,34,35 | P:\Wyrick Robbins\Wilmington Materials - 201214\CAD\Fig 3 - Ph II_soil excavations\soil excavations | |


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**Table 1**
**Laboratory Test Results - Soil Samples**
**Wilmington Materials**
**New Hanover County, North Carolina**

| Analyte | Waste Oil AST Excavation | | | Diesel Fuel Dispenser Excavation | | | Action Level | Soil-to-Groundwater MSCC |
|---|---|---|---|---|---|---|---|---|
| | Sample Identification | | | | | | | |
| | SS-17 | SS-18 | SS-19 | SS-20 | SS-21 | SS-22 | | |
| | Sample Collection Date | | | | | | | |
| | 9/24/2012 | 9/24/2012 | 9/24/2012 | 9/24/2012 | 9/24/2012 | 9/24/2012 | | |
| | Sample Depth (Ft. BLS) | | | | | | | |
| | 1.0 | 3.5 | 2.0 | 3.0 | 2.0 | 2.0 | | |
| | PID Reading (ppm) | | | | | | | |
| | 6.80 | 7.56 | 8.50 | 8.16 | 10.22 | 10.56 | | |
| ***Volatile Organic Compounds - EPA 8260B*** | | | | | | | | |
| Methylene Chloride | <0.00076 | <0.00075 | <0.00085 | **0.0039** | <0.00089 | <0.00087 | NE | 0.02 |
| ***Oil and Grease - EPA 9071B*** | | | | | | | | |
| Oil & Grease | **92.7** | **156** | **88.2** | NT | NT | NT | 250 | NE |
| ***Metals - EPA 6010C*** | | | | | | | | |
| Chromium | **0.933** | **0.713** | **0.856** | NT | NT | NT | NE | 5.4 |
| Lead | **1.01** | **0.645** | **1.18** | NT | NT | NT | NE | 270 |

Notes:
*All results in mg/kg*
*MSCC - Maximum Soil Contaminant Concentration*
*AST - above-ground storage tank*
*ppm - parts per million*
*Ft. BLS - Feet Below Land Surface*
*Result in **bold** exceeds the practical quantitation limit*
*Result in bold and shaded exceeds the Action Level or Soil-to-Groundwater MSCC*
*NT - Sample not tested for this analyte*
*NE - Not Established*
*< # - analyte not detected at a concentration that exceeds the detection level shown*

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number
2. Page 1 of 1
3. Emergency Response Phone
4. Waste Tracking Number

**GENERATOR**

5. Generator's Name and Mailing Address
WILMINGTON MATERIALS
3612 HWY 421 N.
WILMINGTON, NC (910-763-4569)

Generator's Site Address (if different than mailing address): ~ SAME ~

Generator's Phone:

6. Transporter 1 Company Name: Mac Grading Mac 43 — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
E S & J ENTERPRISES, INC.
1555 HOLLAND RD. - AUTRYVILLE, NC 28318

U.S. EPA ID Number: SR0600035

Facility's Phone: (910) 567-6138

| | 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | |
|---|---|---|---|---|---|---|
| 1. | PETROLEUM CONTAMINATED SOIL | 01 | DT | 40,000 | LBS. | 46,248 |
| 2. | | | | | | 23.12 TONS |
| 3. | | | | | | |
| 4. | | | | | | |

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: X Jayson Kilcoyne — Agent for Waste Industries — Signature: X — Month 9 Day 24 Year 12

**INTL**

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MAC GRADING HARVEY — Signature: Harvey — Month 9 Day 24 Year 12
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17c
Printed/Typed Name: RICK WMS — Signature: Rick Wms — Month 9 Day 24 Year 12

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number

5. Generator's Name and Mailing Address
Wilmington Material
3612 Hwy 421 N. Wilmington NC.

Generator's Site Address (if different than mailing address)
- Same -

Generator's Phone: 910 763 4569

6. Transporter 1 Company Name
U.S. EPA ID Number

7. Transporter 2 Company Name
MAC Grading (241)
U.S. EPA ID Number

8. Designated Facility Name and Site Address
E S & J ENTERPRISES, INC.
1555 HOLLAND RD. - AUTRYVILLE, NC 28318
U.S. EPA ID Number
SR0600035

Facility's Phone: (910) 567-6138

| 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt/Vol. | |
|---|---|---|---|---|---|
| 1. PETROLEUM CONTAMINATED SOIL | 1 | TK. | 24 | LBS. | 48,160 |
| 2. | | | | | 24.08 Tons |
| 3. | | | | | |
| 4. | | | | | |

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Jayson Kilcoyne - Agent for Waste Industries
Signature:
Month 9 Day 24 Year 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Greg Kardoroch
Signature:
Month 9 Day 24 Year 12

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Rick Wms
Signature:
Month 9 Day 24 Year 12

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

NORTH CAROLINA
PUBLIC WEIGHMASTER
LICENSE EXPIRES JUNE 30, 2013
RICKY L. WILLIAMS 27363
INVALID UNLESS SIGNED

24.08 Tons

ID 41
GROSS 80620 lb
TARE 32460 lb RECALLED
NET 48160 lb
03:22PM 09/24/2012

KING PRECISION MEASUREMENT **J.A. KING** & COMPANY, LLC. ISO 17025 ACCREDITED

MEASUREMENT PROFESSIONALS SINCE 1939

6541-C Franz Warner Parkway • Whitsett, NC 27377
Ph: (336) 292-0511 • Fax: (336) 294-9664

NORTH CAROLINA
PUBLIC WEIGHMASTER
LICENSE EXPIRES JUNE 30, 2013
RICKY L. WILLIAMS 27363
INVALID UNLESS SIGNED

23.12 Tons

ID 43
GROSS 80280 lb
TARE 34040 lb RECALLED
NET 46240 lb
03:24PM 09/24/2012

KING PRECISION MEASUREMENT **J.A. KING** & COMPANY, LLC. ISO 17025 ACCREDITED

MEASUREMENT PROFESSIONALS SINCE 1939

6541-C Franz Warner Parkway • Whitsett, NC 27377
Ph: (336) 292-0511 • Fax: (336) 294-9664

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

Tuesday, October 9, 2012

Duncklee & Dunham, PC (DU009)

Attn: Jayson A. Kilcoyne

511 Keisler Drive, Suite 102

Cary, NC 27518

**RE: Laboratory Results for**
**Project Number: 201234, Project Name/Desc: Wilmington Materials**
**ENCO Workorder(s): C211362**

Dear Jayson A. Kilcoyne,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, September 25, 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 47.

www.encolabs.com

## SAMPLE SUMMARY/LABORATORY CHRONICLE

**Client ID: Disposal Sample** | **Lab ID: C211362-01** | **Sampled: 09/24/12 13:05** | **Received: 09/25/12 11:00**

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 8260B | 10/08/12 | | 10/03/12 | 06:58 | 10/8/2012 15:51 |
| EPA 8270D | 10/08/12 | 11/07/12 | 09/28/12 | 09:29 | 10/4/2012 23:07 |

**Client ID: SS-17 1'** | **Lab ID: C211362-02** | **Sampled: 09/24/12 14:20** | **Received: 09/25/12 11:00**

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 03/23/13 | | 09/26/12 | 14:01 | 9/27/2012 13:51 |
| EPA 8260B | 10/08/12 | | 09/28/12 | 09:37 | 9/28/2012 14:49 |
| EPA 9071B | 10/22/12 | | 09/28/12 | 08:20 | 10/1/2012 15:19 |

**Client ID: SS-18 3.5'** | **Lab ID: C211362-03** | **Sampled: 09/24/12 14:25** | **Received: 09/25/12 11:00**

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 03/23/13 | | 09/26/12 | 14:01 | 9/27/2012 13:53 |
| EPA 8260B | 10/08/12 | | 09/28/12 | 09:37 | 9/28/2012 15:18 |
| EPA 9071B | 10/22/12 | | 09/28/12 | 08:20 | 10/1/2012 15:19 |

**Client ID: SS-19 2'** | **Lab ID: C211362-04** | **Sampled: 09/24/12 14:28** | **Received: 09/25/12 11:00**

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 6010C | 03/23/13 | | 09/26/12 | 14:01 | 9/27/2012 13:55 |
| EPA 8260B | 10/08/12 | | 09/28/12 | 09:37 | 9/28/2012 15:48 |
| EPA 9071B | 10/22/12 | | 09/28/12 | 08:20 | 10/1/2012 15:19 |

**Client ID: SS-20 3'** | **Lab ID: C211362-05** | **Sampled: 09/24/12 14:58** | **Received: 09/25/12 11:00**

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 8260B | 10/08/12 | | 09/28/12 | 09:37 | 9/28/2012 16:18 |
| EPA 8270D | 10/08/12 | 11/07/12 | 09/28/12 | 09:29 | 10/3/2012 17:14 |

**Client ID: SS-21 2'** | **Lab ID: C211362-06** | **Sampled: 09/24/12 15:02** | **Received: 09/25/12 11:00**

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 8260B | 10/08/12 | | 09/28/12 | 09:37 | 9/28/2012 16:47 |
| EPA 8270D | 10/08/12 | 11/07/12 | 09/28/12 | 09:29 | 10/4/2012 22:10 |

**Client ID: SS-22 2'** | **Lab ID: C211362-07** | **Sampled: 09/24/12 15:05** | **Received: 09/25/12 11:00**

| Parameter | Hold Date/Time(s) | | Prep Date/Time(s) | | Analysis Date/Time(s) |
|---|---|---|---|---|---|
| EPA 8260B | 10/08/12 | | 09/28/12 | 09:37 | 9/28/2012 17:17 |
| EPA 8270D | 10/08/12 | 11/07/12 | 09/28/12 | 09:29 | 10/4/2012 22:39 |

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| Client ID: Trip Blank | Lab ID: C211362-08 | Sampled: 09/24/12 13:05 | Received: 09/25/12 11:00 |
|---|---|---|---|

| Parameter | Hold Date/Time(s) | Prep Date/Time(s) | Analysis Date/Time(s) |
|---|---|---|---|
| EPA 8260B | 10/08/12 | 09/25/12 07:45 | 9/27/2012 06:09 |

## SAMPLE DETECTION SUMMARY

**Client ID: Disposal Sample** — **Lab ID: C211362-01**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | 1.7 | D | 0.13 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| 1,2,4-Trimethylbenzene | 3.1 | D | 0.081 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| 1,3,5-Trimethylbenzene | 1.6 | D | 0.095 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| 4-Isopropyltoluene | 0.50 | D | 0.076 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| Bis(2-Ethylhexyl)phthalate | 1.2 | JD | 0.78 | 7.3 | mg/kg dry | EPA 8270D | R-05 |
| Ethylbenzene | 0.37 | JD | 0.095 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| m,p-Xylenes | 1.6 | D | 0.18 | 0.95 | mg/kg dry | EPA 8260B | R-05 |
| Naphthalene | 1.9 | D | 0.13 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| n-Butyl Benzene | 1.2 | D | 0.062 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| n-Propyl Benzene | 0.53 | D | 0.085 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| o-Xylene | 0.93 | D | 0.10 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| Pyrene | 0.86 | JD | 0.84 | 7.3 | mg/kg dry | EPA 8270D | R-05 |
| sec-Butylbenzene | 0.46 | JD | 0.45 | 0.47 | mg/kg dry | EPA 8260B | R-05 |
| Xylenes (Total) | 2.5 | D | 0.27 | 1.4 | mg/kg dry | EPA 8260B | R-05 |

