



Advanced Environmental Concepts, Inc.

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## **Q2 2015 Groundwater Sampling Report**

Fork BP  
12601 Harford Rd  
Kingsville, MD 21087

MDE Case # 2006-0825-BA

Prepared For:

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Carroll Independent Fuel Company  
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Baltimore, MD 21218

July 13, 2015

SIGNATURE SHEET

Prepared by:

Name: J. Brendan Haffey

A handwritten signature in black ink that reads "J. Brendan Haffey". The signature is written in a cursive style with a large, sweeping initial "J" and a long, horizontal flourish at the end.

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## **1.0 Introduction**

AEC, Inc. has prepared the following Report of Monitoring Well Sampling to satisfy the requirements set forth by the Maryland Department of the Environment (MDE) for the Fork BP Project located at 12601 Harford Rd. Kingsville, MD 21087; referred to herein as the "site".

### **1.1 History**

MDE OCP Case # 2006-0865-BA was opened in 2005 after the installation and sampling of three (3) groundwater monitoring wells in accordance with the high risk groundwater use area (HRGUA) regulations. Groundwater samples collected from the monitoring well network as well as the on-site drinking water well were found to contain elevated concentrations of MTBE. Subsequent sampling of ten (10) off-site drinking water wells has led to the installation and maintenance of granular activated carbon (GAC) filtration units at three (3) off site locations. These GACs have been sampled and maintained on a regular basis since April of 2006.

AEC has taken over project oversight as of 09/01/2010. The monitoring well network is currently required by MDE to be sampled and analyzed for the presence of volatile organic compounds (VOCs) by EPA Method 8260 on a semi-annual basis.

The domestic supply well (DSW) and associated granular activated carbon (GAC) treatment system for 12609 Harford Rd is required to be sampled on a quarterly basis and the site's potable well is required to be sampled on an annual basis for the presence of VOCs by EPA method 524.2.

In February of 2013 AEC requested that the site's GAC unit be removed as well as the GAC units located at 12613 and 12617 Harford Rd be removed based on consistent influent concentrations of MTBE below the regulatory standard of 20 ug/L. Removal of the GAC units was approved by MDE in a letter dated June 10, 2013; the GAC units were removed on July 3, 2013 from 12601, 12613, and 12617 Harford Rd.

## **2.0 Groundwater Monitoring**

### **2.1 Domestic Supply Well Sampling**

On 06/22/2015 AEC sampled the point of entry treatment (POET) system of the adjoining property located at 12609 Harford Rd., and the DSW from 12613 Harford Rd. The samples were collected by an MDE certified Drinking Water sampler. These samples were analyzed for the presence of VOCs by EPA Method 524.2.

Sampling frequency for DSWs and POET systems associated to the site can be found in the table below:

| Address          | Type | Frequency | Date Last Sampled | Date of Next Sampling Event |
|------------------|------|-----------|-------------------|-----------------------------|
| 12601 Harford Rd | DSW  | Annual    | March, 2015       | March, 2016                 |
| 12609 Harford Rd | POET | Quarterly | June, 2015        | September, 2015             |
| 12613 Harford Rd | DSW  | Annual*   | June, 2015        | June, 2016                  |
| 12617 Harford Rd | DSW  | Annual*   | March, 2015       | March, 2016                 |

\* Per MDE's June 10, 2013 SAMPLING REDUCTION APPROVAL, these sites must be sampled for at least one year to verify the absence of petroleum impact

## 2.2 Monitoring Well Gauging & Sampling

On 06/22/2015 AEC personnel arrived onsite and gauged all wells for the presence of liquid phase hydrocarbons (LPH) and depth to groundwater. LPH was not detected in any of the wells. Measurements were made using an oil/water interface meter.

After gauging, each well was purged a total of three well volumes of water. Purged groundwater was treated with activated carbon prior to being discharged to the ground. After purging, groundwater was allowed to recover to a minimum of 90% pre purge levels prior to sample collection. Groundwater samples were collected using pre-packaged, single use, disposable bailers and placed in laboratory supplied VOAs. After collection samples were placed in a cooler with ice and chain of custody record for delivery to the laboratory to be analyzed by EPA Method 8260 for volatile organic compounds (VOCs).

## 3.0 Results

### 3.1 Domestic Supply Well Sampling Results

The 06/22/2015 samples collected at 12609 Harford Rd indicated levels of dissolved phase hydrocarbons in the influent (pre-treatment), intermediate, and effluent. Influent (pre-treatment), intermediate, and effluent concentrations of VOCs detected in the sample collected from the DSW POET located at 12609 Harford Rd are summarized below:

**Influent-** Toluene – 1.88 ug/L

**Intermediate-** Toluene – 1.86 ug/L

**Effluent-** Toluene – 1.78 ug/L

\*Due to the concentrations of Toluene in the effluent samples AEC will replace the POET system carbon to ensure proper treatment of groundwater as soon as possible.

An *Analytical Summary Table* summarizing all DSW sampling conducted for the site to this date can be found in Appendix B. A full Report of Analysis and Chain of Custody Record can be found in Appendix C.

### **3.2 Monitoring Well Sampling Results**

Method detectable concentrations were not observed in any of the MWs sampled on 06/22/2015. A full Report of Analysis and Chain of Custody Record can be found in Appendix C.

### **3.3 Groundwater Elevation**

Groundwater elevations ranged from 73.87 feet (highest) in MW-1 to 68.80 (lowest) in MW-2; these two MWs are approximately one-hundred (100) feet apart resulting in a hydraulic gradient of 0.1007 feet/foot. Groundwater elevation contours, created using the depth to groundwater measurements collected on 06/22/2015, show groundwater flow on-site to the northwest in the direction of MW-2. The groundwater elevation contour map can be found in Appendix A. The gauging and elevation data can be found in a table in Appendix B.

### **4.0 Future Activities**

AEC on behalf of Carroll Independent Fuel Company plans to continue the required quarterly sampling of the POET located at 12609 Harford Rd, the annual sampling of the DSWs located at 12601, 12613, and 12617 Harford Rd, and the biannual sampling of the site monitoring wells.

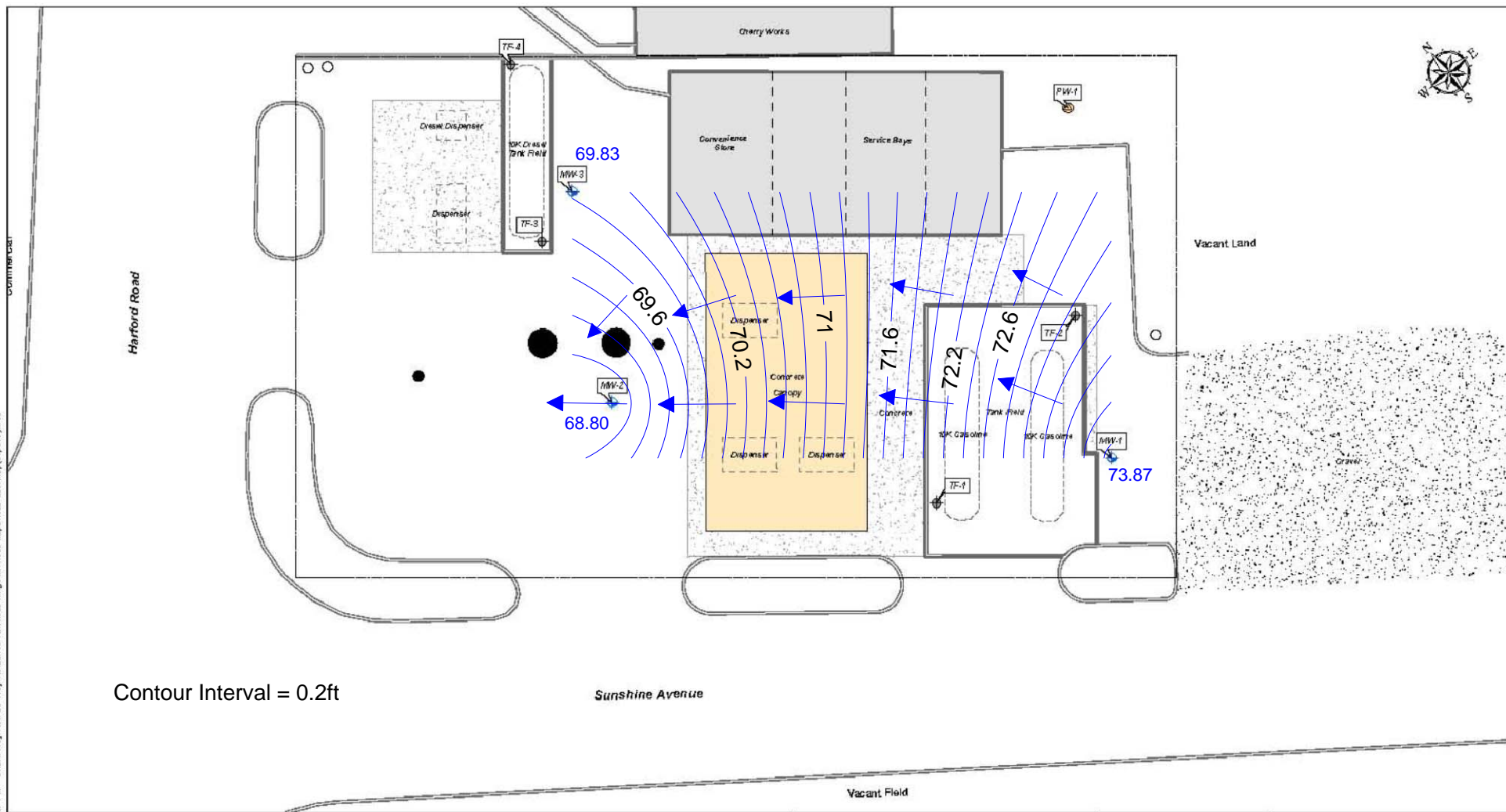
### **5.0 Limitations**

The scope of work is limited to the activities and results contained in this report. Industry standard hydrogeologic investigative procedures and protocol were used in order to complete the scope of work. No other warranty expressed or implied is made.