**Client ID: SS-17 1'** — **Lab ID: C211362-02**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| Chromium - Total | 0.933 | | 0.103 | 0.517 | mg/kg dry | EPA 6010C | |
| Lead - Total | 1.01 | | 0.124 | 0.517 | mg/kg dry | EPA 6010C | |
| Oil & Grease (HEM-SGT) Non-Polar Material | 92.7 | | 51.7 | 51.7 | mg/kg dry | EPA 9071B | |

**Client ID: SS-18 3.5'** — **Lab ID: C211362-03**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| Chromium - Total | 0.713 | | 0.103 | 0.516 | mg/kg dry | EPA 6010C | |
| Lead - Total | 0.645 | | 0.124 | 0.516 | mg/kg dry | EPA 6010C | |
| Oil & Grease (HEM-SGT) Non-Polar Material | 156 | | 51.6 | 51.6 | mg/kg dry | EPA 9071B | |

**Client ID: SS-19 2'** — **Lab ID: C211362-04**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| Chromium - Total | 0.856 | | 0.105 | 0.524 | mg/kg dry | EPA 6010C | |
| Lead - Total | 1.18 | | 0.126 | 0.524 | mg/kg dry | EPA 6010C | |
| Oil & Grease (HEM-SGT) Non-Polar Material | 88.2 | | 52.4 | 52.4 | mg/kg dry | EPA 9071B | |

**Client ID: SS-20 3'** — **Lab ID: C211362-05**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 0.0039 | | 0.00088 | 0.0024 | mg/kg dry | EPA 8260B | |

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## ANALYTICAL RESULTS

**Description:** Disposal Sample
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-01
**Sampled:** 09/24/12 13:05
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 90.3

### 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] ^ | 0.076 | UD | mg/kg dry | 428 | 0.076 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | UD | mg/kg dry | 428 | 0.12 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.095 | UD | mg/kg dry | 428 | 0.095 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.12 | UD | mg/kg dry | 428 | 0.12 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,1-Dichloroethane [75-34-3] ^ | 0.12 | UD | mg/kg dry | 428 | 0.12 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,1-Dichloroethene [75-35-4] ^ | 0.14 | UD | mg/kg dry | 428 | 0.14 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,1-Dichloropropene [563-58-6] ^ | 0.076 | UD | mg/kg dry | 428 | 0.076 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **1,2,3-Trichlorobenzene [87-61-6] ^** | **1.7** | D | mg/kg dry | 428 | 0.13 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.30 | UD | mg/kg dry | 428 | 0.30 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.13 | UD | mg/kg dry | 428 | 0.13 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **1,2,4-Trimethylbenzene [95-63-6] ^** | **3.1** | D | mg/kg dry | 428 | 0.081 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.37 | UD | mg/kg dry | 428 | 0.37 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,2-Dibromoethane [106-93-4] ^ | 0.22 | UD | mg/kg dry | 428 | 0.22 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.13 | UD | mg/kg dry | 428 | 0.13 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,2-Dichloroethane [107-06-2] ^ | 0.19 | UD | mg/kg dry | 428 | 0.19 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,2-Dichloropropane [78-87-5] ^ | 0.12 | UD | mg/kg dry | 428 | 0.12 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **1,3,5-Trimethylbenzene [108-67-8] ^** | **1.6** | D | mg/kg dry | 428 | 0.095 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.10 | UD | mg/kg dry | 428 | 0.10 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,3-Dichloropropane [142-28-9] ^ | 0.14 | UD | mg/kg dry | 428 | 0.14 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.095 | UD | mg/kg dry | 428 | 0.095 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 2,2-Dichloropropane [594-20-7] ^ | 0.11 | UD | mg/kg dry | 428 | 0.11 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 2-Butanone [78-93-3] ^ | 0.37 | UD | mg/kg dry | 428 | 0.37 | 2.4 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.076 | UD | mg/kg dry | 428 | 0.076 | 2.4 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 2-Chlorotoluene [95-49-8] ^ | 0.085 | UD | mg/kg dry | 428 | 0.085 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 2-Hexanone [591-78-6] ^ | 0.36 | UD | mg/kg dry | 428 | 0.36 | 2.4 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 4-Chlorotoluene [106-43-4] ^ | 0.12 | UD | mg/kg dry | 428 | 0.12 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **4-Isopropyltoluene [99-87-6] ^** | **0.50** | D | mg/kg dry | 428 | 0.076 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.27 | UD | mg/kg dry | 428 | 0.27 | 2.4 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Acetone [67-64-1] ^ | 0.66 | UD | mg/kg dry | 428 | 0.66 | 2.4 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Benzene [71-43-2] ^ | 0.081 | UD | mg/kg dry | 428 | 0.081 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Bromobenzene [108-86-1] ^ | 0.10 | UD | mg/kg dry | 428 | 0.10 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Bromochloromethane [74-97-5] ^ | 0.19 | UD | mg/kg dry | 428 | 0.19 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Bromodichloromethane [75-27-4] ^ | 0.11 | UD | mg/kg dry | 428 | 0.11 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Bromoform [75-25-2] ^ | 0.21 | UD | mg/kg dry | 428 | 0.21 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Bromomethane [74-83-9] ^ | 0.15 | UD | mg/kg dry | 428 | 0.15 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Carbon disulfide [75-15-0] ^ | 0.18 | UD | mg/kg dry | 428 | 0.18 | 2.4 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Carbon Tetrachloride [56-23-5] ^ | 0.10 | UD | mg/kg dry | 428 | 0.10 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Chlorobenzene [108-90-7] ^ | 0.081 | UD | mg/kg dry | 428 | 0.081 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Chloroethane [75-00-3] ^ | 0.12 | UD | mg/kg dry | 428 | 0.12 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Chloroform [67-66-3] ^ | 0.085 | UD | mg/kg dry | 428 | 0.085 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Chloromethane [74-87-3] ^ | 0.10 | UD | mg/kg dry | 428 | 0.10 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.11 | UD | mg/kg dry | 428 | 0.11 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.081 | UD | mg/kg dry | 428 | 0.081 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Dibromochloromethane [124-48-1] ^ | 0.17 | UD | mg/kg dry | 428 | 0.17 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Dibromomethane [74-95-3] ^ | 0.16 | UD | mg/kg dry | 428 | 0.16 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Dichlorodifluoromethane [75-71-8] ^ | 0.21 | UD | mg/kg dry | 428 | 0.21 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **Ethylbenzene [100-41-4] ^** | **0.37** | JD | mg/kg dry | 428 | 0.095 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Hexachlorobutadiene [87-68-3] ^ | 0.17 | UD | mg/kg dry | 428 | 0.17 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |

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**Description:** Disposal Sample
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-01
**Sampled:** 09/24/12 13:05
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 90.3

## 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] ^ | 0.071 | UD | mg/kg dry | 428 | 0.071 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **m,p-Xylenes [108-38-3/106-42-3] ^** | **1.6** | D | mg/kg dry | 428 | 0.18 | 0.95 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Methylene Chloride [75-09-2] ^ | 0.35 | UD | mg/kg dry | 428 | 0.35 | 0.95 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Methyl-tert-Butyl Ether [1634-04-4] ^ | 0.14 | UD | mg/kg dry | 428 | 0.14 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **Naphthalene [91-20-3] ^** | **1.9** | D | mg/kg dry | 428 | 0.13 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **n-Butyl Benzene [104-51-8] ^** | **1.2** | D | mg/kg dry | 428 | 0.062 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **n-Propyl Benzene [103-65-1] ^** | **0.53** | D | mg/kg dry | 428 | 0.085 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **o-Xylene [95-47-6] ^** | **0.93** | D | mg/kg dry | 428 | 0.10 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **sec-Butylbenzene [135-98-8] ^** | **0.46** | JD | mg/kg dry | 428 | 0.45 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Styrene [100-42-5] ^ | 0.46 | UD | mg/kg dry | 428 | 0.46 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| tert-Butylbenzene [98-06-6] ^ | 0.081 | UD | mg/kg dry | 428 | 0.081 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Tetrachloroethene [127-18-4] ^ | 0.13 | UD | mg/kg dry | 428 | 0.13 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Toluene [108-88-3] ^ | 0.11 | UD | mg/kg dry | 428 | 0.11 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.18 | UD | mg/kg dry | 428 | 0.18 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.18 | UD | mg/kg dry | 428 | 0.18 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Trichloroethene [79-01-6] ^ | 0.15 | UD | mg/kg dry | 428 | 0.15 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Trichlorofluoromethane [75-69-4] ^ | 0.12 | UD | mg/kg dry | 428 | 0.12 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| Vinyl chloride [75-01-4] ^ | 0.11 | UD | mg/kg dry | 428 | 0.11 | 0.47 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |
| **Xylenes (Total) [1330-20-7] ^** | **2.5** | D | mg/kg dry | 428 | 0.27 | 1.4 | 2J03002 | EPA 8260B | 10/08/12 15:51 | JKG | R-05 |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *57* | *1* | *50.0* | *114 %* | *61-118* | *2J03002* | *EPA 8260B* | *10/08/12 15:51* | *JKG* | *R-05* |
| *Dibromofluoromethane* | *54* | *1* | *50.0* | *108 %* | *66-114* | *2J03002* | *EPA 8260B* | *10/08/12 15:51* | *JKG* | *R-05* |
| *Toluene-d8* | *52* | *1* | *50.0* | *104 %* | *63-118* | *2J03002* | *EPA 8260B* | *10/08/12 15:51* | *JKG* | *R-05* |

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**Description:** Disposal Sample
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-01
**Sampled:** 09/24/12 13:05
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 90.3

## 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] ^ | 0.58 | UD | mg/kg dry | 20 | 0.58 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.51 | UD | mg/kg dry | 20 | 0.51 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.44 | UD | mg/kg dry | 20 | 0.44 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.47 | UD | mg/kg dry | 20 | 0.47 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 1-Methylnaphthalene [90-12-0] ^ | 0.60 | UD | mg/kg dry | 20 | 0.60 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.62 | UD | mg/kg dry | 20 | 0.62 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.69 | UD | mg/kg dry | 20 | 0.69 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 2-Chloronaphthalene [91-58-7] ^ | 0.62 | UD | mg/kg dry | 20 | 0.62 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 2-Methylnaphthalene [91-57-6] ^ | 0.62 | UD | mg/kg dry | 20 | 0.62 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 2-Nitroaniline [88-74-4] ^ | 0.66 | UD | mg/kg dry | 20 | 0.66 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 2.2 | UD | mg/kg dry | 20 | 2.2 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 3-Nitroaniline [99-09-2] ^ | 0.80 | UD | mg/kg dry | 20 | 0.80 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.60 | UD | mg/kg dry | 20 | 0.60 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 4-Chloroaniline [106-47-8] ^ | 2.1 | UD | mg/kg dry | 20 | 2.1 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.58 | UD | mg/kg dry | 20 | 0.58 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| 4-Nitroaniline [100-01-6] ^ | 1.2 | UD | mg/kg dry | 20 | 1.2 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Acenaphthene [83-32-9] ^ | 0.62 | UD | mg/kg dry | 20 | 0.62 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Acenaphthylene [208-96-8] ^ | 0.62 | UD | mg/kg dry | 20 | 0.62 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Anthracene [120-12-7] ^ | 0.84 | UD | mg/kg dry | 20 | 0.84 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Benzidine [92-87-5] ^ | 2.4 | UD | mg/kg dry | 20 | 2.4 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Benzo(a)anthracene [56-55-3] ^ | 0.62 | UD | mg/kg dry | 20 | 0.62 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Benzo(a)pyrene [50-32-8] ^ | 0.73 | UD | mg/kg dry | 20 | 0.73 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.40 | UD | mg/kg dry | 20 | 0.40 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Benzo(g,h,i)perylene [191-24-2] ^ | 1.0 | UD | mg/kg dry | 20 | 1.0 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | QV-01, R-05 |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.73 | UD | mg/kg dry | 20 | 0.73 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Benzyl alcohol [100-51-6] ^ | 0.51 | UD | mg/kg dry | 20 | 0.51 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| bis(2-Chloroethoxy)methane [111-91-1] ^ | 0.55 | UD | mg/kg dry | 20 | 0.55 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Bis(2-Chloroethyl)ether [111-44-4] ^ | 0.95 | UD | mg/kg dry | 20 | 0.95 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.53 | UD | mg/kg dry | 20 | 0.53 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| **Bis(2-Ethylhexyl)phthalate [117-81-7] ^** | **1.2** | JD | mg/kg dry | 20 | 0.78 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Butylbenzylphthalate [85-68-7] ^ | 0.89 | UD | mg/kg dry | 20 | 0.89 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Carbazole [86-74-8] ^ | 0.73 | UD | mg/kg dry | 20 | 0.73 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Chrysene [218-01-9] ^ | 0.66 | UD | mg/kg dry | 20 | 0.66 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 1.1 | UD | mg/kg dry | 20 | 1.1 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Dibenzofuran [132-64-9] ^ | 0.60 | UD | mg/kg dry | 20 | 0.60 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Diethylphthalate [84-66-2] ^ | 0.62 | UD | mg/kg dry | 20 | 0.62 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Dimethylphthalate [131-11-3] ^ | 0.73 | UD | mg/kg dry | 20 | 0.73 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Di-n-butylphthalate [84-74-2] ^ | 0.91 | UD | mg/kg dry | 20 | 0.91 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Di-n-octylphthalate [117-84-0] ^ | 0.73 | UD | mg/kg dry | 20 | 0.73 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Fluoranthene [206-44-0] ^ | 0.80 | UD | mg/kg dry | 20 | 0.80 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Fluorene [86-73-7] ^ | 0.64 | UD | mg/kg dry | 20 | 0.64 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Hexachlorobenzene [118-74-1] ^ | 0.58 | UD | mg/kg dry | 20 | 0.58 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Hexachlorobutadiene [87-68-3] ^ | 0.58 | UD | mg/kg dry | 20 | 0.58 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.86 | UD | mg/kg dry | 20 | 0.86 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Hexachloroethane [67-72-1] ^ | 0.47 | UD | mg/kg dry | 20 | 0.47 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 1.0 | UD | mg/kg dry | 20 | 1.0 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Isophorone [78-59-1] ^ | 0.66 | UD | mg/kg dry | 20 | 0.66 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Naphthalene [91-20-3] ^ | 0.62 | UD | mg/kg dry | 20 | 0.62 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Nitrobenzene [98-95-3] ^ | 0.58 | UD | mg/kg dry | 20 | 0.58 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.47 | UD | mg/kg dry | 20 | 0.47 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | Disposal Sample | **Lab Sample ID:** | C211362-01 | **Received:** | 09/25/12 11:00 |
| **Matrix:** | Soil | **Sampled:** | 09/24/12 13:05 | **Work Order:** | C211362 |
| **Project:** | Wilmington Materials | **Sampled By:** | Jayson Kilcoyne | **% Solids:** | 90.3 |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 1.8 | UD | mg/kg dry | 20 | 1.8 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 1.2 | UD | mg/kg dry | 20 | 1.2 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Phenanthrene [85-01-8] ^ | 0.60 | UD | mg/kg dry | 20 | 0.60 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| **Pyrene [129-00-0] ^** | **0.86** | JD | mg/kg dry | 20 | 0.84 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |
| Pyridine [110-86-1] ^ | 1.8 | UD | mg/kg dry | 20 | 1.8 | 7.3 | 2I28015 | EPA 8270D | 10/04/12 23:07 | DFM | R-05 |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *1.9* | *20* | *1.85* | *101 %* | *56-120* | *2I28015* | *EPA 8270D* | *10/04/12 23:07* | *DFM* | *R-05* |
| *Nitrobenzene-d5* | *2.3* | *20* | *1.85* | *122 %* | *50-117* | *2I28015* | *EPA 8270D* | *10/04/12 23:07* | *DFM* | *R-05* |
| *Terphenyl-d14* | *1.7* | *20* | *1.85* | *91 %* | *36-151* | *2I28015* | *EPA 8270D* | *10/04/12 23:07* | *DFM* | *R-05* |

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-17 1'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-02
**Sampled:** 09/24/12 14:20
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.7

## 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] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00066 | U | mg/kg dry | 1 | 0.00066 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00082 | U | mg/kg dry | 1 | 0.00082 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00048 | U | mg/kg dry | 1 | 0.00048 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00081 | U | mg/kg dry | 1 | 0.00081 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00078 | U | mg/kg dry | 1 | 0.00078 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00059 | U | mg/kg dry | 1 | 0.00059 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Acetone [67-64-1] ^ | 0.0014 | U | mg/kg dry | 1 | 0.0014 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Benzene [71-43-2] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Bromoform [75-25-2] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Chloroform [67-66-3] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.0021 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.00076 | U | mg/kg dry | 1 | 0.00076 | 0.0021 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |

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**Description:** SS-17 1'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-02
**Sampled:** 09/24/12 14:20
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.7

## 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] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.00098 | U | mg/kg dry | 1 | 0.00098 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Styrene [100-42-5] ^ | 0.0010 | U | mg/kg dry | 1 | 0.0010 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Toluene [108-88-3] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00058 | U | mg/kg dry | 1 | 0.00058 | 0.0031 | 2I28016 | EPA 8260B | 09/28/12 14:49 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *42* | *1* | *50.0* | *84 %* | *61-118* | *2I28016* | *EPA 8260B* | *09/28/12 14:49* | *JKG* | |
| *Dibromofluoromethane* | *43* | *1* | *50.0* | *85 %* | *66-114* | *2I28016* | *EPA 8260B* | *09/28/12 14:49* | *JKG* | |
| *Toluene-d8* | *43* | *1* | *50.0* | *86 %* | *63-118* | *2I28016* | *EPA 8260B* | *09/28/12 14:49* | *JKG* | |

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| | | |
|---|---|---|
| **Description:** SS-17 1' | **Lab Sample ID:** C211362-02 | **Received:** 09/25/12 11:00 |
| **Matrix:** Soil | **Sampled:** 09/24/12 14:20 | **Work Order:** C211362 |
| **Project:** Wilmington Materials | **Sampled By:** Jayson Kilcoyne | **% Solids:** 96.7 |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chromium [7440-47-3] ^** | **0.933** | | mg/kg dry | 1 | 0.103 | 0.517 | 2I25027 | EPA 6010C | 09/27/12 13:51 | JDH | |
| **Lead [7439-92-1] ^** | **1.01** | | mg/kg dry | 1 | 0.124 | 0.517 | 2I25027 | EPA 6010C | 09/27/12 13:51 | JDH | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-17 1' | **Lab Sample ID:** | C211362-02 | **Received:** | 09/25/12 11:00 |
| **Matrix:** | Soil | **Sampled:** | 09/24/12 14:20 | **Work Order:** | C211362 |
| **Project:** | Wilmington Materials | **Sampled By:** | Jayson Kilcoyne | **% Solids:** | 96.7 |

## Classical Chemistry Parameters

*^ - ENCO Jacksonville certified analyte [NC 442]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Oil & Grease (HEM-SGT) Non-Polar Material [ECL-0104] ^** | **92.7** | | mg/kg dry | 1 | 51.7 | 51.7 | 2I28002 | EPA 9071B | 10/01/12 15:19 | MJF | |

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-18 3.5'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-03
**Sampled:** 09/24/12 14:25
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.9

## 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] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00066 | U | mg/kg dry | 1 | 0.00066 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00082 | U | mg/kg dry | 1 | 0.00082 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00080 | U | mg/kg dry | 1 | 0.00080 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00077 | U | mg/kg dry | 1 | 0.00077 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00059 | U | mg/kg dry | 1 | 0.00059 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Acetone [67-64-1] ^ | 0.0014 | U | mg/kg dry | 1 | 0.0014 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Benzene [71-43-2] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Bromoform [75-25-2] ^ | 0.00046 | U | mg/kg dry | 1 | 0.00046 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0052 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Chloroform [67-66-3] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00046 | U | mg/kg dry | 1 | 0.00046 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00015 | U | mg/kg dry | 1 | 0.00015 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.0021 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.00075 | U | mg/kg dry | 1 | 0.00075 | 0.0021 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |

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**Description:** SS-18 3.5'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-03
**Sampled:** 09/24/12 14:25
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.9

## 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] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00013 | U | mg/kg dry | 1 | 0.00013 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.00098 | U | mg/kg dry | 1 | 0.00098 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Styrene [100-42-5] ^ | 0.0010 | U | mg/kg dry | 1 | 0.0010 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Toluene [108-88-3] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0010 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00058 | U | mg/kg dry | 1 | 0.00058 | 0.0031 | 2I28016 | EPA 8260B | 09/28/12 15:18 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *41* | *1* | *50.0* | *82 %* | *61-118* | *2I28016* | *EPA 8260B* | *09/28/12 15:18* | *JKG* | |
| *Dibromofluoromethane* | *43* | *1* | *50.0* | *87 %* | *66-114* | *2I28016* | *EPA 8260B* | *09/28/12 15:18* | *JKG* | |
| *Toluene-d8* | *43* | *1* | *50.0* | *86 %* | *63-118* | *2I28016* | *EPA 8260B* | *09/28/12 15:18* | *JKG* | |

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| | | |
|---|---|---|
| **Description:** SS-18 3.5' | **Lab Sample ID:** C211362-03 | **Received:** 09/25/12 11:00 |
| **Matrix:** Soil | **Sampled:** 09/24/12 14:25 | **Work Order:** C211362 |
| **Project:** Wilmington Materials | **Sampled By:** Jayson Kilcoyne | **% Solids:** 96.9 |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chromium [7440-47-3] ^** | **0.713** | | mg/kg dry | 1 | 0.103 | 0.516 | 2I25027 | EPA 6010C | 09/27/12 13:53 | JDH | |
| **Lead [7439-92-1] ^** | **0.645** | | mg/kg dry | 1 | 0.124 | 0.516 | 2I25027 | EPA 6010C | 09/27/12 13:53 | JDH | |

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| | | |
|---|---|---|
| **Description:** SS-18 3.5' | **Lab Sample ID:** C211362-03 | **Received:** 09/25/12 11:00 |
| **Matrix:** Soil | **Sampled:** 09/24/12 14:25 | **Work Order:** C211362 |
| **Project:** Wilmington Materials | **Sampled By:** Jayson Kilcoyne | **% Solids:** 96.9 |