### **6.0 Appendices**

**Appendix A**  
**Site Maps**

# Carroll Fuel Fork BP Groundwater Elevation Contour Map Q2 2015



Contour Interval = 0.2ft

Sunshine Avenue

Vacant Field

**Legend**

- Monitoring Well
- Tank Field Well
- Potable Well
- Vent Line
- Curb
- Approximate Property Boundary
- Retaining Wall
- Utility Manhole
- Building
- Canopy
- Concrete
- Dispenser
- Gravel
- Tank Field
- UST



Source: Site features based on Baltimore County, MD aerial orthophotography (1988-1998)

**AEC, Inc.**

Fork BP (Former Fork Citgo)  
12601 Harford Road  
Kingsville, Maryland  
Groundwater Elevation  
Drawing Q2 2015

|              |              |               |             |
|--------------|--------------|---------------|-------------|
| DESIGNED BY: | OWNER:       | PROJECTED BY: | FIGURE NO.: |
| APPROVED BY: | GAS          | DATE:         | 1           |
|              | PROJECT NO.: | 11/6/2010     |             |

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**Appendix B**  
**Historical Groundwater Monitoring & Analytical Tables**

Fork BP  
12601 Harford Rd, Kingsville, MD 21087  
Monitoring Well Gauging Summary Table

| Well ID         | Date of Sample | Depth to Groundwater | Depth to Product | LPH Thickness | GW Elevation |
|-----------------|----------------|----------------------|------------------|---------------|--------------|
| MW-1            | 08/05/05       | 27.28                | ND               | ND            | 70.42        |
| TOC Elevation = | 02/16/06       | 24.60                | ND               | ND            | 73.10        |
| 97.70           | 03/14/06       | 25.10                | ND               | ND            | 72.60        |
|                 | 08/15/06       | 24.65                | ND               | ND            | 73.05        |
|                 | 02/27/07       | 26.50                | ND               | ND            | 71.20        |
|                 | 08/13/07       | Dry                  | ND               | ND            | NA           |
|                 | 02/06/08       | Dry                  | ND               | ND            | NA           |
|                 | 5/8/2008       | 27.82                | ND               | ND            | 69.88        |
|                 | 8/6/2008       | 28.92                | ND               | ND            | 68.78        |
|                 | 12/11/08       | Dry                  | ND               | ND            | NA           |
|                 | 02/10/09       | Dry                  | ND               | ND            | NA           |
|                 | 05/01/09       | 28.00                | ND               | ND            | 69.70        |
|                 | 11/12/09       | 25.48                | ND               | ND            | 72.22        |
|                 | 5/10/2010      | 23.92                | ND               | ND            | 73.78        |
|                 | 10/16/2010     | 28.09                | ND               | ND            | 69.61        |
|                 | 5/27/2011      | 24.69                | ND               | ND            | 73.01        |
|                 | 12/22/2011     | 26.17                | ND               | ND            | 71.53        |
|                 | 6/13/2012      | 28.93                | ND               | ND            | 68.77        |
|                 | 12/6/2012      | Dry                  | ND               | ND            | NA           |
|                 | 7/3/2013       | 28.23                | ND               | ND            | 69.47        |
|                 | 12/5/2013      | Dry                  | ND               | ND            | NA           |
|                 | 6/19/2014      | 23.70                | ND               | ND            | 74.00        |
|                 | 12/11/2014     | 27.34                | ND               | ND            | 70.36        |
|                 | 6/22/2015      | 23.83                | ND               | ND            | 73.87        |
|                 |                |                      |                  |               |              |
| MW-2            | 08/05/05       | 30.49                | ND               | ND            | 68.23        |
| TOC Elevation = | 02/16/06       | 30.59                | ND               | ND            | 68.13        |
| 98.72           | 03/14/06       | 30.03                | ND               | ND            | 68.69        |
|                 | 08/15/06       | 27.74                | ND               | ND            | 70.98        |
|                 | 02/27/07       | 30.11                | ND               | ND            | 68.61        |
|                 | 08/13/07       | 31.56                | ND               | ND            | 67.16        |
|                 | 2/6/2008       | 34.10                | ND               | ND            | 64.62        |
|                 | 5/8/2008       | 32.73                | ND               | ND            | 65.99        |
|                 | 8/6/2008       | 32.82                | ND               | ND            | 65.90        |
|                 | 12/11/2008     | 35.17                | ND               | ND            | 63.55        |
|                 | 2/10/2009      | 35.12                | ND               | ND            | 63.60        |
|                 | 05/01/09       | 34.74                | ND               | ND            | 63.98        |
|                 | 11/12/09       | 31.06                | ND               | ND            | 67.66        |
|                 | 5/10/2010      | 27.35                | ND               | ND            | 71.37        |
|                 | 10/6/2010      | 32.03                | ND               | ND            | 66.69        |
|                 | 5/27/2011      | 29.48                | ND               | ND            | 69.24        |
|                 | 12/22/2011     | 30.88                | ND               | ND            | 67.84        |
|                 | 6/13/2012      | 32.42                | ND               | ND            | 66.30        |
|                 | 12/6/2012      | 35.13                | ND               | ND            | 63.59        |
|                 | 7/3/2013       | 32.86                | ND               | ND            | 65.86        |
|                 | 12/5/2013      | 34.33                | ND               | ND            | 64.39        |
|                 | 6/19/2014      | 27.93                | ND               | ND            | 70.79        |
|                 | 12/11/2014     | 31.81                | ND               | ND            | 66.91        |

Fork BP  
 12601 Harford Rd, Kingsville, MD 21087  
 Monitoring Well Gauging Summary Table

| Well ID         | Date of Sample | Depth to Groundwater | Depth to Product | LPH Thickness | GW Elevation |
|-----------------|----------------|----------------------|------------------|---------------|--------------|
| MW-2            | 6/22/2015      | 29.92                | ND               | ND            | 68.80        |
| MW-3            | 08/05/05       | 29.53                | ND               | ND            | 68.11        |
| TOC Elevation = | 02/16/06       | 27.60                | ND               | ND            | 70.04        |
| 97.64           | 03/14/06       | 29.14                | ND               | ND            | 68.50        |
|                 | 08/15/06       | 26.98                | ND               | ND            | 70.66        |
|                 | 02/27/07       | 28.70                | ND               | ND            | 68.94        |
|                 | 08/13/07       | 30.66                | ND               | ND            | 66.98        |
|                 | 2/6/2008       | 33.15                | ND               | ND            | 64.49        |
|                 | 5/8/2008       | 31.72                | ND               | ND            | 65.92        |
|                 | 8/6/2008       | 31.91                | ND               | ND            | 65.73        |
|                 | 12/11/2008     | 34.43                | ND               | ND            | 63.21        |
|                 | 2/10/2009      | 34.34                | ND               | ND            | 63.30        |
|                 | 05/01/09       | 33.82                | ND               | ND            | 63.82        |
|                 | 11/12/09       | 30.04                | ND               | ND            | 67.60        |
|                 | 5/10/2010      | 26.40                | ND               | ND            | 71.24        |
|                 | 10/6/2010      | 30.76                | ND               | ND            | 66.88        |
|                 | 5/27/2011      | 28.34                | ND               | ND            | 69.30        |
|                 | 12/22/2011     | 29.54                | ND               | ND            | 68.10        |
|                 | 6/13/2012      | 31.14                | ND               | ND            | 66.50        |
|                 | 12/6/2012      | 33.81                | ND               | ND            | 63.83        |
|                 | 7/3/2013       | 32.03                | ND               | ND            | 65.61        |
|                 | 12/5/2013      | 33.65                | ND               | ND            | 65.07        |
|                 | 6/19/2014      | 27.46                | ND               | ND            | 71.26        |
|                 | 12/11/2014     | 30.86                | ND               | ND            | 67.86        |
|                 | 6/22/2015      | 28.89                | ND               | ND            | 69.83        |
| TF-1            | 08/13/07       | LOCKED               | -                | -             | -            |
|                 | 02/06/08       | LOCKED               | -                | -             | -            |
|                 | 05/08/08       | LOCKED               | -                | -             | -            |
|                 | 08/06/08       | LOCKED               | -                | -             | -            |
|                 | 12/11/08       | LOCKED               | -                | -             | -            |
|                 | 02/10/09       | LOCKED               | -                | -             | -            |
|                 | 05/01/09       | LOCKED               | -                | -             | -            |
|                 | 11/12/09       | LOCKED               | -                | -             | -            |
|                 | 5/10/2010      | LOCKED               | -                | -             | -            |
|                 | 10/6/2010      | DRY                  | -                | -             | -            |
| TF-2            | 8/13/2007      | DRY                  | -                | -             | -            |
|                 | 2/6/2008       | DRY                  | -                | -             | -            |
|                 | 5/8/2008       | DRY                  | -                | -             | -            |
|                 | 8/6/2008       | DRY                  | -                | -             | -            |
|                 | 12/11/2008     | DRY                  | -                | -             | -            |
|                 | 2/10/2009      | DRY                  | -                | -             | -            |
|                 | 5/1/2009       | DRY                  | -                | -             | -            |
|                 | 11/12/2009     | DRY                  | -                | -             | -            |

Fork BP  
 12601 Harford Rd, Kingsville, MD 21087  
 Monitoring Well Gauging Summary Table

| Well ID    | Date of Sample | Depth to Groundwater | Depth to Product | LPH Thickness | GW Elevation |
|------------|----------------|----------------------|------------------|---------------|--------------|
| TF-2       | 5/10/2010      | DRY                  | -                | -             | -            |
|            | 10/6/2010      | DRY                  | -                | -             | -            |
| TF-3       | 08/13/07       | DRY                  | -                | -             | -            |
|            | 02/06/08       | DRY                  | -                | -             | -            |
|            | 05/08/08       | DRY                  | -                | -             | -            |
|            | 08/06/08       | DRY                  | -                | -             | -            |
|            | 12/11/08       | DRY                  | -                | -             | -            |
|            | 02/10/09       | DRY                  | -                | -             | -            |
|            | 05/01/09       | DRY                  | -                | -             | -            |
|            | 11/12/09       | DRY                  | -                | -             | -            |
|            | 5/10/2010      | DRY                  | -                | -             | -            |
|            | 10/6/2010      | DRY                  | -                | -             | -            |
|            | TF-4           | 8/13/2007            | BLOCKED          | -             | -            |
| 2/6/2008   |                | DRY                  | -                | -             | -            |
| 5/8/2008   |                | DRY                  | -                | -             | -            |
| 8/6/2008   |                | DRY                  | -                | -             | -            |
| 12/11/2008 |                | DRY                  | -                | -             | -            |
| 2/10/2009  |                | DRY                  | -                | -             | -            |
| 5/1/2009   |                | DRY                  | -                | -             | -            |
| 11/12/2009 |                | DRY                  | -                | -             | -            |
| 5/10/2010  |                | DRY                  | -                | -             | -            |
| 10/6/2010  |                | DRY                  | -                | -             | -            |

ND - Non-detect  
 NA - Not Applicable





Fork BP  
12601 Harford Rd, Kingsville, MD 21087  
Monitoring Well Sampling Analytical Summary Table

| Well ID  | Date       | Benzene  | Toluene     | Ethylbenzene | Xylenes      | Total BTEX | Naphthalene | MTBE      | TPH/DRO   | TPH/GRO   | TCE |
|--|------------|----------|-------------|--------------|--------------|------------|-------------|-----------|-----------|-----------|-----|
| <b>MDE GNCS<br/>CLEANUP<br/>Type I&amp;II<br/>Aquifers</b> |            | <b>5</b> | <b>1000</b> | <b>700</b>   | <b>10000</b> | <b>NG</b>  | <b>10</b>   | <b>20</b> | <b>47</b> | <b>47</b> |     |
| MW-3   | 08/05/05   | ND       | ND          | ND           | ND           | ND         | ND          | 20        | --        | --        |     |
|  | 02/16/06   | ND       | ND          | ND           | ND           | ND         | ND          | 36        | 71 J      | 42 J      |     |
|  | 03/14/06   | ND       | ND          | ND           | ND           | ND         | ND          | 41        | 340 J     | 62        |     |
|  | 08/15/06   | ND       | ND          | ND           | ND           | ND         | ND          | 29        | < 290     | 34 J      |     |
|  | 02/27/07   | ND       | ND          | ND           | ND           | ND         | ND          | 25        | 98        | 36 J      |     |
|  | 08/13/07   | ND       | ND          | ND           | ND           | ND         | ND          | 21        | 120       | 28 J      |     |
|  | 2/6/2008   | ND       | ND          | ND           | ND           | ND         | ND          | 22        | < 150     | 29 J      |     |
|  | 5/8/2008   | ND       | ND          | ND           | ND           | ND         | ND          | 24        | 560       | 39 J      |     |
|  | 8/6/2008   | ND       | ND          | ND           | ND           | ND         | ND          | 29        | 370 J     | 23 J      |     |
|  | 12/11/2008 | ND       | ND          | ND           | ND           | ND         | ND          | 6         | 1,900     | < 20      |     |
|  | 2/10/2009  | ND       | ND          | ND           | ND           | ND         | ND          | 16.6      | 146 J     | < 25.0    |     |
|  | 05/01/09   | ND       | ND          | ND           | ND           | ND         | ND          | 6.92      | --        | --        |     |
|  | 11/12/09   | ND       | ND          | ND           | ND           | ND         | ND          | 12.8      | --        | --        |     |
|  | 5/10/2010  | ND       | ND          | ND           | ND           | ND         | ND          | 11.0      | --        | --        |     |
|  | 10/6/2010  | ND       | ND          | ND           | ND           | ND         | ND          | 26.3      | NS        | NS        |     |
|  | 5/27/2011  | ND       | ND          | ND           | ND           | ND         | ND          | 9.28      | NS        | NS        |     |
|  | 12/22/2011 | ND       | ND          | ND           | ND           | ND         | ND          | ND        | NS        | NS        |     |
|  | 6/13/2012  | ND       | ND          | ND           | ND           | ND         | ND          | ND        | NS        | NS        |     |
|  | 12/6/2012  | ND       | ND          | ND           | ND           | ND         | ND          | ND        | NS        | NS        |     |
|  | 7/3/2013   | ND       | ND          | ND           | ND           | ND         | ND          | ND        | NS        | NS        |     |
|  | 12/5/2013  | ND       | ND          | ND           | ND           | ND         | ND          | ND        | ND        | ND        |     |
|  | 6/19/2014  | ND       | ND          | ND           | ND           | ND         | ND          | ND        | NS        | NS        |     |
|  | 12/11/2014 | ND       | ND          | ND           | ND           | ND         | ND          | ND        | ND        | ND        | ND  |
|  | 6/22/2015  | ND       | ND          | ND           | ND           | ND         | ND          | ND        | ND        | ND        | ND  |

Groundwater Sampling Data reported in ug/L

Values exceeding the specified MDE criteria are **bolded**

ND - Concentrations below method detectable levels

NA - Not Applicable

NG - No Guidance

NS - Not Sampled







**Fork BP**  
**12601 Harford Rd, Kingsville, MD 21087**  
**POET System and DSW VOC Sampling Summary Table**

| ID                                      | Date     | Benzene ug/L | Toluene ug/L | Ethylbenzene ug/L | Xylenes ug/L  | Total BTEX ug/L | MTBE ug/L      | TAME ug/L | TBA ug/L  | DIPE ug/L | Methylene Chloride | TCE      |
|---|----------|--------------|--------------|-------------------|---------------|-----------------|----------------|-----------|-----------|-----------|--------------------|----------|
| <b>MDE GNCS, Type I and II Aquifers</b> |          | <b>5</b>     | <b>1,000</b> | <b>700</b>        | <b>10,000</b> | <b>NG</b>       | <b>20</b>      | <b>NG</b> | <b>NG</b> | <b>NG</b> | <b>5</b>           | <b>5</b> |
| <b>12609 Harford Road</b>               | 4/25/06  | ND           | ND           | ND                | ND            | ND              | <b>138</b>     | ND        | ND        | ND        | ND                 | ND       |
| <b>Influent</b>                         | 5/26/06  | ND           | 23.0         | 0.80              | 2.50          | 26.3            | <b>87.0</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 6/14/06  | ND           | 0.1 J        | ND                | ND            | ND              | <b>110</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 7/18/06  | ND           | 5.00         | ND                | ND            | 5.00            | <b>140</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 8/15/06  | ND           | 8.20         | ND                | ND            | 8.20            | <b>160</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 9/14/06  | ND           | 0.4 J        | ND                | ND            | ND              | <b>140</b>     | ND        | 5.1 J     | ND        | ND                 | ND       |
|   | 10/19/06 | ND           | 1.10         | ND                | ND            | 1.10            | <b>130</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 11/27/06 | ND           | 1.00         | ND                | ND            | 1.00            | <b>100</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 12/21/06 | ND           | 0.4 J        | ND                | ND            | ND              | <b>98.0</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 1/11/07  | ND           | 0.90         | ND                | ND            | 0.90            | <b>97.0</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 2/27/07  | ND           | 2.90         | ND                | ND            | 2.90            | <b>84.0</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 3/15/07  | ND           | 0.6 J        | ND                | ND            | ND              | <b>86.0</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 5/16/07  | ND           | 0.1 J        | ND                | ND            | ND              | <b>69.0</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 8/13/07  | ND           | 4.70         | ND                | ND            | 4.70            | < 0.1          | ND        | ND        | ND        | ND                 | ND       |
|   | 11/9/07  | ND           | 0.90         | ND                | ND            | 0.90            | <b>75.0</b>    | 0.50 J    | ND        | ND        | ND                 | ND       |
|   | 2/6/08   | ND           | 0.60         | ND                | ND            | 0.60            | <b>88.0</b>    | 0.80      | ND        | ND        | ND                 | ND       |
|   | 5/8/08   | ND           | 0.3 J        | ND                | ND            | ND              | <b>120 E †</b> | 1.90      | ND        | ND        | ND                 | ND       |
|   | 8/6/08   | ND           | 3.20         | ND                | ND            | 3.20            | <b>110</b>     | 2.00      | ND        | ND        | ND                 | ND       |
|   | 11/14/08 | ND           | 1.00         | ND                | ND            | 1.00            | <b>120</b>     | 2.60      | ND        | ND        | ND                 | ND       |
|   | 2/10/09  | ND           | 3.63         | ND                | ND            | 3.63            | <b>202</b>     | 2.78      | ND        | ND        | ND                 | ND       |
|   | 5/1/09   | ND           | 0.60         | ND                | ND            | 0.60            | <b>89.0</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 8/14/09  | ND           | ND           | ND                | ND            | ND              | <b>65.5</b>    | 1.44      | ND        | ND        | ND                 | ND       |
|   | 11/12/09 | ND           | ND           | ND                | ND            | ND              | <b>64.4</b>    | 2.30      | ND        | ND        | ND                 | ND       |
|   | 2/19/10  | ND           | ND           | ND                | ND            | ND              | <b>33.9</b>    | 1.77      | ND        | ND        | ND                 | ND       |
|   | 5/10/10  | ND           | ND           | ND                | ND            | ND              | <b>24.6</b>    | 1.33      | ND        | ND        | ND                 | ND       |
|   | 8/2/10   | ND           | 3.06         | ND                | ND            | 3.06            | <b>21.3</b>    | 1.29      | ND        | ND        | ND                 | ND       |
|   | 10/6/10  | ND           | ND           | ND                | ND            | ND              | <b>30.9</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 2/16/11  | ND           | ND           | ND                | ND            | ND              | <b>89.9</b>    | 1.25      | ND        | ND        | ND                 | ND       |
|   | 5/27/11  | ND           | ND           | ND                | ND            | ND              | <b>124</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 8/31/11  | ND           | ND           | ND                | ND            | ND              | <b>102</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 12/22/11 | ND           | ND           | ND                | ND            | ND              | <b>72.2</b>    | 0.89      | ND        | 0.66      | ND                 | ND       |
|   | 3/6/12   | ND           | ND           | ND                | ND            | ND              | <b>89.9</b>    | 1.03      | ND        | 0.79      | ND                 | ND       |
|   | 6/13/12  | ND           | ND           | ND                | ND            | ND              | <b>156</b>     | ND        | ND        | 1.65      | ND                 | ND       |
|   | 9/10/12  | ND           | ND           | ND                | ND            | ND              | <b>231</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 12/6/12  | ND           | ND           | ND                | ND            | ND              | <b>185</b>     | ND        | ND        | 2.15      | ND                 | ND       |
|   | 3/25/13  | ND           | ND           | ND                | ND            | ND              | <b>ND</b>      | ND        | ND        | 2.70      | ND                 | ND       |
|   | 9/9/13   | ND           | 0.95         | ND                | ND            | ND              | <b>545</b>     | 2.45      | ND        | 4.57      | ND                 | ND       |
|   | 12/5/13  | ND           | ND           | ND                | ND            | ND              | <b>299</b>     | 1.93      | ND        | 4.11      | ND                 | ND       |
|   | 3/25/14  | ND           | ND           | ND                | ND            | ND              | <b>162</b>     | 2.86      | ND        | 3.23      | ND                 | ND       |
|   | 6/19/14  | ND           | 32.5         | ND                | ND            | 32.5            | <b>174</b>     | 2.61      | ND        | 3.52      | ND                 | ND       |
|   | 9/23/14  | ND           | ND           | ND                | ND            | ND              | <b>500</b>     | 3.3       | ND        | 6.3       | ND                 | ND       |
|   | 12/11/14 | ND           | ND           | ND                | ND            | ND              | <b>292</b>     | ND        | ND        | ND        | ND                 | ND       |
|   | 3/3/15   | ND           | ND           | ND                | ND            | ND              | <b>32.9</b>    | ND        | ND        | ND        | ND                 | ND       |
|   | 6/22/15  | ND           | ND           | 1.88              | ND            | 2               | <b>198</b>     | ND        | ND        | 6         | ND                 | ND       |





Fork BP  
12601 Harford Rd, Kingsville, MD 21087  
POET System and DSW VOC Sampling Summary Table