## Classical Chemistry Parameters

*^ - ENCO Jacksonville certified analyte [NC 442]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Oil & Grease (HEM-SGT) Non-Polar Material [ECL-0104] ^** | **156** | | mg/kg dry | 1 | 51.6 | 51.6 | 2I28002 | EPA 9071B | 10/01/12 15:19 | MJF | |

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-19- 2'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-04
**Sampled:** 09/24/12 14:28
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 95.4

## 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] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00035 | U | mg/kg dry | 1 | 0.00035 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00075 | U | mg/kg dry | 1 | 0.00075 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00092 | U | mg/kg dry | 1 | 0.00092 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00054 | U | mg/kg dry | 1 | 0.00054 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00048 | U | mg/kg dry | 1 | 0.00048 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00091 | U | mg/kg dry | 1 | 0.00091 | 0.0058 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0058 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00087 | U | mg/kg dry | 1 | 0.00087 | 0.0058 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00066 | U | mg/kg dry | 1 | 0.00066 | 0.0058 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Acetone [67-64-1] ^ | 0.0016 | U | mg/kg dry | 1 | 0.0016 | 0.0058 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Benzene [71-43-2] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00048 | U | mg/kg dry | 1 | 0.00048 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Bromoform [75-25-2] ^ | 0.00052 | U | mg/kg dry | 1 | 0.00052 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0058 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Chloroform [67-66-3] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00041 | U | mg/kg dry | 1 | 0.00041 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00052 | U | mg/kg dry | 1 | 0.00052 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00023 | U | mg/kg dry | 1 | 0.00023 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00041 | U | mg/kg dry | 1 | 0.00041 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00017 | U | mg/kg dry | 1 | 0.00017 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00043 | U | mg/kg dry | 1 | 0.00043 | 0.0023 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.00085 | U | mg/kg dry | 1 | 0.00085 | 0.0023 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |

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**Description:** SS-19- 2'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-04
**Sampled:** 09/24/12 14:28
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 95.4

## 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] ^ | 0.00035 | U | mg/kg dry | 1 | 0.00035 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00015 | U | mg/kg dry | 1 | 0.00015 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Styrene [100-42-5] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Toluene [108-88-3] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00043 | U | mg/kg dry | 1 | 0.00043 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00065 | U | mg/kg dry | 1 | 0.00065 | 0.0035 | 2I28016 | EPA 8260B | 09/28/12 15:48 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *41* | *1* | *50.0* | *83 %* | *61-118* | *2I28016* | *EPA 8260B* | *09/28/12 15:48* | *JKG* | |
| *Dibromofluoromethane* | *43* | *1* | *50.0* | *86 %* | *66-114* | *2I28016* | *EPA 8260B* | *09/28/12 15:48* | *JKG* | |
| *Toluene-d8* | *43* | *1* | *50.0* | *86 %* | *63-118* | *2I28016* | *EPA 8260B* | *09/28/12 15:48* | *JKG* | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-19- 2' | **Lab Sample ID:** | C211362-04 | **Received:** | 09/25/12 11:00 |
| **Matrix:** | Soil | **Sampled:** | 09/24/12 14:28 | **Work Order:** | C211362 |
| **Project:** | Wilmington Materials | **Sampled By:** | Jayson Kilcoyne | **% Solids:** | 95.4 |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chromium [7440-47-3] ^** | **0.856** | | mg/kg dry | 1 | 0.105 | 0.524 | 2I25027 | EPA 6010C | 09/27/12 13:55 | JDH | |
| **Lead [7439-92-1] ^** | **1.18** | | mg/kg dry | 1 | 0.126 | 0.524 | 2I25027 | EPA 6010C | 09/27/12 13:55 | JDH | |

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| | | |
|---|---|---|
| **Description:** SS-19- 2' | **Lab Sample ID:** C211362-04 | **Received:** 09/25/12 11:00 |
| **Matrix:** Soil | **Sampled:** 09/24/12 14:28 | **Work Order:** C211362 |
| **Project:** Wilmington Materials | **Sampled By:** Jayson Kilcoyne | **% Solids:** 95.4 |

## Classical Chemistry Parameters

*^ - ENCO Jacksonville certified analyte [NC 442]*

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | MRL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Oil & Grease (HEM-SGT) Non-Polar Material [ECL-0104] ^** | **88.2** | | mg/kg dry | 1 | 52.4 | 52.4 | 2128002 | EPA 9071B | 10/01/12 15:19 | MJF | |

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-20 3'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-05
**Sampled:** 09/24/12 14:58
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.6

## 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] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00078 | U | mg/kg dry | 1 | 0.00078 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00096 | U | mg/kg dry | 1 | 0.00096 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00056 | U | mg/kg dry | 1 | 0.00056 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00050 | U | mg/kg dry | 1 | 0.00050 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00035 | U | mg/kg dry | 1 | 0.00035 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00095 | U | mg/kg dry | 1 | 0.00095 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00091 | U | mg/kg dry | 1 | 0.00091 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00069 | U | mg/kg dry | 1 | 0.00069 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Acetone [67-64-1] ^ | 0.0017 | U | mg/kg dry | 1 | 0.0017 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Benzene [71-43-2] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00050 | U | mg/kg dry | 1 | 0.00050 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Bromoform [75-25-2] ^ | 0.00055 | U | mg/kg dry | 1 | 0.00055 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00039 | U | mg/kg dry | 1 | 0.00039 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Chloroform [67-66-3] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00055 | U | mg/kg dry | 1 | 0.00055 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0024 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| **Methylene Chloride [75-09-2] ^** | **0.0039** | | mg/kg dry | 1 | 0.00088 | 0.0024 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |

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**Description:** SS-20 3'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-05
**Sampled:** 09/24/12 14:58
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.6

## 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] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Styrene [100-42-5] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Toluene [108-88-3] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00039 | U | mg/kg dry | 1 | 0.00039 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00068 | U | mg/kg dry | 1 | 0.00068 | 0.0036 | 2I28016 | EPA 8260B | 09/28/12 16:18 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *41* | *1* | *50.0* | *82 %* | *61-118* | *2I28016* | *EPA 8260B* | *09/28/12 16:18* | *JKG* | |
| *Dibromofluoromethane* | *45* | *1* | *50.0* | *89 %* | *66-114* | *2I28016* | *EPA 8260B* | *09/28/12 16:18* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *87 %* | *63-118* | *2I28016* | *EPA 8260B* | *09/28/12 16:18* | *JKG* | |

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**Description:** SS-20 3'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-05
**Sampled:** 09/24/12 14:58
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.6

## 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] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.021 | U | mg/kg dry | 1 | 0.021 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.10 | U | mg/kg dry | 1 | 0.10 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.096 | U | mg/kg dry | 1 | 0.096 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.055 | U | mg/kg dry | 1 | 0.055 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Anthracene [120-12-7] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Benzidine [92-87-5] ^ | 0.11 | U | mg/kg dry | 1 | 0.11 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.019 | U | mg/kg dry | 1 | 0.019 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.049 | U | mg/kg dry | 1 | 0.049 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| bis(2-Chloroethoxy)methane [111-91-1] ^ | 0.026 | U | mg/kg dry | 1 | 0.026 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Bis(2-Chloroethyl)ether [111-44-4] ^ | 0.045 | U | mg/kg dry | 1 | 0.045 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Bis(2-Ethylhexyl)phthalate [117-81-7] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.041 | U | mg/kg dry | 1 | 0.041 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Carbazole [86-74-8] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Chrysene [218-01-9] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.053 | U | mg/kg dry | 1 | 0.053 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.042 | U | mg/kg dry | 1 | 0.042 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Fluoranthene [206-44-0] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Fluorene [86-73-7] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.040 | U | mg/kg dry | 1 | 0.040 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.049 | U | mg/kg dry | 1 | 0.049 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Isophorone [78-59-1] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Naphthalene [91-20-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.084 | U | mg/kg dry | 1 | 0.084 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-20 3' | **Lab Sample ID:** | C211362-05 | **Received:** | 09/25/12 11:00 |
| **Matrix:** | Soil | **Sampled:** | 09/24/12 14:58 | **Work Order:** | C211362 |
| **Project:** | Wilmington Materials | **Sampled By:** | Jayson Kilcoyne | **% Solids:** | 96.6 |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.056 | U | mg/kg dry | 1 | 0.056 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Pyrene [129-00-0] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |
| Pyridine [110-86-1] ^ | 0.085 | U | mg/kg dry | 1 | 0.085 | 0.34 | 2I28015 | EPA 8270D | 10/03/12 17:14 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *1.5* | *1* | *1.73* | *84 %* | *56-120* | *2I28015* | *EPA 8270D* | *10/03/12 17:14* | *DFM* | |
| *Nitrobenzene-d5* | *1.4* | *1* | *1.73* | *80 %* | *50-117* | *2I28015* | *EPA 8270D* | *10/03/12 17:14* | *DFM* | |
| *Terphenyl-d14* | *1.7* | *1* | *1.73* | *99 %* | *36-151* | *2I28015* | *EPA 8270D* | *10/03/12 17:14* | *DFM* | |

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-21 2'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-06
**Sampled:** 09/24/12 15:02
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 97.3

## 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] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00078 | U | mg/kg dry | 1 | 0.00078 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00096 | U | mg/kg dry | 1 | 0.00096 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00056 | U | mg/kg dry | 1 | 0.00056 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00050 | U | mg/kg dry | 1 | 0.00050 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00035 | U | mg/kg dry | 1 | 0.00035 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00095 | U | mg/kg dry | 1 | 0.00095 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00091 | U | mg/kg dry | 1 | 0.00091 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00069 | U | mg/kg dry | 1 | 0.00069 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Acetone [67-64-1] ^ | 0.0017 | U | mg/kg dry | 1 | 0.0017 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Benzene [71-43-2] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00050 | U | mg/kg dry | 1 | 0.00050 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Bromoform [75-25-2] ^ | 0.00055 | U | mg/kg dry | 1 | 0.00055 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00039 | U | mg/kg dry | 1 | 0.00039 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0061 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Chloroform [67-66-3] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00028 | U | mg/kg dry | 1 | 0.00028 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00043 | U | mg/kg dry | 1 | 0.00043 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00040 | U | mg/kg dry | 1 | 0.00040 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00055 | U | mg/kg dry | 1 | 0.00055 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00043 | U | mg/kg dry | 1 | 0.00043 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0024 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.00089 | U | mg/kg dry | 1 | 0.00089 | 0.0024 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |

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**Description:** SS-21 2'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-06
**Sampled:** 09/24/12 15:02
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 97.3

## 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] ^ | 0.00037 | U | mg/kg dry | 1 | 0.00037 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00016 | U | mg/kg dry | 1 | 0.00016 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00022 | U | mg/kg dry | 1 | 0.00022 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Styrene [100-42-5] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00034 | U | mg/kg dry | 1 | 0.00034 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Toluene [108-88-3] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00045 | U | mg/kg dry | 1 | 0.00045 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00047 | U | mg/kg dry | 1 | 0.00047 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00039 | U | mg/kg dry | 1 | 0.00039 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00068 | U | mg/kg dry | 1 | 0.00068 | 0.0037 | 2I28016 | EPA 8260B | 09/28/12 16:47 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *41* | *1* | *50.0* | *81 %* | *61-118* | *2I28016* | *EPA 8260B* | *09/28/12 16:47* | *JKG* | |
| *Dibromofluoromethane* | *43* | *1* | *50.0* | *86 %* | *66-114* | *2I28016* | *EPA 8260B* | *09/28/12 16:47* | *JKG* | |
| *Toluene-d8* | *42* | *1* | *50.0* | *85 %* | *63-118* | *2I28016* | *EPA 8260B* | *09/28/12 16:47* | *JKG* | |