| ID                                      | Date     | Benzene ug/L | Toluene ug/L | Ethylbenzene ug/L | Xylenes ug/L  | Total BTEX ug/L | MTBE ug/L   | TAME ug/L | TBA ug/L  | DIPE ug/L | Methylene Chloride | TCE      |
|---|----------|--------------|--------------|-------------------|---------------|-----------------|-------------|-----------|-----------|-----------|--------------------|----------|
| <b>MDE GNCS, Type I and II Aquifers</b> |          | <b>5</b>     | <b>1,000</b> | <b>700</b>        | <b>10,000</b> | <b>NG</b>       | <b>20</b>   | <b>NG</b> | <b>NG</b> | <b>NG</b> | <b>5</b>           | <b>5</b> |
| <b>12613 Harford Road Effluent</b>      | 10/6/10  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 2/16/11  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 5/27/11  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 8/31/11  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 12/22/11 | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 3/6/12   | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 6/13/12  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 9/10/12  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 12/6/12  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 3/25/13  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
| <b>DSW</b>                              | 7/22/13  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 6/19/14  | ND           | ND           | ND                | ND            | ND              | 1.23        | ND        | ND        | ND        | ND                 | ND       |
|   | 6/22/15  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
| <b>12617 Harford Road Influent</b>      | 5/10/06  | ND           | ND           | ND                | ND            | ND              | 15.0        | --        | --        | --        | ND                 | ND       |
|   | 6/14/06  | ND           | ND           | ND                | ND            | ND              | <b>20.0</b> | 0.2 J     | ND        | 0.1 J     | ND                 | ND       |
|   | 8/2/06   | ND           | ND           | ND                | ND            | ND              | 15.0        | 0.1 J     | ND        | 0.2 J     | ND                 | ND       |
|   | 9/14/06  | ND           | ND           | ND                | ND            | ND              | 9.70        | 0.1 J     | ND        | 0.1 J     | ND                 | ND       |
|   | 10/19/06 | ND           | ND           | ND                | ND            | ND              | <b>24.0</b> | 0.3 J     | ND        | 0.2 J     | ND                 | ND       |
|   | 11/27/06 | ND           | ND           | ND                | ND            | ND              | <b>21.0</b> | 0.2 J     | ND        | ND        | ND                 | ND       |
|   | 12/21/06 | ND           | ND           | ND                | ND            | ND              | 18.0        | 0.2 J     | ND        | ND        | ND                 | ND       |
|   | 1/11/07  | ND           | ND           | ND                | ND            | ND              | 15.0        | 0.2 J     | ND        | ND        | ND                 | ND       |
|   | 2/27/07  | ND           | ND           | ND                | ND            | ND              | 11.0        | 0.1 J     | ND        | ND        | ND                 | ND       |
|   | 3/15/07  | ND           | ND           | ND                | ND            | ND              | 15.0        | 0.2 J     | ND        | ND        | ND                 | ND       |
|   | 5/31/07  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 8/13/07  | ND           | ND           | ND                | ND            | ND              | 7.40        | 0.1 J     | ND        | 0.1 J     | ND                 | ND       |
|   | 11/9/07  | ND           | ND           | ND                | ND            | ND              | 11.0        | 0.1 J     | ND        | ND        | ND                 | ND       |
|   | 2/6/08   | ND           | ND           | ND                | ND            | ND              | 11.0        | 0.1 J     | ND        | ND        | ND                 | ND       |
|   | 5/8/08   | ND           | ND           | ND                | ND            | ND              | 15.0        | 0.2 J     | ND        | ND        | ND                 | ND       |
|   | 8/15/08  | ND           | ND           | ND                | ND            | ND              | 7.90        | ND        | ND        | 0.1 J     | ND                 | ND       |
|   | 11/14/08 | ND           | ND           | ND                | ND            | ND              | 17.0        | 0.2 J     | ND        | 0.1 J     | ND                 | ND       |
|   | 2/10/09  | ND           | ND           | ND                | ND            | ND              | 16.0        | ND        | ND        | ND        | ND                 | ND       |
|   | 5/1/09   | ND           | ND           | ND                | ND            | ND              | 16.4        | ND        | ND        | ND        | ND                 | ND       |
|   | 8/14/09  | ND           | ND           | ND                | ND            | ND              | 6.92        | ND        | ND        | ND        | ND                 | ND       |
|   | 11/12/09 | ND           | ND           | ND                | ND            | ND              | 5.73        | ND        | ND        | ND        | ND                 | ND       |
|   | 2/19/10  | ND           | ND           | ND                | ND            | ND              | 6.41        | ND        | ND        | ND        | ND                 | ND       |
|   | 5/10/10  | ND           | ND           | ND                | ND            | ND              | 3.26        | ND        | ND        | ND        | ND                 | ND       |
|   | 8/2/10   | ND           | ND           | ND                | ND            | ND              | 1.04        | ND        | ND        | ND        | ND                 | ND       |
|   | 10/6/10  | ND           | ND           | ND                | ND            | ND              | 0.68        | ND        | ND        | ND        | ND                 | ND       |
|   | 6/13/12  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 12/6/12  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
| <b>12617 Harford Road Intermediate</b>  | 10/6/10  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 6/13/12  | ND           | ND           | ND                | ND            | ND              | 1.11        | ND        | ND        | ND        | ND                 | ND       |
|   | 12/6/12  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
| <b>12617 Harford Road Effluent</b>      | 10/6/10  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 6/13/12  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
|   | 12/6/12  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |
| <b>DSW</b>                              | 3/25/14  | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | 0.71     |
|   | 3/3/15   | ND           | ND           | ND                | ND            | ND              | ND          | ND        | ND        | ND        | ND                 | ND       |

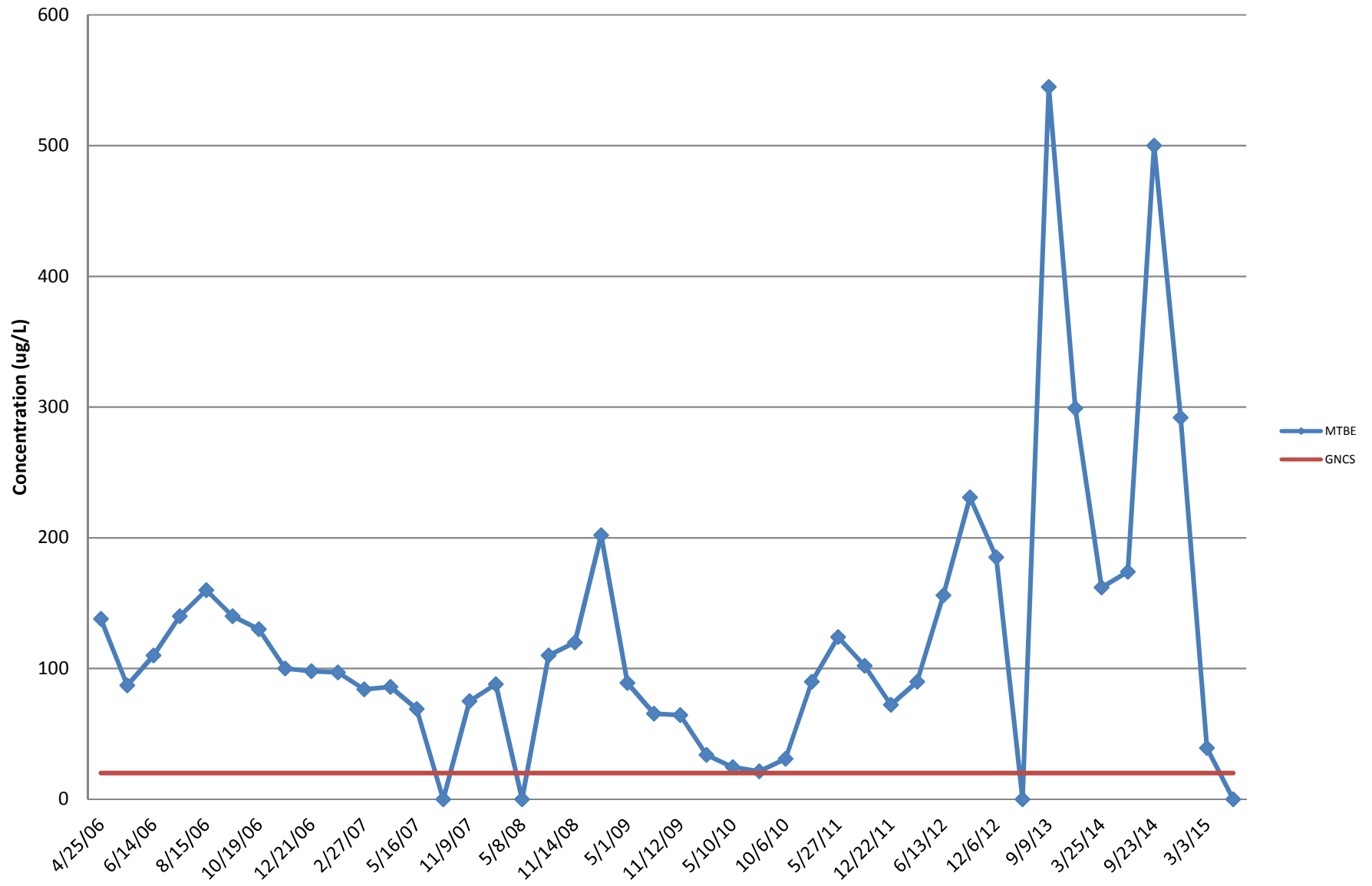
ND = Not detectable at method limits

NG = No Guideline

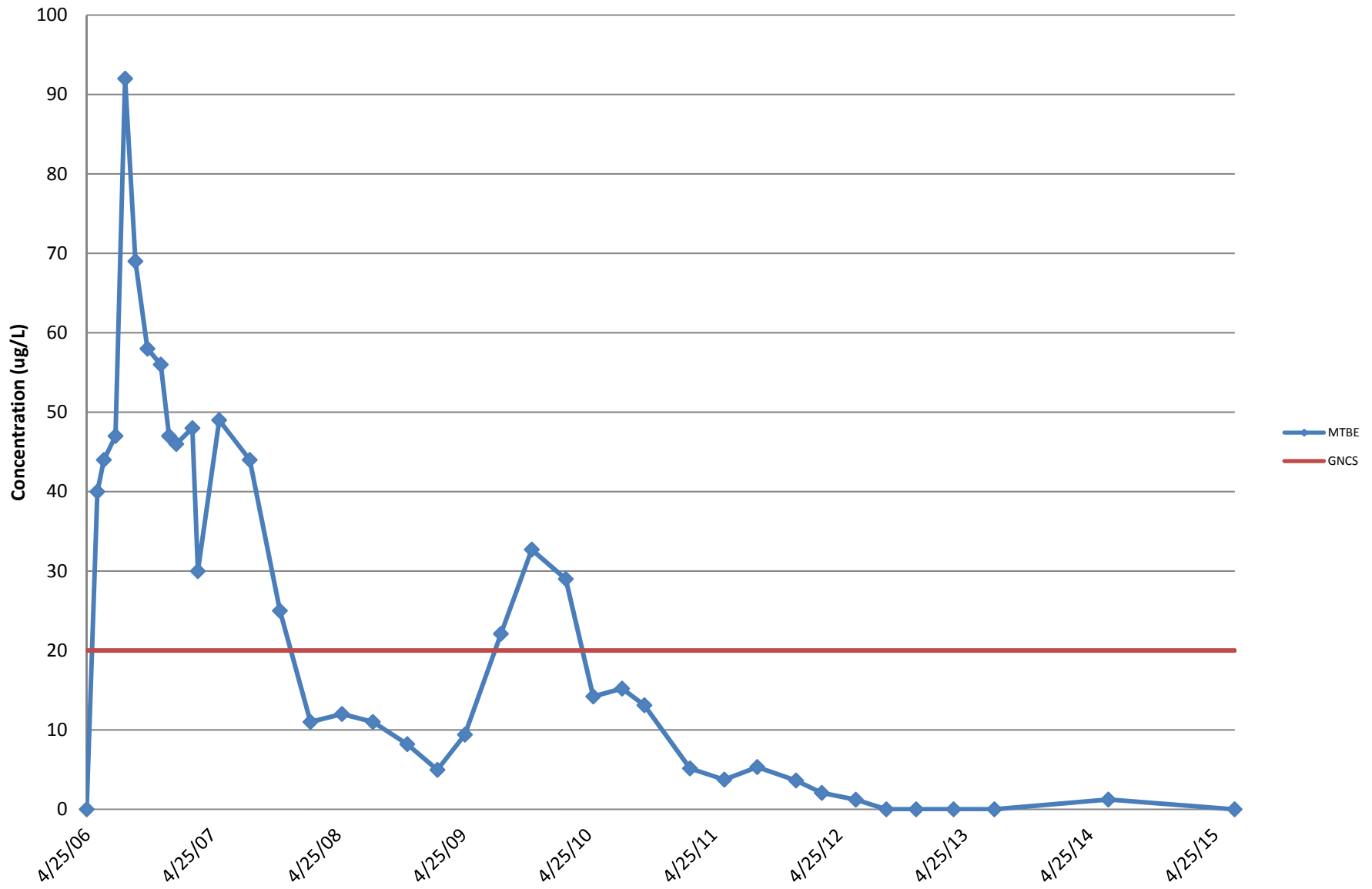
J = Estimated Value

Values exceeding the specified MDE GNCS are **bolded**.