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**Description:** SS-21 2'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-06
**Sampled:** 09/24/12 15:02
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 97.3

## 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] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.021 | U | mg/kg dry | 1 | 0.021 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.10 | U | mg/kg dry | 1 | 0.10 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.096 | U | mg/kg dry | 1 | 0.096 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.054 | U | mg/kg dry | 1 | 0.054 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Anthracene [120-12-7] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Benzidine [92-87-5] ^ | 0.11 | U | mg/kg dry | 1 | 0.11 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.018 | U | mg/kg dry | 1 | 0.018 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.048 | U | mg/kg dry | 1 | 0.048 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | QV-01 |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| bis(2-Chloroethoxy)methane [111-91-1] ^ | 0.026 | U | mg/kg dry | 1 | 0.026 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Bis(2-Chloroethyl)ether [111-44-4] ^ | 0.044 | U | mg/kg dry | 1 | 0.044 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Bis(2-Ethylhexyl)phthalate [117-81-7] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.041 | U | mg/kg dry | 1 | 0.041 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Carbazole [86-74-8] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Chrysene [218-01-9] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.052 | U | mg/kg dry | 1 | 0.052 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.042 | U | mg/kg dry | 1 | 0.042 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Fluoranthene [206-44-0] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Fluorene [86-73-7] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.040 | U | mg/kg dry | 1 | 0.040 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.048 | U | mg/kg dry | 1 | 0.048 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Isophorone [78-59-1] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Naphthalene [91-20-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.083 | U | mg/kg dry | 1 | 0.083 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-21 2' | **Lab Sample ID:** | C211362-06 | **Received:** | 09/25/12 11:00 |
| **Matrix:** | Soil | **Sampled:** | 09/24/12 15:02 | **Work Order:** | C211362 |
| **Project:** | Wilmington Materials | **Sampled By:** | Jayson Kilcoyne | **% Solids:** | 97.3 |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.055 | U | mg/kg dry | 1 | 0.055 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Pyrene [129-00-0] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |
| Pyridine [110-86-1] ^ | 0.084 | U | mg/kg dry | 1 | 0.084 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:10 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *1.3* | *1* | *1.71* | *78 %* | *56-120* | *2I28015* | *EPA 8270D* | *10/04/12 22:10* | *DFM* | |
| *Nitrobenzene-d5* | *1.3* | *1* | *1.71* | *73 %* | *50-117* | *2I28015* | *EPA 8270D* | *10/04/12 22:10* | *DFM* | |
| *Terphenyl-d14* | *1.5* | *1* | *1.71* | *85 %* | *36-151* | *2I28015* | *EPA 8270D* | *10/04/12 22:10* | *DFM* | |

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-22 2'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-07
**Sampled:** 09/24/12 15:05
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.3

## 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] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.00076 | U | mg/kg dry | 1 | 0.00076 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.00094 | U | mg/kg dry | 1 | 0.00094 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.00055 | U | mg/kg dry | 1 | 0.00055 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.00049 | U | mg/kg dry | 1 | 0.00049 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.00035 | U | mg/kg dry | 1 | 0.00035 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 2-Butanone [78-93-3] ^ | 0.00093 | U | mg/kg dry | 1 | 0.00093 | 0.0060 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0060 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.00089 | U | mg/kg dry | 1 | 0.00089 | 0.0060 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.00019 | U | mg/kg dry | 1 | 0.00019 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 0.00068 | U | mg/kg dry | 1 | 0.00068 | 0.0060 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Acetone [67-64-1] ^ | 0.0017 | U | mg/kg dry | 1 | 0.0017 | 0.0060 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Benzene [71-43-2] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.00049 | U | mg/kg dry | 1 | 0.00049 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Bromoform [75-25-2] ^ | 0.00054 | U | mg/kg dry | 1 | 0.00054 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Bromomethane [74-83-9] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Carbon disulfide [75-15-0] ^ | 0.00046 | U | mg/kg dry | 1 | 0.00046 | 0.0060 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Carbon Tetrachloride [56-23-5] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Chloroethane [75-00-3] ^ | 0.00030 | U | mg/kg dry | 1 | 0.00030 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Chloroform [67-66-3] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Chloromethane [74-87-3] ^ | 0.00025 | U | mg/kg dry | 1 | 0.00025 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.00027 | U | mg/kg dry | 1 | 0.00027 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.00039 | U | mg/kg dry | 1 | 0.00039 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.00054 | U | mg/kg dry | 1 | 0.00054 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.00024 | U | mg/kg dry | 1 | 0.00024 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.00042 | U | mg/kg dry | 1 | 0.00042 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.00018 | U | mg/kg dry | 1 | 0.00018 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.00044 | U | mg/kg dry | 1 | 0.00044 | 0.0024 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Methylene Chloride [75-09-2] ^ | 0.00087 | U | mg/kg dry | 1 | 0.00087 | 0.0024 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |

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**Description:** SS-22 2'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-07
**Sampled:** 09/24/12 15:05
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.3

## 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] ^ | 0.00036 | U | mg/kg dry | 1 | 0.00036 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Naphthalene [91-20-3] ^ | 0.00032 | U | mg/kg dry | 1 | 0.00032 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.00015 | U | mg/kg dry | 1 | 0.00015 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.00021 | U | mg/kg dry | 1 | 0.00021 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| o-Xylene [95-47-6] ^ | 0.00026 | U | mg/kg dry | 1 | 0.00026 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.0011 | U | mg/kg dry | 1 | 0.0011 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Styrene [100-42-5] ^ | 0.0012 | U | mg/kg dry | 1 | 0.0012 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.00020 | U | mg/kg dry | 1 | 0.00020 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.00033 | U | mg/kg dry | 1 | 0.00033 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Toluene [108-88-3] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.00044 | U | mg/kg dry | 1 | 0.00044 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.00046 | U | mg/kg dry | 1 | 0.00046 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.00038 | U | mg/kg dry | 1 | 0.00038 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.00031 | U | mg/kg dry | 1 | 0.00031 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.00029 | U | mg/kg dry | 1 | 0.00029 | 0.0012 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.00067 | U | mg/kg dry | 1 | 0.00067 | 0.0036 | 2I28016 | EPA 8260B | 09/28/12 17:17 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *43* | *1* | *50.0* | *85 %* | *61-118* | *2I28016* | *EPA 8260B* | *09/28/12 17:17* | *JKG* | |
| *Dibromofluoromethane* | *44* | *1* | *50.0* | *89 %* | *66-114* | *2I28016* | *EPA 8260B* | *09/28/12 17:17* | *JKG* | |
| *Toluene-d8* | *44* | *1* | *50.0* | *89 %* | *63-118* | *2I28016* | *EPA 8260B* | *09/28/12 17:17* | *JKG* | |

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**Description:** SS-22 2'
**Matrix:** Soil
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-07
**Sampled:** 09/24/12 15:05
**Sampled By:** Jayson Kilcoyne

**Received:** 09/25/12 11:00
**Work Order:** C211362
**% Solids:** 96.3

## 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] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.021 | U | mg/kg dry | 1 | 0.021 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 1-Methylnaphthalene [90-12-0] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 2,4-Dinitrotoluene [121-14-2] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 2,6-Dinitrotoluene [606-20-2] ^ | 0.032 | U | mg/kg dry | 1 | 0.032 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 2-Chloronaphthalene [91-58-7] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 2-Methylnaphthalene [91-57-6] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 2-Nitroaniline [88-74-4] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 3,3'-Dichlorobenzidine [91-94-1] ^ | 0.10 | U | mg/kg dry | 1 | 0.10 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 3-Nitroaniline [99-09-2] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 4-Bromophenyl-phenylether [101-55-3] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 4-Chloroaniline [106-47-8] ^ | 0.097 | U | mg/kg dry | 1 | 0.097 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 4-Chlorophenyl-phenylether [7005-72-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| 4-Nitroaniline [100-01-6] ^ | 0.055 | U | mg/kg dry | 1 | 0.055 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Acenaphthene [83-32-9] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Acenaphthylene [208-96-8] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Anthracene [120-12-7] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Benzidine [92-87-5] ^ | 0.11 | U | mg/kg dry | 1 | 0.11 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Benzo(a)anthracene [56-55-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Benzo(a)pyrene [50-32-8] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Benzo(b)fluoranthene [205-99-2] ^ | 0.019 | U | mg/kg dry | 1 | 0.019 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Benzo(g,h,i)perylene [191-24-2] ^ | 0.049 | U | mg/kg dry | 1 | 0.049 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | QV-01 |
| Benzo(k)fluoranthene [207-08-9] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Benzyl alcohol [100-51-6] ^ | 0.024 | U | mg/kg dry | 1 | 0.024 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| bis(2-Chloroethoxy)methane [111-91-1] ^ | 0.026 | U | mg/kg dry | 1 | 0.026 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Bis(2-Chloroethyl)ether [111-44-4] ^ | 0.045 | U | mg/kg dry | 1 | 0.045 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Bis(2-chloroisopropyl)ether [108-60-1] ^ | 0.025 | U | mg/kg dry | 1 | 0.025 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Bis(2-Ethylhexyl)phthalate [117-81-7] ^ | 0.036 | U | mg/kg dry | 1 | 0.036 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Butylbenzylphthalate [85-68-7] ^ | 0.042 | U | mg/kg dry | 1 | 0.042 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Carbazole [86-74-8] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Chrysene [218-01-9] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Dibenzo(a,h)anthracene [53-70-3] ^ | 0.053 | U | mg/kg dry | 1 | 0.053 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Dibenzofuran [132-64-9] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Diethylphthalate [84-66-2] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Dimethylphthalate [131-11-3] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Di-n-butylphthalate [84-74-2] ^ | 0.043 | U | mg/kg dry | 1 | 0.043 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Di-n-octylphthalate [117-84-0] ^ | 0.034 | U | mg/kg dry | 1 | 0.034 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Fluoranthene [206-44-0] ^ | 0.037 | U | mg/kg dry | 1 | 0.037 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Fluorene [86-73-7] ^ | 0.030 | U | mg/kg dry | 1 | 0.030 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Hexachlorobenzene [118-74-1] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Hexachlorobutadiene [87-68-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Hexachlorocyclopentadiene [77-47-4] ^ | 0.041 | U | mg/kg dry | 1 | 0.041 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Hexachloroethane [67-72-1] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Indeno(1,2,3-cd)pyrene [193-39-5] ^ | 0.049 | U | mg/kg dry | 1 | 0.049 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Isophorone [78-59-1] ^ | 0.031 | U | mg/kg dry | 1 | 0.031 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Naphthalene [91-20-3] ^ | 0.029 | U | mg/kg dry | 1 | 0.029 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Nitrobenzene [98-95-3] ^ | 0.027 | U | mg/kg dry | 1 | 0.027 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| N-Nitrosodimethylamine [62-75-9] ^ | 0.022 | U | mg/kg dry | 1 | 0.022 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| N-Nitroso-di-n-propylamine [621-64-7] ^ | 0.084 | U | mg/kg dry | 1 | 0.084 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |

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| | | | | | |
|---|---|---|---|---|---|
| **Description:** | SS-22 2' | **Lab Sample ID:** | C211362-07 | **Received:** | 09/25/12 11:00 |
| **Matrix:** | Soil | **Sampled:** | 09/24/12 15:05 | **Work Order:** | C211362 |
| **Project:** | Wilmington Materials | **Sampled By:** | Jayson Kilcoyne | **% Solids:** | 96.3 |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4] ^ | 0.056 | U | mg/kg dry | 1 | 0.056 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Phenanthrene [85-01-8] ^ | 0.028 | U | mg/kg dry | 1 | 0.028 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Pyrene [129-00-0] ^ | 0.039 | U | mg/kg dry | 1 | 0.039 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |
| Pyridine [110-86-1] ^ | 0.085 | U | mg/kg dry | 1 | 0.085 | 0.34 | 2I28015 | EPA 8270D | 10/04/12 22:39 | DFM | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *1.5* | *1* | *1.73* | *84 %* | *56-120* | *2I28015* | *EPA 8270D* | *10/04/12 22:39* | *DFM* | |
| *Nitrobenzene-d5* | *1.4* | *1* | *1.73* | *81 %* | *50-117* | *2I28015* | *EPA 8270D* | *10/04/12 22:39* | *DFM* | |
| *Terphenyl-d14* | *1.5* | *1* | *1.73* | *88 %* | *36-151* | *2I28015* | *EPA 8270D* | *10/04/12 22:39* | *DFM* | |

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:** Wilmington Materials

**Lab Sample ID:** C211362-08
**Sampled:** 09/24/12 13:05
**Sampled By:** enco

**Received:** 09/25/12 11:00
**Work Order:** C211362

## 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 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,1,1-Trichloroethane [71-55-6] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,1,2,2-Tetrachloroethane [79-34-5] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,1,2-Trichloroethane [79-00-5] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,1-Dichloroethane [75-34-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,1-Dichloroethene [75-35-4] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,1-Dichloropropene [563-58-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2,3-Trichlorobenzene [87-61-6] ^ | 0.012 | U | ug/L | 1 | 0.012 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2,3-Trichloropropane [96-18-4] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2,4-Trichlorobenzene [120-82-1] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2,4-Trimethylbenzene [95-63-6] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2-Dibromo-3-chloropropane [96-12-8] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2-Dibromoethane [106-93-4] ^ | 0.66 | U | ug/L | 1 | 0.66 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2-Dichlorobenzene [95-50-1] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2-Dichloroethane [107-06-2] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,2-Dichloropropane [78-87-5] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,3,5-Trimethylbenzene [108-67-8] ^ | 0.30 | U | ug/L | 1 | 0.30 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,3-Dichlorobenzene [541-73-1] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,3-Dichloropropane [142-28-9] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 1,4-Dichlorobenzene [106-46-7] ^ | 0.19 | U | ug/L | 1 | 0.19 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 2,2-Dichloropropane [594-20-7] ^ | 0.28 | U | ug/L | 1 | 0.28 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 2-Butanone [78-93-3] ^ | 1.3 | U | ug/L | 1 | 1.3 | 5.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 2-Chloroethyl Vinyl Ether [110-75-8] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 2-Chlorotoluene [95-49-8] ^ | 0.081 | U | ug/L | 1 | 0.081 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 2-Hexanone [591-78-6] ^ | 0.88 | U | ug/L | 1 | 0.88 | 5.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 4-Chlorotoluene [106-43-4] ^ | 0.068 | U | ug/L | 1 | 0.068 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 4-Isopropyltoluene [99-87-6] ^ | 0.085 | U | ug/L | 1 | 0.085 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| 4-Methyl-2-pentanone [108-10-1] ^ | 1.1 | U | ug/L | 1 | 1.1 | 5.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Acetone [67-64-1] ^ | 1.2 | U | ug/L | 1 | 1.2 | 5.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Benzene [71-43-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Bromobenzene [108-86-1] ^ | 0.16 | U | ug/L | 1 | 0.16 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Bromochloromethane [74-97-5] ^ | 0.48 | U | ug/L | 1 | 0.48 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Bromodichloromethane [75-27-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Bromoform [75-25-2] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Bromomethane [74-83-9] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Carbon disulfide [75-15-0] ^ | 1.5 | U | ug/L | 1 | 1.5 | 5.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Carbon tetrachloride [56-23-5] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Chlorobenzene [108-90-7] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Chloroethane [75-00-3] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Chloroform [67-66-3] ^ | 0.18 | U | ug/L | 1 | 0.18 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Chloromethane [74-87-3] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| cis-1,2-Dichloroethene [156-59-2] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| cis-1,3-Dichloropropene [10061-01-5] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Dibromochloromethane [124-48-1] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Dibromomethane [74-95-3] ^ | 0.27 | U | ug/L | 1 | 0.27 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Dichlorodifluoromethane [75-71-8] ^ | 0.20 | U | ug/L | 1 | 0.20 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Ethylbenzene [100-41-4] ^ | 0.13 | U | ug/L | 1 | 0.13 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Hexachlorobutadiene [87-68-3] ^ | 0.22 | U | ug/L | 1 | 0.22 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Isopropylbenzene [98-82-8] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| m,p-Xylenes [108-38-3/106-42-3] ^ | 0.17 | U | ug/L | 1 | 0.17 | 2.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Methylene chloride [75-09-2] ^ | 0.23 | U | ug/L | 1 | 0.23 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |

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**Description:** Trip Blank
**Matrix:** Water
**Project:** Wilmington Materials

**Lab Sample ID:** C211362-08
**Sampled:** 09/24/12 13:05
**Sampled By:** enco

**Received:** 09/25/12 11:00
**Work Order:** C211362

## 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 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Naphthalene [91-20-3] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| n-Butyl Benzene [104-51-8] ^ | 0.058 | U | ug/L | 1 | 0.058 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| n-Propyl Benzene [103-65-1] ^ | 0.12 | U | ug/L | 1 | 0.12 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| o-Xylene [95-47-6] ^ | 0.065 | U | ug/L | 1 | 0.065 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| sec-Butylbenzene [135-98-8] ^ | 0.10 | U | ug/L | 1 | 0.10 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Styrene [100-42-5] ^ | 0.11 | U | ug/L | 1 | 0.11 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| tert-Butylbenzene [98-06-6] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Tetrachloroethene [127-18-4] ^ | 0.17 | U | ug/L | 1 | 0.17 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Toluene [108-88-3] ^ | 0.14 | U | ug/L | 1 | 0.14 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| trans-1,2-Dichloroethene [156-60-5] ^ | 0.21 | U | ug/L | 1 | 0.21 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| trans-1,3-Dichloropropene [10061-02-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Trichloroethene [79-01-6] ^ | 0.15 | U | ug/L | 1 | 0.15 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Trichlorofluoromethane [75-69-4] ^ | 0.24 | U | ug/L | 1 | 0.24 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Vinyl chloride [75-01-4] ^ | 0.32 | U | ug/L | 1 | 0.32 | 1.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |
| Xylenes (Total) [1330-20-7] ^ | 0.45 | U | ug/L | 1 | 0.45 | 3.0 | 2I25001 | EPA 8260B | 09/27/12 06:09 | JKG | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *47* | *1* | *50.0* | *94 %* | *51-122* | *2I25001* | *EPA 8260B* | *09/27/12 06:09* | *JKG* | |
| *Dibromofluoromethane* | *57* | *1* | *50.0* | *114 %* | *68-117* | *2I25001* | *EPA 8260B* | *09/27/12 06:09* | *JKG* | |
| *Toluene-d8* | *52* | *1* | *50.0* | *105 %* | *67-127* | *2I25001* | *EPA 8260B* | *09/27/12 06:09* | *JKG* | |

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

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2I25001 - EPA 5030B_MS*

**Blank (2I25001-BLK1)** Prepared: 09/25/2012 07:45 Analyzed: 09/26/2012 22:11

| 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 2I25001 - EPA 5030B_MS*

**Blank (2I25001-BLK1) Continued** Prepared: 09/25/2012 07:45 Analyzed: 09/26/2012 22:11

| 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* | *49* | | | *ug/L* | *50.0* | | *99* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *57* | | | *ug/L* | *50.0* | | *114* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *52* | | | *ug/L* | *50.0* | | *104* | *67-127* | | | |

**LCS (2I25001-BS1)** Prepared: 09/25/2012 07:45 Analyzed: 09/26/2012 22:41

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 21 | | 1.0 | ug/L | 20.0 | | 107 | 75-133 | | | |
| Benzene | 20 | | 1.0 | ug/L | 20.0 | | 98 | 81-134 | | | |
| Chlorobenzene | 19 | | 1.0 | ug/L | 20.0 | | 96 | 83-117 | | | |
| Toluene | 18 | | 1.0 | ug/L | 20.0 | | 89 | 71-118 | | | |
| Trichloroethene | 19 | | 1.0 | ug/L | 20.0 | | 96 | 74-119 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *49* | | | *ug/L* | *50.0* | | *97* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *52* | | | *ug/L* | *50.0* | | *105* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *53* | | | *ug/L* | *50.0* | | *106* | *67-127* | | | |

**Matrix Spike (2I25001-MS1)** Prepared: 09/25/2012 07:45 Analyzed: 09/26/2012 23:11

**Source: C211424-04**

| 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 | 117 | 75-133 | | | |
| Benzene | 20 | | 1.0 | ug/L | 20.0 | 0.15 U | 100 | 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 | 105 | 74-119 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *50* | | | *ug/L* | *50.0* | | *99* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *53* | | | *ug/L* | *50.0* | | *106* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *53* | | | *ug/L* | *50.0* | | *106* | *67-127* | | | |

# QUALITY CONTROL

## Volatile Organic Compounds by GCMS - Quality Control

*Batch 2I25001 - EPA 5030B_MS*

**Matrix Spike Dup (2I25001-MSD1)** Prepared: 09/25/2012 07:45 Analyzed: 09/26/2012 23:41

**Source: C211424-04**

| 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 | 111 | 75-133 | 5 | 20 | |
| Benzene | 19 | | 1.0 | ug/L | 20.0 | 0.15 U | 93 | 81-134 | 7 | 17 | |
| Chlorobenzene | 20 | | 1.0 | ug/L | 20.0 | 0.17 U | 98 | 83-117 | 4 | 16 | |
| Toluene | 19 | | 1.0 | ug/L | 20.0 | 0.14 U | 93 | 71-118 | 0.4 | 17 | |
| Trichloroethene | 20 | | 1.0 | ug/L | 20.0 | 0.15 U | 98 | 74-119 | 7 | 22 | |
| *Surrogate: 4-Bromofluorobenzene* | *51* | | | *ug/L* | *50.0* | | *101* | *51-122* | | | |
| *Surrogate: Dibromofluoromethane* | *52* | | | *ug/L* | *50.0* | | *103* | *68-117* | | | |
| *Surrogate: Toluene-d8* | *53* | | | *ug/L* | *50.0* | | *106* | *67-127* | | | |

*Batch 2I28016 - EPA 5035_MS*

**Blank (2I28016-BLK1)** Prepared: 09/28/2012 09:37 Analyzed: 09/28/2012 13:20

| 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 2I28016 - EPA 5035_MS*

**Blank (2I28016-BLK1) Continued** Prepared: 09/28/2012 09:37 Analyzed: 09/28/2012 13:20

| 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* | *42* | | | *ug/L* | *50.0* | | *83* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *41* | | | *ug/L* | *50.0* | | *82* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *43* | | | *ug/L* | *50.0* | | *87* | *63-118* | | | |