# 12609 Harford Rd MTBE Concentration vs. Time



# 12613 Harford Rd MTBE Concentration vs. Time



**Appendix C**  
**Reports of Analysis and Chain of Custody Records**



# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 1751 Pulaski Highway, Havre de Grace, MD 21078 Phone:410-939-5550 Fax:410-939-5552

## Certificate of Analysis

|                               |            |                                |              |
|-------------------------------|------------|--------------------------------|--------------|
| <b>Sample Identification:</b> | TRIP BLANK | <b>Project Identification:</b> | FORK BP      |
| <b>MATRIX:</b>                | water      | <b>Client Identification:</b>  | CARROLL FUEL |
| <b>Sample Date:</b>           | 6/22/2015  | <b>Client Telephone:</b>       |              |
| <b>Date Received:</b>         | 6/24/2015  | <b>Client Fax:</b>             |              |
| <b>Extraction Date:</b>       | na         | <b>Analyst:</b>                | MM           |
| <b>Analysis Date:</b>         | 7/6/2015   | <b>Lab File:</b>               | 70615.D08    |

| COMPOUND                       | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|--------------------------------|-----------------|-----------|------------|-----------|
| Dichlorodifluoromethane        | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloromethane                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Vinyl Chloride                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromomethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichlorofluoromethane         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butyl Alcohol (TBA)       | 10              | ug/L      | ND         | EPA 524.2 |
| Methylene Chloride             | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,2-Dichloroethene       | 0.5             | ug/L      | ND         | EPA 524.2 |
| Methyl tert-Butyl Ether (MtBE) | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Diisopropyl Ether (DIPE)       | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,2-Dichloroethene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromochloromethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroform                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethyl tert-Butyl Ether (EtBE)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Alcohol (TAA)        | 10              | ug/L      | ND         | EPA 524.2 |
| 1,1,1-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloropropene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Carbon tetrachloride           | 0.5             | ug/L      | ND         | EPA 524.2 |
| Benzene                        | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Methyl Ether (TAME)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromomethane                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichloroethene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromodichloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Ethyl Ether (TAEE)   | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,3-Dichloropropene        | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,3-Dichloropropene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| Toluene                        | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromochloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromoethane              | 0.5             | ug/L      | ND         | EPA 524.2 |
| Tetrachloroethene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,1,2-Tetrachloroethene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chlorobenzene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethylbenzene                   | 0.5             | ug/L      | ND         | EPA 524.2 |

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 5292 Enterprise Street Suite C, Eldersburg, MD 21784 Phone 410-795-5955 Fax 410-795-9459

## Certificate of Analysis

|                        |            |                         |              |
|------------------------|------------|-------------------------|--------------|
| Sample Identification: | TRIP BLANK | Project Identification: | FORK BP      |
| MATRIX:                | water      | Client Identification:  | CARROLL FUEL |
| Sample Date:           | 6/22/2015  | Client Telephone:       |              |
| Date Received:         | 6/24/2015  | Client Fax:             |              |
| Extraction Date:       | na         | Analyst:                | MM           |
| Analysis Date:         | 7/6/2015   | Lab File:               | 70615.D08    |

| COMPOUND                    | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|-----------------------------|-----------------|-----------|------------|-----------|
| m&p-Xylene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromoform                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Styrene                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| o-Xylene                    | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2,2-Tetrachloroethene   | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichloropropane      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Isopropylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromobenzene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Propylbenzene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 4-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3,5-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butylbenzene           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| sec-Butylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,4-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| p-iso-Propyltoluene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Butylbenzene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromo-3-chloropropane | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Naphthalene                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Hexachlorobutadiene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |

### SURROGATE SPIKE

|                       |   |     |           |
|-----------------------|---|-----|-----------|
| 1,2-Dichloroethane-d4 | % | 114 | EPA 524.2 |
| Dibromofluoromethane  | % | 119 | EPA 524.2 |
| Toluene-d8            | % | 99  | EPA 524.2 |
| Bromofluorobenzene    | % | 102 | EPA 524.2 |

MDE Drinking Water Supply Laboratory Certification #333

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 1751 Pulaski Highway, Havre de Grace, MD 21078 Phone:410-939-5550 Fax:410-939-5552

## Certificate of Analysis

|                               |                       |                                |                     |
|-------------------------------|-----------------------|--------------------------------|---------------------|
| <b>Sample Identification:</b> | <b>12609 EFFLUENT</b> | <b>Project Identification:</b> | <b>FORK BP</b>      |
| <b>MATRIX:</b>                | <b>water</b>          | <b>Client Identification:</b>  | <b>CARROLL FUEL</b> |
| <b>Sample Date:</b>           | <b>6/22/2015</b>      | <b>Client Telephone:</b>       |                     |
| <b>Date Received:</b>         | <b>6/24/2015</b>      | <b>Client Fax:</b>             |                     |
| <b>Extraction Date:</b>       | <b>na</b>             | <b>Analyst:</b>                | <b>MM</b>           |
| <b>Analysis Date:</b>         | <b>7/6/2015</b>       | <b>Lab File:</b>               | <b>70615.D09</b>    |

| COMPOUND                       | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|--------------------------------|-----------------|-----------|------------|-----------|
| Dichlorodifluoromethane        | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloromethane                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Vinyl Chloride                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromomethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichlorofluoromethane         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butyl Alcohol (TBA)       | 10              | ug/L      | ND         | EPA 524.2 |
| Methylene Chloride             | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,2-Dichloroethene       | 0.5             | ug/L      | ND         | EPA 524.2 |
| Methyl tert-Butyl Ether (MtBE) | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Diisopropyl Ether (DIPE)       | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,2-Dichloroethene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromochloromethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroform                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethyl tert-Butyl Ether (EtBE)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Alcohol (TAA)        | 10              | ug/L      | ND         | EPA 524.2 |
| 1,1,1-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloropropene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Carbon tetrachloride           | 0.5             | ug/L      | ND         | EPA 524.2 |
| Benzene                        | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Methyl Ether (TAME)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromomethane                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichloroethene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromodichloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Ethyl Ether (TAEE)   | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,3-Dichloropropene        | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,3-Dichloropropene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| Toluene                        | 0.5             | ug/L      | 1.78       | EPA 524.2 |
| 1,3-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromochloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromoethane              | 0.5             | ug/L      | ND         | EPA 524.2 |
| Tetrachloroethene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,1,2-Tetrachloroethene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chlorobenzene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethylbenzene                   | 0.5             | ug/L      | ND         | EPA 524.2 |

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 5292 Enterprise Street Suite C, Eldersburg, MD 21784 Phone 410-795-5955 Fax 410-795-9459

## Certificate of Analysis

|                        |                |                         |              |
|------------------------|----------------|-------------------------|--------------|
| Sample Identification: | 12609 EFFLUENT | Project Identification: | FORK BP      |
| MATRIX:                | water          | Client Identification:  | CARROLL FUEL |
| Sample Date:           | 6/22/2015      | Client Telephone:       |              |
| Date Received:         | 6/24/2015      | Client Fax:             |              |
| Extraction Date:       | na             | Analyst:                | MM           |
| Analysis Date:         | 7/6/2015       | Lab File:               | 70615.D09    |

| COMPOUND                    | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|-----------------------------|-----------------|-----------|------------|-----------|
| m&p-Xylene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromoform                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Styrene                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| o-Xylene                    | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2,2-Tetrachloroethene   | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichloropropane      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Isopropylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromobenzene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Propylbenzene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 4-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3,5-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butylbenzene           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| sec-Butylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,4-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| p-iso-Propyltoluene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Butylbenzene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromo-3-chloropropane | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Naphthalene                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Hexachlorobutadiene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |

### SURROGATE SPIKE

|                       |   |     |           |
|-----------------------|---|-----|-----------|
| 1,2-Dichloroethane-d4 | % | 118 | EPA 524.2 |
| Dibromofluoromethane  | % | 120 | EPA 524.2 |
| Toluene-d8            | % | 98  | EPA 524.2 |
| Bromofluorobenzene    | % | 102 | EPA 524.2 |

MDE Drinking Water Supply Laboratory Certification #333

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 1751 Pulaski Highway, Havre de Grace, MD 21078 Phone:410-939-5550 Fax:410-939-5552

## Certificate of Analysis

|                        |             |                         |              |
|------------------------|-------------|-------------------------|--------------|
| Sample Identification: | 12609 INTER | Project Identification: | FORK BP      |
| MATRIX:                | water       | Client Identification:  | CARROLL FUEL |
| Sample Date:           | 6/22/2015   | Client Telephone:       |              |
| Date Received:         | 6/24/2015   | Client Fax:             |              |
| Extraction Date:       | na          | Analyst:                | MM           |
| Analysis Date:         | 7/6/2015    | Lab File:               | 70615.D10    |

| COMPOUND                       | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|--------------------------------|-----------------|-----------|------------|-----------|
| Dichlorodifluoromethane        | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloromethane                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Vinyl Chloride                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromomethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichlorofluoromethane         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butyl Alcohol (TBA)       | 10              | ug/L      | ND         | EPA 524.2 |
| Methylene Chloride             | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,2-Dichloroethene       | 0.5             | ug/L      | ND         | EPA 524.2 |
| Methyl tert-Butyl Ether (MtBE) | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Diisopropyl Ether (DIPE)       | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,2-Dichloroethene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromochloromethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroform                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethyl tert-Butyl Ether (EtBE)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Alcohol (TAA)        | 10              | ug/L      | ND         | EPA 524.2 |
| 1,1,1-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloropropene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Carbon tetrachloride           | 0.5             | ug/L      | ND         | EPA 524.2 |
| Benzene                        | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Methyl Ether (TAME)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromomethane                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichloroethene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromodichloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Ethyl Ether (TAEE)   | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,3-Dichloropropene        | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,3-Dichloropropene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| Toluene                        | 0.5             | ug/L      | 1.86       | EPA 524.2 |
| 1,3-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromochloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromoethane              | 0.5             | ug/L      | ND         | EPA 524.2 |
| Tetrachloroethene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,1,2-Tetrachloroethene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chlorobenzene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethylbenzene                   | 0.5             | ug/L      | ND         | EPA 524.2 |

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 5292 Enterprise Street Suite C, Eldersburg, MD 21784 Phone 410-795-5955 Fax 410-795-9459

## Certificate of Analysis

|                        |             |                         |              |
|------------------------|-------------|-------------------------|--------------|
| Sample Identification: | 12609 INTER | Project Identification: | FORK BP      |
| MATRIX:                | water       | Client Identification:  | CARROLL FUEL |
| Sample Date:           | 6/22/2015   | Client Telephone:       |              |
| Date Received:         | 6/24/2015   | Client Fax:             |              |
| Extraction Date:       | na          | Analyst:                | MM           |
| Analysis Date:         | 7/6/2015    | Lab File:               | 70615.D10    |

| COMPOUND                    | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|-----------------------------|-----------------|-----------|------------|-----------|
| m&p-Xylene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromoform                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Styrene                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| o-Xylene                    | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2,2-Tetrachloroethene   | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichloropropane      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Isopropylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromobenzene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Propylbenzene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 4-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3,5-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butylbenzene           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| sec-Butylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,4-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| p-iso-Propyltoluene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Butylbenzene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromo-3-chloropropane | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Naphthalene                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Hexachlorobutadiene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |

### SURROGATE SPIKE

|                       |   |     |           |
|-----------------------|---|-----|-----------|
| 1,2-Dichloroethane-d4 | % | 117 | EPA 524.2 |
| Dibromofluoromethane  | % | 119 | EPA 524.2 |
| Toluene-d8            | % | 100 | EPA 524.2 |
| Bromofluorobenzene    | % | 101 | EPA 524.2 |

MDE Drinking Water Supply Laboratory Certification #333

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 1751 Pulaski Highway, Havre de Grace, MD 21078 Phone:410-939-5550 Fax:410-939-5552

## Certificate of Analysis

|                               |                       |                                |                     |
|-------------------------------|-----------------------|--------------------------------|---------------------|
| <b>Sample Identification:</b> | <b>12609 INFLUENT</b> | <b>Project Identification:</b> | <b>FORK BP</b>      |
| <b>MATRIX:</b>                | <b>water</b>          | <b>Client Identification:</b>  | <b>CARROLL FUEL</b> |
| <b>Sample Date:</b>           | <b>6/22/2015</b>      | <b>Client Telephone:</b>       |                     |
| <b>Date Received:</b>         | <b>6/24/2015</b>      | <b>Client Fax:</b>             |                     |
| <b>Extraction Date:</b>       | <b>na</b>             | <b>Analyst:</b>                | <b>MM</b>           |
| <b>Analysis Date:</b>         | <b>7/6/2015</b>       | <b>Lab File:</b>               | <b>70615.D11</b>    |

| COMPOUND                       | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|--------------------------------|-----------------|-----------|------------|-----------|
| Dichlorodifluoromethane        | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloromethane                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Vinyl Chloride                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromomethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichlorofluoromethane         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butyl Alcohol (TBA)       | 10              | ug/L      | ND         | EPA 524.2 |
| Methylene Chloride             | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,2-Dichloroethene       | 0.5             | ug/L      | ND         | EPA 524.2 |
| Methyl tert-Butyl Ether (MtBE) | 0.5             | ug/L      | 198        | EPA 524.2 |
| 1,1-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Diisopropyl Ether (DIPE)       | 0.5             | ug/L      | 5.5        | EPA 524.2 |
| cis-1,2-Dichloroethene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromochloromethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroform                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethyl tert-Butyl Ether (EtBE)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Alcohol (TAA)        | 10              | ug/L      | ND         | EPA 524.2 |
| 1,1,1-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloropropene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Carbon tetrachloride           | 0.5             | ug/L      | ND         | EPA 524.2 |
| Benzene                        | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Methyl Ether (TAME)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromomethane                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichloroethene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromodichloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Ethyl Ether (TAEE)   | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,3-Dichloropropene        | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,3-Dichloropropene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| Toluene                        | 0.5             | ug/L      | 1.88       | EPA 524.2 |
| 1,3-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromochloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromoethane              | 0.5             | ug/L      | ND         | EPA 524.2 |
| Tetrachloroethene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,1,2-Tetrachloroethene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chlorobenzene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethylbenzene                   | 0.5             | ug/L      | ND         | EPA 524.2 |

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## Certificate of Analysis

|                        |                |                         |              |
|------------------------|----------------|-------------------------|--------------|
| Sample Identification: | 12609 INFLUENT | Project Identification: | FORK BP      |
| MATRIX:                | water          | Client Identification:  | CARROLL FUEL |
| Sample Date:           | 6/22/2015      | Client Telephone:       |              |
| Date Received:         | 6/24/2015      | Client Fax:             |              |
| Extraction Date:       | na             | Analyst:                | MM           |
| Analysis Date:         | 7/6/2015       | Lab File:               | 70615.D11    |

| COMPOUND                    | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|-----------------------------|-----------------|-----------|------------|-----------|
| m&p-Xylene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromoform                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Styrene                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| o-Xylene                    | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2,2-Tetrachloroethene   | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichloropropane      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Isopropylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromobenzene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Propylbenzene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 4-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3,5-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butylbenzene           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| sec-Butylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,4-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| p-iso-Propyltoluene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Butylbenzene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromo-3-chloropropane | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Naphthalene                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Hexachlorobutadiene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |

### SURROGATE SPIKE

|                       |   |     |           |
|-----------------------|---|-----|-----------|
| 1,2-Dichloroethane-d4 | % | 114 | EPA 524.2 |
| Dibromofluoromethane  | % | 118 | EPA 524.2 |
| Toluene-d8            | % | 99  | EPA 524.2 |
| Bromofluorobenzene    | % | 100 | EPA 524.2 |

MDE Drinking Water Supply Laboratory Certification #333



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Laboratory Services 1751 Pulaski Highway, Havre de Grace, MD 21078 Phone:410-939-5550 Fax:410-939-5552

## Certificate of Analysis

|                               |           |                                |              |
|-------------------------------|-----------|--------------------------------|--------------|
| <b>Sample Identification:</b> | 12613 DSW | <b>Project Identification:</b> | FORK BP      |
| <b>MATRIX:</b>                | water     | <b>Client Identification:</b>  | CARROLL FUEL |
| <b>Sample Date:</b>           | 6/22/2015 | <b>Client Telephone:</b>       |              |
| <b>Date Received:</b>         | 6/24/2015 | <b>Client Fax:</b>             |              |
| <b>Extraction Date:</b>       | na        | <b>Analyst:</b>                | MM           |
| <b>Analysis Date:</b>         | 7/6/2015  | <b>Lab File:</b>               | 70615.D12    |

| COMPOUND                       | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|--------------------------------|-----------------|-----------|------------|-----------|
| Dichlorodifluoromethane        | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloromethane                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Vinyl Chloride                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromomethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroethane                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichlorofluoromethane         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butyl Alcohol (TBA)       | 10              | ug/L      | ND         | EPA 524.2 |
| Methylene Chloride             | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,2-Dichloroethene       | 0.5             | ug/L      | ND         | EPA 524.2 |
| Methyl tert-Butyl Ether (MtBE) | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Diisopropyl Ether (DIPE)       | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,2-Dichloroethene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromochloromethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chloroform                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethyl tert-Butyl Ether (EtBE)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloroethane             | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Alcohol (TAA)        | 10              | ug/L      | ND         | EPA 524.2 |
| 1,1,1-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1-Dichloropropene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Carbon tetrachloride           | 0.5             | ug/L      | ND         | EPA 524.2 |
| Benzene                        | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Methyl Ether (TAME)  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromomethane                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Trichloroethene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromodichloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Amyl Ethyl Ether (TAEE)   | 0.5             | ug/L      | ND         | EPA 524.2 |
| cis-1,3-Dichloropropene        | 0.5             | ug/L      | ND         | EPA 524.2 |
| trans-1,3-Dichloropropene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2-Trichloroethane          | 0.5             | ug/L      | ND         | EPA 524.2 |
| Toluene                        | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3-Dichloropropane            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Dibromochloromethane           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromoethane              | 0.5             | ug/L      | ND         | EPA 524.2 |
| Tetrachloroethene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,1,2-Tetrachloroethene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Chlorobenzene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Ethylbenzene                   | 0.5             | ug/L      | ND         | EPA 524.2 |

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 5292 Enterprise Street Suite C, Eldersburg, MD 21784 Phone 410-795-5955 Fax 410-795-9459

## Certificate of Analysis

|                        |           |                         |              |
|------------------------|-----------|-------------------------|--------------|
| Sample Identification: | 12613 DSW | Project Identification: | FORK BP      |
| MATRIX:                | water     | Client Identification:  | CARROLL FUEL |
| Sample Date:           | 6/22/2015 | Client Telephone:       |              |
| Date Received:         | 6/24/2015 | Client Fax:             |              |
| Extraction Date:       | na        | Analyst:                | MM           |
| Analysis Date:         | 7/6/2015  | Lab File:               | 70615.D12    |

| COMPOUND                    | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|-----------------------------|-----------------|-----------|------------|-----------|
| m&p-Xylene                  | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromoform                   | 0.5             | ug/L      | ND         | EPA 524.2 |
| Styrene                     | 0.5             | ug/L      | ND         | EPA 524.2 |
| o-Xylene                    | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,1,2,2-Tetrachloroethene   | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichloropropane      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Isopropylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| Bromobenzene                | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Propylbenzene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 2-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 4-Chlorotoluene             | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3,5-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| tert-Butylbenzene           | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trimethylbenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| sec-Butylbenzene            | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,3-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,4-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dichlorobenzene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| p-iso-Propyltoluene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| n-Butylbenzene              | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2-Dibromo-3-chloropropane | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,4-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |
| Naphthalene                 | 0.5             | ug/L      | ND         | EPA 524.2 |
| Hexachlorobutadiene         | 0.5             | ug/L      | ND         | EPA 524.2 |
| 1,2,3-Trichlorobenzene      | 0.5             | ug/L      | ND         | EPA 524.2 |

### SURROGATE SPIKE

|                       |   |     |           |
|-----------------------|---|-----|-----------|
| 1,2-Dichloroethane-d4 | % | 119 | EPA 524.2 |
| Dibromofluoromethane  | % | 122 | EPA 524.2 |
| Toluene-d8            | % | 99  | EPA 524.2 |
| Bromofluorobenzene    | % | 100 | EPA 524.2 |

MDE Drinking Water Supply Laboratory Certification #333

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 1751 Pulaski Highway, Havre de Grace, MD 21078 Phone:410-939-5550 Fax:410-939-5552

## Certificate of Analysis

|                               |                  |                                |                     |
|-------------------------------|------------------|--------------------------------|---------------------|
| <b>Sample Identification:</b> | <b>MW-1</b>      | <b>Project Identification:</b> | <b>FORK BP</b>      |
| <b>MATRIX:</b>                | <b>water</b>     | <b>Client Identification:</b>  | <b>CARROLL FUEL</b> |
| <b>Sample Date:</b>           | <b>6/22/2015</b> | <b>Client Telephone:</b>       |                     |
| <b>Date Received:</b>         | <b>6/24/2015</b> | <b>Client Fax:</b>             |                     |
| <b>Extraction Date:</b>       | <b>6/29/2015</b> | <b>Analyst:</b>                | <b>MM</b>           |
| <b>Analysis Date:</b>         | <b>6/30/2015</b> | <b>Lab File:</b>               | <b>63015.D16</b>    |

| COMPOUND                       | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD   |
|--------------------------------|-----------------|-----------|------------|----------|
| Dichlorodifluoromethane        | 5               | ug/L      | ND         | EPA 8260 |
| Chloromethane                  | 5               | ug/L      | ND         | EPA 8260 |
| Vinyl Chloride                 | 5               | ug/L      | ND         | EPA 8260 |
| Bromomethane                   | 5               | ug/L      | ND         | EPA 8260 |
| Chloroethane                   | 5               | ug/L      | ND         | EPA 8260 |
| Trichlorofluoromethane         | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloroethene             | 5               | ug/L      | ND         | EPA 8260 |
| tert-Butyl Alcohol (TBA)       | 50              | ug/L      | ND         | EPA 8260 |
| Methylene Chloride             | 5               | ug/L      | ND         | EPA 8260 |
| trans-1,2-Dichloroethene       | 5               | ug/L      | ND         | EPA 8260 |
| Methyl tert-Butyl Ether (MtBE) | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloroethane             | 5               | ug/L      | ND         | EPA 8260 |
| Diisopropyl Ether (DIPE)       | 5               | ug/L      | ND         | EPA 8260 |
| cis-1,2-Dichloroethene         | 5               | ug/L      | ND         | EPA 8260 |
| Bromochloromethane             | 5               | ug/L      | ND         | EPA 8260 |
| Chloroform                     | 5               | ug/L      | ND         | EPA 8260 |
| 2,2-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Ethyl tert-Butyl Ether (EtBE)  | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dichloroethane             | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Alcohol (TAA)        | 50              | ug/L      | ND         | EPA 8260 |
| 1,1,1-Trichloroethane          | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloropropene            | 5               | ug/L      | ND         | EPA 8260 |
| Carbon tetrachloride           | 5               | ug/L      | ND         | EPA 8260 |
| Benzene                        | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Methyl Ether (TAME)  | 5               | ug/L      | ND         | EPA 8260 |
| Dibromomethane                 | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Trichloroethene                | 5               | ug/L      | ND         | EPA 8260 |
| Bromodichloromethane           | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Ethyl Ether (TAEE)   | 5               | ug/L      | ND         | EPA 8260 |
| cis-1,3-Dichloropropene        | 5               | ug/L      | ND         | EPA 8260 |
| trans-1,3-Dichloropropene      | 5               | ug/L      | ND         | EPA 8260 |
| 1,1,2-Trichloroethane          | 5               | ug/L      | ND         | EPA 8260 |
| Toluene                        | 5               | ug/L      | ND         | EPA 8260 |
| 1,3-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Dibromochloromethane           | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dibromoethane              | 5               | ug/L      | ND         | EPA 8260 |
| Tetrachloroethene              | 5               | ug/L      | ND         | EPA 8260 |
| 1,1,1,2-Tetrachloroethene      | 5               | ug/L      | ND         | EPA 8260 |
| Chlorobenzene                  | 5               | ug/L      | ND         | EPA 8260 |
| Ethylbenzene                   | 5               | ug/L      | ND         | EPA 8260 |

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## Certificate of Analysis

|                        |           |                         |              |
|------------------------|-----------|-------------------------|--------------|
| Sample Identification: | MW-1      | Project Identification: | FORK BP      |
| MATRIX:                | water     | Client Identification:  | CARROLL FUEL |
| Sample Date:           | 6/22/2015 | Client Telephone:       |              |
| Date Received:         | 6/24/2015 | Client Fax:             |              |
| Extraction Date:       | 6/29/2015 | Analyst:                | MM           |
| Analysis Date:         | 6/30/2015 | Lab File:               | 63015.D16    |

| COMPOUND                    | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|-----------------------------|-----------------|-----------|------------|-----------|
| m&p-Xylene                  | 5               | ug/L      | ND         | EPA 8260  |
| Bromoform                   | 5               | ug/L      | ND         | EPA 8260  |
| Styrene                     | 5               | ug/L      | ND         | EPA 8260  |
| o-Xylene                    | 5               | ug/L      | ND         | EPA 8260  |
| 1,1,2,2-Tetrachloroethane   | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,3-Trichloropropane      | 5               | ug/L      | ND         | EPA 8260  |
| Isopropylbenzene            | 5               | ug/L      | ND         | EPA 8260  |
| Bromobenzene                | 5               | ug/L      | ND         | EPA 8260  |
| n-Propylbenzene             | 5               | ug/L      | ND         | EPA 8260  |
| 2-Chlorotoluene             | 5               | ug/L      | ND         | EPA 8260  |
| 4-Chlorotoluene             | 5               | ug/L      | ND         | EPA 8260  |
| 1,3,5-Trimethylbenzene      | 5               | ug/L      | ND         | EPA 8260  |
| tert-Butylbenzene           | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,4-Trimethylbenzene      | 5               | ug/L      | ND         | EPA 8260  |
| sec-Butylbenzene            | 5               | ug/L      | ND         | EPA 8260  |
| 1,3-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,4-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,2-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| p-iso-Propyltoluene         | 5               | ug/L      | ND         | EPA 8260  |
| n-Butylbenzene              | 5               | ug/L      | ND         | EPA 8260  |
| 1,2-Dibromo-3-chloropropane | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,4-Trichlorobenzene      | 5               | ug/L      | ND         | EPA 8260  |
| Naphthalene                 | 5               | ug/L      | ND         | EPA 8260  |
| Hexachlorobutadiene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,3-Trichlorobenzene      | 5               | ug/L      | ND         | EPA 8260  |
| TPH GRO                     | 100             | ug/L      | ND         | EPA 8015B |
| TPH DRO                     | 500             | ug/L      | ND         | EPA 8015B |

### SURROGATE SPIKE

|                       |  |   |     |           |
|-----------------------|--|---|-----|-----------|
| 1,2-Dichloroethane-d4 |  | % | 118 | EPA 8260  |
| Dibromofluoromethane  |  | % | 118 | EPA 8260  |
| TFT                   |  | % | 114 | EPA 8015B |
| Toluene-d8            |  | % | 101 | EPA 8260  |
| Bromofluorobenzene    |  | % | 107 | EPA 8260  |

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## Certificate of Analysis

|                               |                  |                                |                     |
|-------------------------------|------------------|--------------------------------|---------------------|
| <b>Sample Identification:</b> | <b>MW-2</b>      | <b>Project Identification:</b> | <b>FORK BP</b>      |
| <b>MATRIX:</b>                | <b>water</b>     | <b>Client Identification:</b>  | <b>CARROLL FUEL</b> |
| <b>Sample Date:</b>           | <b>6/22/2015</b> | <b>Client Telephone:</b>       |                     |
| <b>Date Received:</b>         | <b>6/24/2015</b> | <b>Client Fax:</b>             |                     |
| <b>Extraction Date:</b>       | <b>6/29/2015</b> | <b>Analyst:</b>                | <b>MM</b>           |
| <b>Analysis Date:</b>         | <b>6/30/2015</b> | <b>Lab File:</b>               | <b>63015.D17</b>    |

| COMPOUND                       | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD   |
|--------------------------------|-----------------|-----------|------------|----------|
| Dichlorodifluoromethane        | 5               | ug/L      | ND         | EPA 8260 |
| Chloromethane                  | 5               | ug/L      | ND         | EPA 8260 |
| Vinyl Chloride                 | 5               | ug/L      | ND         | EPA 8260 |
| Bromomethane                   | 5               | ug/L      | ND         | EPA 8260 |
| Chloroethane                   | 5               | ug/L      | ND         | EPA 8260 |
| Trichlorofluoromethane         | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloroethene             | 5               | ug/L      | ND         | EPA 8260 |
| tert-Butyl Alcohol (TBA)       | 50              | ug/L      | ND         | EPA 8260 |
| Methylene Chloride             | 5               | ug/L      | ND         | EPA 8260 |
| trans-1,2-Dichloroethene       | 5               | ug/L      | ND         | EPA 8260 |
| Methyl tert-Butyl Ether (MtBE) | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloroethane             | 5               | ug/L      | ND         | EPA 8260 |
| Diisopropyl Ether (DIPE)       | 5               | ug/L      | ND         | EPA 8260 |
| cis-1,2-Dichloroethene         | 5               | ug/L      | ND         | EPA 8260 |
| Bromochloromethane             | 5               | ug/L      | ND         | EPA 8260 |
| Chloroform                     | 5               | ug/L      | ND         | EPA 8260 |
| 2,2-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Ethyl tert-Butyl Ether (EtBE)  | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dichloroethane             | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Alcohol (TAA)        | 50              | ug/L      | ND         | EPA 8260 |
| 1,1,1-Trichloroethane          | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloropropene            | 5               | ug/L      | ND         | EPA 8260 |
| Carbon tetrachloride           | 5               | ug/L      | ND         | EPA 8260 |
| Benzene                        | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Methyl Ether (TAME)  | 5               | ug/L      | ND         | EPA 8260 |
| Dibromomethane                 | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Trichloroethene                | 5               | ug/L      | ND         | EPA 8260 |
| Bromodichloromethane           | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Ethyl Ether (TAEE)   | 5               | ug/L      | ND         | EPA 8260 |
| cis-1,3-Dichloropropene        | 5               | ug/L      | ND         | EPA 8260 |
| trans-1,3-Dichloropropene      | 5               | ug/L      | ND         | EPA 8260 |
| 1,1,2-Trichloroethane          | 5               | ug/L      | ND         | EPA 8260 |
| Toluene                        | 5               | ug/L      | ND         | EPA 8260 |
| 1,3-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Dibromochloromethane           | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dibromoethane              | 5               | ug/L      | ND         | EPA 8260 |
| Tetrachloroethene              | 5               | ug/L      | ND         | EPA 8260 |
| 1,1,1,2-Tetrachloroethene      | 5               | ug/L      | ND         | EPA 8260 |
| Chlorobenzene                  | 5               | ug/L      | ND         | EPA 8260 |
| Ethylbenzene                   | 5               | ug/L      | ND         | EPA 8260 |

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## Certificate of Analysis

|                               |                  |                                |                     |
|-------------------------------|------------------|--------------------------------|---------------------|
| <b>Sample Identification:</b> | <b>MW-2</b>      | <b>Project Identification:</b> | <b>FORK BP</b>      |
| <b>MATRIX:</b>                | <b>water</b>     | <b>Client Identification:</b>  | <b>CARROLL FUEL</b> |
| <b>Sample Date:</b>           | <b>6/22/2015</b> | <b>Client Telephone:</b>       |                     |
| <b>Date Received:</b>         | <b>6/24/2015</b> | <b>Client Fax:</b>             |                     |
| <b>Extraction Date:</b>       | <b>6/29/2015</b> | <b>Analyst:</b>                | <b>MM</b>           |
| <b>Analysis Date:</b>         | <b>6/30/2015</b> | <b>Lab File:</b>               | <b>63015.D17</b>    |

| COMPOUND                    | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|-----------------------------|-----------------|-----------|------------|-----------|
| m&p-Xylene                  | 5               | ug/L      | ND         | EPA 8260  |
| Bromoform                   | 5               | ug/L      | ND         | EPA 8260  |
| Styrene                     | 5               | ug/L      | ND         | EPA 8260  |
| o-Xylene                    | 5               | ug/L      | ND         | EPA 8260  |
| 1,1,2,2-Tetrachloroethane   | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,3-Trichloropropane      | 5               | ug/L      | ND         | EPA 8260  |
| Isopropylbenzene            | 5               | ug/L      | ND         | EPA 8260  |
| Bromobenzene                | 5               | ug/L      | ND         | EPA 8260  |
| n-Propylbenzene             | 5               | ug/L      | ND         | EPA 8260  |
| 2-Chlorotoluene             | 5               | ug/L      | ND         | EPA 8260  |
| 4-Chlorotoluene             | 5               | ug/L      | ND         | EPA 8260  |
| 1,3,5-Trimethylbenzene      | 5               | ug/L      | ND         | EPA 8260  |
| tert-Butylbenzene           | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,4-Trimethylbenzene      | 5               | ug/L      | ND         | EPA 8260  |
| sec-Butylbenzene            | 5               | ug/L      | ND         | EPA 8260  |
| 1,3-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,4-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,2-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| p-iso-Propyltoluene         | 5               | ug/L      | ND         | EPA 8260  |
| n-Butylbenzene              | 5               | ug/L      | ND         | EPA 8260  |
| 1,2-Dibromo-3-chloropropane | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,4-Trichlorobenzene      | 5               | ug/L      | ND         | EPA 8260  |
| Naphthalene                 | 5               | ug/L      | ND         | EPA 8260  |
| Hexachlorobutadiene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,3-Trichlorobenzene      | 5               | ug/L      | ND         | EPA 8260  |
| TPH GRO                     | 100             | ug/L      | ND         | EPA 8015B |
| TPH DRO                     | 500             | ug/L      | ND         | EPA 8015B |