**LCS (2I28016-BS1)** Prepared: 09/28/2012 09:37 Analyzed: 09/28/2012 11:21

| 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 | | 94 | 64-133 | | | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | | 97 | 79-129 | | | |
| Chlorobenzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | | 95 | 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 | | 98 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *41* | | | *ug/L* | *50.0* | | *83* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *39* | | | *ug/L* | *50.0* | | *79* | *66-114* | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 2I28016 - EPA 5035_MS*

**LCS (2I28016-BS1) Continued** Prepared: 09/28/2012 09:37 Analyzed: 09/28/2012 11:21

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: Toluene-d8* | *43* | | | *ug/L* | *50.0* | | *87* | *63-118* | | | |

**Matrix Spike (2I28016-MS1)** Prepared: 09/28/2012 09:37 Analyzed: 09/28/2012 11:51

**Source: C211580-09**

| 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 | | | |
| Benzene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 98 | 79-129 | | | |
| Chlorobenzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 93 | 79-121 | | | |
| Toluene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 101 | 77-120 | | | |
| Trichloroethene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 99 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *42* | | | *ug/L* | *50.0* | | *85* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *40* | | | *ug/L* | *50.0* | | *81* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *45* | | | *ug/L* | *50.0* | | *90* | *63-118* | | | |

**Matrix Spike Dup (2I28016-MSD1)** Prepared: 09/28/2012 09:37 Analyzed: 09/28/2012 12:20

**Source: C211580-09**

| 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 | 91 | 64-133 | 0.7 | 23 | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 94 | 79-129 | 5 | 23 | |
| Chlorobenzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 93 | 79-121 | 0.6 | 25 | |
| Toluene | 0.020 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 99 | 77-120 | 1 | 23 | |
| Trichloroethene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 95 | 78-118 | 4 | 24 | |
| *Surrogate: 4-Bromofluorobenzene* | *42* | | | *ug/L* | *50.0* | | *85* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *39* | | | *ug/L* | *50.0* | | *77* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *44* | | | *ug/L* | *50.0* | | *88* | *63-118* | | | |

*Batch 2J03002 - EPA 5035_MS*

**Blank (2J03002-BLK1)** Prepared: 10/03/2012 06:58 Analyzed: 10/08/2012 12:21

| 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 2J03002 - EPA 5035_MS*

**Blank (2J03002-BLK1) Continued** Prepared: 10/03/2012 06:58 Analyzed: 10/08/2012 12:21

| 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 2J03002 - EPA 5035_MS*

**Blank (2J03002-BLK1) Continued** Prepared: 10/03/2012 06:58 Analyzed: 10/08/2012 12:21

| 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* | *52* | | | *ug/L* | *50.0* | | *104* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *53* | | | *ug/L* | *50.0* | | *105* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *52* | | | *ug/L* | *50.0* | | *104* | *63-118* | | | |

**LCS (2J03002-BS1)** Prepared: 10/03/2012 06:58 Analyzed: 10/08/2012 12:51

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.022 | | 0.0010 | mg/kg wet | 0.0200 | | 112 | 64-133 | | | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | | 97 | 79-129 | | | |
| Chlorobenzene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | | 89 | 79-121 | | | |
| Toluene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | | 93 | 77-120 | | | |
| Trichloroethene | 0.021 | | 0.0010 | mg/kg wet | 0.0200 | | 103 | 78-118 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *52* | | | *ug/L* | *50.0* | | *105* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *57* | | | *ug/L* | *50.0* | | *114* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *52* | | | *ug/L* | *50.0* | | *104* | *63-118* | | | |

**Matrix Spike (2J03002-MS1)** Prepared: 10/03/2012 06:58 Analyzed: 10/08/2012 14:19

**Source: C211714-08**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 0.021 | | 0.0010 | mg/kg wet | 0.0200 | 0.00030 U | 107 | 64-133 | | | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 96 | 79-129 | | | |
| Chlorobenzene | 0.017 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 85 | 79-121 | | | |
| Toluene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 90 | 77-120 | | | |
| Trichloroethene | 0.027 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 134 | 78-118 | | | QM-07 |
| *Surrogate: 4-Bromofluorobenzene* | *50* | | | *ug/L* | *50.0* | | *101* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *54* | | | *ug/L* | *50.0* | | *109* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *53* | | | *ug/L* | *50.0* | | *105* | *63-118* | | | |

**Matrix Spike Dup (2J03002-MSD1)** Prepared: 10/03/2012 06:58 Analyzed: 10/08/2012 14:52

**Source: C211714-08**

| 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 | 98 | 64-133 | 8 | 23 | |
| Benzene | 0.019 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 94 | 79-129 | 3 | 23 | |
| Chlorobenzene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00017 U | 89 | 79-121 | 5 | 25 | |
| Toluene | 0.018 | | 0.0010 | mg/kg wet | 0.0200 | 0.00024 U | 90 | 77-120 | 0.2 | 23 | |
| Trichloroethene | 0.022 | | 0.0010 | mg/kg wet | 0.0200 | 0.00032 U | 110 | 78-118 | 20 | 24 | |
| *Surrogate: 4-Bromofluorobenzene* | *53* | | | *ug/L* | *50.0* | | *107* | *61-118* | | | |
| *Surrogate: Dibromofluoromethane* | *53* | | | *ug/L* | *50.0* | | *105* | *66-114* | | | |
| *Surrogate: Toluene-d8* | *52* | | | *ug/L* | *50.0* | | *104* | *63-118* | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2I28015 - EPA 3550C_MS*

**Blank (2I28015-BLK1)** Prepared: 09/28/2012 09:29 Analyzed: 10/03/2012 15:21

| 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-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-Methylnaphthalene | 0.028 | U | 0.33 | mg/kg wet | | | | | | | |
| 2-Nitroaniline | 0.030 | 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-Chloroaniline | 0.093 | U | 0.33 | mg/kg wet | | | | | | | |
| 4-Chlorophenyl-phenylether | 0.026 | U | 0.33 | mg/kg wet | | | | | | | |
| 4-Nitroaniline | 0.053 | 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 | | | | | | | |
| 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 | | | | | | | |
| Carbazole | 0.033 | 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 | | | | | | | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2I28015 - EPA 3550C_MS*

**Blank (2I28015-BLK1) Continued** Prepared: 09/28/2012 09:29 Analyzed: 10/03/2012 15:21

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | | | | | |
| Phenanthrene | 0.027 | 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-Fluorobiphenyl* | *1.5* | | | *mg/kg wet* | *1.67* | | *90* | *56-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.4* | | | *mg/kg wet* | *1.67* | | *87* | *50-117* | | | |
| *Surrogate: Terphenyl-d14* | *1.6* | | | *mg/kg wet* | *1.67* | | *99* | *36-151* | | | |

**LCS (2I28015-BS1)** Prepared: 09/28/2012 09:29 Analyzed: 10/03/2012 15:49

| 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 | | 86 | 51-121 | | | |
| 1,4-Dichlorobenzene | 1.4 | | 0.33 | mg/kg wet | 1.67 | | 85 | 48-118 | | | |
| 2,4-Dinitrotoluene | 1.6 | | 0.33 | mg/kg wet | 1.67 | | 95 | 63-127 | | | |
| Acenaphthene | 1.5 | | 0.33 | mg/kg wet | 1.67 | | 90 | 64-131 | | | |
| N-Nitroso-di-n-propylamine | 1.5 | | 0.33 | mg/kg wet | 1.67 | | 92 | 55-135 | | | |
| Pyrene | 1.6 | | 0.33 | mg/kg wet | 1.67 | | 95 | 65-146 | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.5* | | | *mg/kg wet* | *1.67* | | *90* | *56-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.5* | | | *mg/kg wet* | *1.67* | | *89* | *50-117* | | | |
| *Surrogate: Terphenyl-d14* | *1.6* | | | *mg/kg wet* | *1.67* | | *96* | *36-151* | | | |

**Matrix Spike (2I28015-MS1)** Prepared: 09/28/2012 09:29 Analyzed: 10/03/2012 16:18

**Source: C211362-05**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 1.3 | | 0.34 | mg/kg dry | 1.73 | 0.027 U | 78 | 51-121 | | | |
| 1,4-Dichlorobenzene | 1.4 | | 0.34 | mg/kg dry | 1.73 | 0.022 U | 79 | 48-118 | | | |
| 2,4-Dinitrotoluene | 1.6 | | 0.34 | mg/kg dry | 1.73 | 0.029 U | 91 | 63-127 | | | |
| Acenaphthene | 1.5 | | 0.34 | mg/kg dry | 1.73 | 0.029 U | 86 | 64-131 | | | |
| N-Nitroso-di-n-propylamine | 1.5 | | 0.34 | mg/kg dry | 1.73 | 0.084 U | 88 | 55-135 | | | |
| Pyrene | 1.5 | | 0.34 | mg/kg dry | 1.73 | 0.039 U | 89 | 65-146 | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.5* | | | *mg/kg dry* | *1.73* | | *86* | *56-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.4* | | | *mg/kg dry* | *1.73* | | *82* | *50-117* | | | |
| *Surrogate: Terphenyl-d14* | *1.5* | | | *mg/kg dry* | *1.73* | | *90* | *36-151* | | | |

**Matrix Spike Dup (2I28015-MSD1)** Prepared: 09/28/2012 09:29 Analyzed: 10/03/2012 16:46

**Source: C211362-05**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 1.4 | | 0.34 | mg/kg dry | 1.73 | 0.027 U | 79 | 51-121 | 1 | 10 | |
| 1,4-Dichlorobenzene | 1.4 | | 0.34 | mg/kg dry | 1.73 | 0.022 U | 82 | 48-118 | 4 | 13 | |
| 2,4-Dinitrotoluene | 1.6 | | 0.34 | mg/kg dry | 1.73 | 0.029 U | 92 | 63-127 | 0.9 | 10 | |
| Acenaphthene | 1.5 | | 0.34 | mg/kg dry | 1.73 | 0.029 U | 87 | 64-131 | 0.9 | 19 | |
| N-Nitroso-di-n-propylamine | 1.5 | | 0.34 | mg/kg dry | 1.73 | 0.084 U | 89 | 55-135 | 0.7 | 10 | |

## QUALITY CONTROL

### Semivolatile Organic Compounds by GCMS - Quality Control

*Batch 2I28015 - EPA 3550C_MS*

**Matrix Spike Dup (2I28015-MSD1) Continued** Prepared: 09/28/2012 09:29 Analyzed: 10/03/2012 16:46

**Source: C211362-05**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pyrene | 1.5 | | 0.34 | mg/kg dry | 1.73 | 0.039 U | 88 | 65-146 | 1 | 50 | |
| *Surrogate: 2-Fluorobiphenyl* | *1.5* | | | *mg/kg dry* | *1.73* | | *86* | *56-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.4* | | | *mg/kg dry* | *1.73* | | *83* | *50-117* | | | |
| *Surrogate: Terphenyl-d14* | *1.5* | | | *mg/kg dry* | *1.73* | | *88* | *36-151* | | | |