### SURROGATE SPIKE

|                       |  |   |     |           |
|-----------------------|--|---|-----|-----------|
| 1,2-Dichloroethane-d4 |  | % | 116 | EPA 8260  |
| Dibromofluoromethane  |  | % | 116 | EPA 8260  |
| TFT                   |  | % | 114 | EPA 8015B |
| Toluene-d8            |  | % | 100 | EPA 8260  |
| Bromofluorobenzene    |  | % | 107 | EPA 8260  |

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## Certificate of Analysis

|                               |                  |                                |                     |
|-------------------------------|------------------|--------------------------------|---------------------|
| <b>Sample Identification:</b> | <b>MW-3</b>      | <b>Project Identification:</b> | <b>FORK BP</b>      |
| <b>MATRIX:</b>                | <b>water</b>     | <b>Client Identification:</b>  | <b>CARROLL FUEL</b> |
| <b>Sample Date:</b>           | <b>6/22/2015</b> | <b>Client Telephone:</b>       |                     |
| <b>Date Received:</b>         | <b>6/24/2015</b> | <b>Client Fax:</b>             |                     |
| <b>Extraction Date:</b>       | <b>6/29/2015</b> | <b>Analyst:</b>                | <b>MM</b>           |
| <b>Analysis Date:</b>         | <b>6/30/2015</b> | <b>Lab File:</b>               | <b>63015.D18</b>    |

| COMPOUND                       | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD   |
|--------------------------------|-----------------|-----------|------------|----------|
| Dichlorodifluoromethane        | 5               | ug/L      | ND         | EPA 8260 |
| Chloromethane                  | 5               | ug/L      | ND         | EPA 8260 |
| Vinyl Chloride                 | 5               | ug/L      | ND         | EPA 8260 |
| Bromomethane                   | 5               | ug/L      | ND         | EPA 8260 |
| Chloroethane                   | 5               | ug/L      | ND         | EPA 8260 |
| Trichlorofluoromethane         | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloroethene             | 5               | ug/L      | ND         | EPA 8260 |
| tert-Butyl Alcohol (TBA)       | 50              | ug/L      | ND         | EPA 8260 |
| Methylene Chloride             | 5               | ug/L      | ND         | EPA 8260 |
| trans-1,2-Dichloroethene       | 5               | ug/L      | ND         | EPA 8260 |
| Methyl tert-Butyl Ether (MtBE) | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloroethane             | 5               | ug/L      | ND         | EPA 8260 |
| Diisopropyl Ether (DIPE)       | 5               | ug/L      | ND         | EPA 8260 |
| cis-1,2-Dichloroethene         | 5               | ug/L      | ND         | EPA 8260 |
| Bromochloromethane             | 5               | ug/L      | ND         | EPA 8260 |
| Chloroform                     | 5               | ug/L      | ND         | EPA 8260 |
| 2,2-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Ethyl tert-Butyl Ether (EtBE)  | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dichloroethane             | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Alcohol (TAA)        | 50              | ug/L      | ND         | EPA 8260 |
| 1,1,1-Trichloroethane          | 5               | ug/L      | ND         | EPA 8260 |
| 1,1-Dichloropropene            | 5               | ug/L      | ND         | EPA 8260 |
| Carbon tetrachloride           | 5               | ug/L      | ND         | EPA 8260 |
| Benzene                        | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Methyl Ether (TAME)  | 5               | ug/L      | ND         | EPA 8260 |
| Dibromomethane                 | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Trichloroethene                | 5               | ug/L      | ND         | EPA 8260 |
| Bromodichloromethane           | 5               | ug/L      | ND         | EPA 8260 |
| tert-Amyl Ethyl Ether (TAEE)   | 5               | ug/L      | ND         | EPA 8260 |
| cis-1,3-Dichloropropene        | 5               | ug/L      | ND         | EPA 8260 |
| trans-1,3-Dichloropropene      | 5               | ug/L      | ND         | EPA 8260 |
| 1,1,2-Trichloroethane          | 5               | ug/L      | ND         | EPA 8260 |
| Toluene                        | 5               | ug/L      | ND         | EPA 8260 |
| 1,3-Dichloropropane            | 5               | ug/L      | ND         | EPA 8260 |
| Dibromochloromethane           | 5               | ug/L      | ND         | EPA 8260 |
| 1,2-Dibromoethane              | 5               | ug/L      | ND         | EPA 8260 |
| Tetrachloroethene              | 5               | ug/L      | ND         | EPA 8260 |
| 1,1,1,2-Tetrachloroethene      | 5               | ug/L      | ND         | EPA 8260 |
| Chlorobenzene                  | 5               | ug/L      | ND         | EPA 8260 |
| Ethylbenzene                   | 5               | ug/L      | ND         | EPA 8260 |

# ADVANCED ENVIRONMENTAL CONCEPTS, INC.

Laboratory Services 5292 Enterprise Street Suite C, Eldersburg, MD 21784 Phone 410-795-5955 Fax 410-795-9459

## Certificate of Analysis

|                        |           |                         |              |
|------------------------|-----------|-------------------------|--------------|
| Sample Identification: | MW-3      | Project Identification: | FORK BP      |
| MATRIX:                | water     | Client Identification:  | CARROLL FUEL |
| Sample Date:           | 6/22/2015 | Client Telephone:       |              |
| Date Received:         | 6/24/2015 | Client Fax:             |              |
| Extraction Date:       | 6/29/2015 | Analyst:                | MM           |
| Analysis Date:         | 6/30/2015 | Lab File:               | 63015.D18    |

| COMPOUND                    | DETECTION LIMIT | TEST UNIT | TEST VALUE | METHOD    |
|-----------------------------|-----------------|-----------|------------|-----------|
| m&p-Xylene                  | 5               | ug/L      | ND         | EPA 8260  |
| Bromoform                   | 5               | ug/L      | ND         | EPA 8260  |
| Styrene                     | 5               | ug/L      | ND         | EPA 8260  |
| o-Xylene                    | 5               | ug/L      | ND         | EPA 8260  |
| 1,1,2,2-Tetrachloroethane   | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,3-Trichloropropane      | 5               | ug/L      | ND         | EPA 8260  |
| Isopropylbenzene            | 5               | ug/L      | ND         | EPA 8260  |
| Bromobenzene                | 5               | ug/L      | ND         | EPA 8260  |
| n-Propylbenzene             | 5               | ug/L      | ND         | EPA 8260  |
| 2-Chlorotoluene             | 5               | ug/L      | ND         | EPA 8260  |
| 4-Chlorotoluene             | 5               | ug/L      | ND         | EPA 8260  |
| 1,3,5-Trimethylbenzene      | 5               | ug/L      | ND         | EPA 8260  |
| tert-Butylbenzene           | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,4-Trimethylbenzene      | 5               | ug/L      | ND         | EPA 8260  |
| sec-Butylbenzene            | 5               | ug/L      | ND         | EPA 8260  |
| 1,3-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,4-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,2-Dichlorobenzene         | 5               | ug/L      | ND         | EPA 8260  |
| p-iso-Propyltoluene         | 5               | ug/L      | ND         | EPA 8260  |
| n-Butylbenzene              | 5               | ug/L      | ND         | EPA 8260  |
| 1,2-Dibromo-3-chloropropane | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,4-Trichlorobenzene      | 5               | ug/L      | ND         | EPA 8260  |
| Naphthalene                 | 5               | ug/L      | ND         | EPA 8260  |
| Hexachlorobutadiene         | 5               | ug/L      | ND         | EPA 8260  |
| 1,2,3-Trichlorobenzene      | 5               | ug/L      | ND         | EPA 8260  |
| TPH GRO                     | 100             | ug/L      | ND         | EPA 8015B |
| TPH DRO                     | 500             | ug/L      | ND         | EPA 8015B |

### SURROGATE SPIKE

|                       |  |   |     |           |
|-----------------------|--|---|-----|-----------|
| 1,2-Dichloroethane-d4 |  | % | 120 | EPA 8260  |
| Dibromofluoromethane  |  | % | 121 | EPA 8260  |
| TFT                   |  | % | 114 | EPA 8015B |
| Toluene-d8            |  | % | 100 | EPA 8260  |
| Bromofluorobenzene    |  | % | 106 | EPA 8260  |



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# Chain of Custody Record

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|                                     |          |  |         |                    |        |                    |  |
|-------------------------------------|----------|--|---------|--------------------|--------|--------------------|--|
| Client: CIFCO                       |          | Project Name: Fork, BP   |         | SDG#:              |        |                    |  |
| Address: 12601 Harford Rd           |          | Project Location: Kingsville, MD                                       |         | Preservatives      |        |                    |  |
| Phone:                              |          | Fax:   |         | HCL HCL HCL        |        |                    |  |
| Email:                              |          | Receive Completed Report Via (Circle One)<br>U.S. Mail    Email    Fax |         | Requested Analysis |        |                    |  |
| Sample By: BW0877                   |          | Date   |         | 8260               |        |                    |  |
| 1                                   | Sample # | Sample ID  | Date    | Time               | Matrix | pH                 |  |
| 2                                   | 2        | Trip Blank   | 6/22/15 |                    | O      |                    |  |
| 3                                   |          | 12609 Effluent   |         |                    | DW     |                    |  |
| 4                                   |          | 12609 Intermediate   |         |                    |        |                    |  |
| 5                                   |          | 12609 Influent   |         |                    |        |                    |  |
| 6                                   |          | 12613 DSW  |         |                    |        |                    |  |
| 7                                   |          | MW-1   |         |                    | GW     |                    |  |
| 8                                   |          | MW-2   |         |                    |        |                    |  |
| 9                                   |          | MW-3   |         |                    |        |                    |  |
| 10                                  |          |  |         |                    |        |                    |  |
| Relinquished/Received By: Signature |          | Date   |         | Time               |        | Delivery Method    |  |
| Relinquished By: <i>[Signature]</i> |          | 6/24/15  |         | 11:30              |        | Hand               |  |
| Received By: <i>[Signature]</i>     |          | 6/24/15  |         |                    |        |                    |  |
| Relinquished By:                    |          |  |         |                    |        |                    |  |
| Received By:                        |          |  |         |                    |        |                    |  |
| Relinquished By:                    |          |  |         |                    |        |                    |  |
| Received By:                        |          |  |         |                    |        |                    |  |
| Temp of Cooler                      |          | Ice Present (Y/N)  |         | Custody Seal (Y/N) |        | Date of Extraction |  |
| 24°C                                |          | (Y)  |         | (Y)                |        |                    |  |
| Lab Use Only                        |          |  |         |                    |        |                    |  |

Matrix Codes: SO = Soil, GW = Ground Water, WW = Waste Water, VP = Vapor, SL = Sludge, DW = Drinking Water, O = Other

Special Instructions / Comments / QC Requirements:

Turn Around Time: STD 1 Day 2 Day 3 Day Other