### Metals by EPA 6000/7000 Series Methods - Quality Control

*Batch 2I25027 - EPA 3050B*

**Blank (2I25027-BLK1)** Prepared: 09/26/2012 14:01 Analyzed: 09/27/2012 13:29

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 0.100 | U | 0.500 | mg/kg wet | | | | | | | |
| Lead | 0.120 | U | 0.500 | mg/kg wet | | | | | | | |

**LCS (2I25027-BS1)** Prepared: 09/26/2012 14:01 Analyzed: 09/27/2012 13:31

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.59 | | 0.500 | mg/kg wet | 10.1 | | 95 | 80-120 | | | |
| Lead | 9.67 | | 0.500 | mg/kg wet | 10.1 | | 96 | 80-120 | | | |

**Matrix Spike (2I25027-MS1)** Prepared: 09/26/2012 14:01 Analyzed: 09/27/2012 13:42

**Source: C211363-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 25.4 | | 0.573 | mg/kg dry | 11.5 | 14.8 | 93 | 75-125 | | | |
| Lead | 19.8 | | 0.573 | mg/kg dry | 11.5 | 7.85 | 105 | 75-125 | | | |

**Matrix Spike Dup (2I25027-MSD1)** Prepared: 09/26/2012 14:01 Analyzed: 09/27/2012 13:44

**Source: C211363-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 21.5 | | 0.573 | mg/kg dry | 11.3 | 14.8 | 60 | 75-125 | 17 | 20 | QM-07 |
| Lead | 17.0 | | 0.573 | mg/kg dry | 11.3 | 7.85 | 80 | 75-125 | 16 | 20 | |

**Post Spike (2I25027-PS1)** Prepared: 09/26/2012 14:01 Analyzed: 09/27/2012 13:46

**Source: C211363-01**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 0.434 | | 0.0100 | mg/L | 0.200 | 0.258 | 88 | 80-120 | | | |
| Lead | 0.321 | | 0.0100 | mg/L | 0.200 | 0.137 | 92 | 80-120 | | | |

## QUALITY CONTROL

### Classical Chemistry Parameters - Quality Control

*Batch 2I28002 - EPA 1664A*

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## QUALITY CONTROL

### Classical Chemistry Parameters - Quality Control

**Blank (2I28002-BLK1)** Prepared: 09/28/2012 08:20 Analyzed: 10/01/2012 15:19

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil & Grease (HEM-SGT) Non-Polar Material | 50.0 | U | 50.0 | mg/kg wet | | | | | | | |

**LCS (2I28002-BS1)** Prepared: 09/28/2012 08:20 Analyzed: 10/01/2012 15:19

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil & Grease (HEM-SGT) Non-Polar Material | 1070 | | 50.0 | mg/kg wet | 1000 | | 106 | 51-113 | | | |

**Matrix Spike (2I28002-MS1)** Prepared: 09/28/2012 08:20 Analyzed: 10/01/2012 15:19

**Source: C211362-02**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil & Grease (HEM-SGT) Non-Polar Material | 1100 | | 51.7 | mg/kg dry | 1030 | 92.7 | 98 | 51-113 | | | |

**Matrix Spike Dup (2I28002-MSD1)** Prepared: 09/28/2012 08:20 Analyzed: 10/01/2012 15:19

**Source: C211362-02**

| Analyte | Result | Flag | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil & Grease (HEM-SGT) Non-Polar Material | 1080 | | 51.7 | mg/kg dry | 1040 | 92.7 | 95 | 51-113 | 2 | 13 | |

## FLAGS/NOTES AND DEFINITIONS

| | |
|---|---|
| B | The analyte was detected in the associated method blank. |
| D | The sample was analyzed at dilution. |
| J | The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable. |
| U | The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable. |
| E | The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate. |
| MRL | Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content. |
| QM-07 | The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery. |
| QV-01 | The associated continuing calibration verification standard exhibited high bias; since the result is ND, the impact on data quality is minimal. |
| QV-02 | The associated continuing calibration verification standard exhibited low bias; the reported result should be considered to be a minimum estimate. |
| R-05 | The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits. |

# ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

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

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Page 1 of 21

| | |
|---|---|
| Client Name: Duncklee & Dunham, PC (DU009) | Project Number: ~~301234~~ 301237 |
| Address: 511 Keisler Drive, Suite 102 | Project Name/Desc: Wilmington Materials |
| City/ST/Zip: Cary, NC 27518 | PO # / Billing Info: |
| Tel: (919) 853-9898 Fax: — | Reporting Contact: Jayson A. Kilcoyne |
| Sampler(s) Name, Affiliation (Print): Jayson Kilcoyne | Billing Contact: Rick Kolb |
| Sampler(s) Signature: [signature] | Site Location / Time Zone: Wilmington, NC |

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

Lab Workorder: C211362

| Item # | Sample ID (Field Identification) | Collection Date | Collection Time | Comp / Grab | Matrix (see codes) | Total # of Containers | %Solids | %Solids,8270D | %Solids,Cr,O&G 9071B SGT,Pb | 8260B | | | | | | | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Disposal Sample | 9/24/12 | 1305 | Grab | SO | 5* | X | X | | X | | | | | | | |
| | SS-17 1' | ↓ | 1420 | ↓ | SO | 6* | X | | X | X | | | | | | | |
| | SS-18 3.5' | ↓ | 1425 | ↓ | SO | 6* | X | | X | X | | | | | | | |
| | SS-19 2' | ↓ | 1428 | ↓ | SO | 6* | X | | X | X | | | | | | | |
| | SS-20 3' | ↓ | 1458 | ↓ | SO | 5* | X | X | | X | | | | | | | |
| | SS-21 2' | ↓ | 1502 | ↓ | SO | 5* | X | X | | X | | | | | | | |
| | SS-22 2' | ↓ | 1505 | ↓ | SO | 5* | X | X | | X | | | | | | | |
| | | | | | SO | 4 | X | | | X | | | | | | | |
| | | | | | SO | 4 | X | | | X | | | | | | | |
| | | | | | SO | 4 | X | | | X | | | | | | | |
| | | | | | SO | 4 | X | | | X | | | | | | | |
| | | | | | SO | 4 | X | | | X | | | | | | | |

Preservation (See Codes) (Combine as necessary)

<-- Total # of Containers

| | | | | | |
|---|---|---|---|---|---|
| Sample Kit Prepared By: CS | Date/Time: 9/21/12 | Relinquished By: [signature] | Date/Time: 9/25/12 | Received By: Rachel Yarnell | Date/Time: 9-25-12 1100 |
| Comments/Special Reporting Requirements: | | Relinquished By: | Date/Time: | Received By: | Date/Time: |
| | | Relinquished By: | Date/Time: | Received By: | Date/Time: |

Cooler #'s & Temps on Receipt: 1.9°c C-332 Red

Condition Upon Receipt: X 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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# WELL ABANDONMENT RECORD

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

**WELL CONTRACTOR CERTIFICATION #** 3470-A

**1. WELL CONTRACTOR:**

William M Wiggins
Well Contractor (Individual) Name

Mid-Atlantic Drilling, Inc.
Well Contractor Company Name

STREET ADDRESS PO Box 315

Carolina Beach, NC 28428
City or Town State Zip Code

( 910 ) - 458-5020
Area code - Phone number

**2. WELL INFORMATION:**

**SITE WELL ID #** (if applicable) Maintenance building well

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

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

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

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

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

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

☐ Other (list use) _____

**3. WELL LOCATION:**

COUNTY New Hanove QUADRANGLE NAME _____

NEAREST TOWN: Wilmington

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

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other _____

(Check appropriate setting)

LATITUDE 34 . 17' 41.33" N

LONGITUDE 77. 58' 03.77" W

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

**Latitude/longitude source:** ☑ **GPS** ☐ **Topographic map**

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

**4a. FACILITY**- The name of the business where the well is located. Complete 4a and4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

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

NAME OF FACILITY Wilmington Materials

STREET ADDRESS 3612 Highway 421

Wilmington NC 28401
City or Town State Zip Code

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

NAME Randy Gainey - Waste Industries, Inc.

STREET ADDRESS 3618 Hwy 421 N, Wilmington, NC

**5. WELL DETAILS:**

a. Total Depth: 23.5 ft. Diameter: 2 in.

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

Measuring point is _____ ft. above land surface.

**6. CASING:**

| | Length | Diameter |
|---|---|---|
| a. Casing Depth (if known): | _____ ft. | _____ in. |
| b. Casing Removed: | NA ft. | _____ in. |

**7. DISINFECTION:** _____

(Amount of 65%-75% calcium hypochlorite used)

**8. SEALING MATERIAL:**

**Neat Cement**

Cement _____ lb.
Water _____ gal.

**Sand Cement**

Cement _____ lb.
Water _____ gal.

**Bentonite**

Bentonite lb.

Type: ☐ Slurry ☑ Pellets

Water _____ gal.

**Other**

Type material Bentonite Pellets

Amount 50 lb bag

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

Pour bentonite into casing up to one foot from the top of casing

Poured neat cement to top of casing

**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** 9/24/12

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.

William M Wiggins
**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.)

William Wiggins
**PRINTED NAME OF PERSON ABANDONING THE WELL**

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

Form GW-30
Rev. 5/06

# WELL ABANDONMENT RECORD

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

**WELL CONTRACTOR CERTIFICATION #** 3470-A

**1. WELL CONTRACTOR:**

William M Wiggins
Well Contractor (Individual) Name

Mid-Atlantic Drilling, Inc.
Well Contractor Company Name

STREET ADDRESS PO Box 315

Carolina Beach, NC 28428
City or Town State Zip Code

(910) - 458-5020
Area code - Phone number

**2. WELL INFORMATION:**

**SITE WELL ID #** (if applicable) office building well

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

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

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

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

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

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

☐ Other (list use) _____

**3. WELL LOCATION:**

COUNTY New Hanove QUADRANGLE NAME _____

NEAREST TOWN: Wilmington

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

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other _____

(Check appropriate setting)

LATITUDE 34 . 17' 41.33" N

LONGITUDE 77. 58' 03.77" W

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

**Latitude/longitude source:** ☑ **GPS** ☐ **Topographic map**

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

**4a. FACILITY**- The name of the business where the well is located. Complete 4a and4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

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

NAME OF FACILITY Wilmington Materials

STREET ADDRESS 3612 Highway 421

Wilmington NC 28401
City or Town State Zip Code

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

NAME Randy Gainey - Waste Industries, Inc.

STREET ADDRESS 3618 Hwy 421 N, Wilmington, NC

**5. WELL DETAILS:**

a. Total Depth: 23.5 ft. Diameter: 2 in.

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

Measuring point is _____ ft. above land surface.

**6. CASING:** Length Diameter

a. Casing Depth (if known): _____ ft. _____ in.

b. Casing Removed: NA ft. _____ in.

**7. DISINFECTION:** _____

(Amount of 65%-75% calcium hypochlorite used)

**8. SEALING MATERIAL:**

**Neat Cement**

Cement _____ lb.
Water _____ gal.

**Sand Cement**

Cement _____ lb.
Water _____ gal.

**Bentonite**

Bentonite lb.

Type: ☐ Slurry ☑ Pellets

Water _____ gal.

**Other**

Type material Bentonite Pellets

Amount 50 lb bag

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

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William M Wiggins

**SIGNATURE OF CERTIFIED WELL CONTRACTOR** **DATE**

**SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL** **DATE**

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William Wiggins

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