



January 8, 2016

Mrs. Jeannette DeBartolomeo
Maryland Department of the Environment (MDE)
Oil Control Program
1800 Washington Boulevard
Baltimore, Maryland 21230-1719

Re: **Rebound Evaluation – Round Two – Month Four**
Royal Farms Store # 96
500 Mechanics Valley Road
North East, MD
OCP Case No. 2011-0729-CE
MDE Facility No. 13326

Dear Mrs. DeBartolomeo,

Advantage Environmental Consultants, LLC (AEC), on behalf of Royal Farms / Two Farms, Inc. (Royal Farms), is presenting this data and analysis package for the fourth month of the second round of the Rebound Evaluation following deactivation of the Vapor Extraction / Groundwater Extraction (VE/GE) remediation system located at 500 Mechanics Valley Road in North East, MD (i.e. the "Site"). Sampling procedures and analysis parameters used for this Rebound Evaluation are outlined in AEC's Rebound Evaluation Work Plan – Revised dated April 20, 2015 and approved by MDE in a letter dated May 21, 2015.

The rebound test is designed to continue for 12 months unless the evaluation determines that a restart of the VE/GE system is necessary. Data for the evaluation is obtained by sampling eight select representative wells on a monthly basis for the first 6 months following operation of the VE/GE System and then quarterly for the remainder of the rebound period. Eight wells are utilized for the purposes of this evaluation: MW-8, RW-1, RW-2, RW-4, RW-6, RW-8, RW-11, and RW-12. A figure depicting the well locations is included as Figure 1 of Attachment A.

Established Baseline

The rebound in the selected wells is assessed for the following fuel constituents: benzene, total BTEX (benzene, toluene, ethylbenzene, and xylenes), and naphthalene. Baseline concentrations for these constituents in each respective well have been established based on results reported from sampling events after the discovery of the release and prior to the start-up of the VE/GE system. The baseline concentrations for the rebound study are listed in Table 1 of Attachment B.

Evaluation Parameters

Laboratory results from each Rebound Evaluation event are compared to the baseline concentrations for benzene, total BTEX, and naphthalene in each well independently. A ratio is generated for each constituent in each well using the most recent laboratory results in relation to the established baseline concentration. The current rebound concentration ratios are listed in Table 1 of Attachment B. For analysis of the data obtained from each Rebound Evaluation sampling event, rebound response for benzene, total BTEX, and naphthalene in each well is classified under one of the following three cases:

- Case A – Little-to-No Rebound, defined as the rebound ratio less than 0.25 (25 percent);
- Case B – Gradual Rebound, defined as the rebound ratio greater than or equal to 0.25 percent but less than 0.75 ; and,
- Case C - Rapid Rebound, defined as the rebound ratio greater than or equal to 0.75 (75 percent).

If a rebound ratio for benzene, total BTEX, or naphthalene is greater than 75 percent (Case C - Rapid Rebound) in the same well during two consecutive sampling events, then the rebound test will be terminated and the VE/GE system will be restarted. Case C threshold concentrations for each constituent of concern in each selected well are included in Table 1 of Attachment B.

In the case that the rebound evaluation criteria is met, the VE/GE system will operate for one month before being shutdown again to begin a new round of the Rebound Evaluation. Sampling results from the third month of the first round of the Rebound Evaluation met the restart criteria for a single constituent in a single well and the VE/GE System was restarted for one month from August 5 through September 4, 2015.

Sampling Events

The VE/GE system was shut down to begin the second round of the Rebound Evaluation on September 4, 2015. AEC performed sampling for the fourth month of the second round of the Rebound Evaluation on December 9th, 2015. Samples were collected using the purge and bail method in accordance with standard operating procedures for groundwater sampling at the Site.

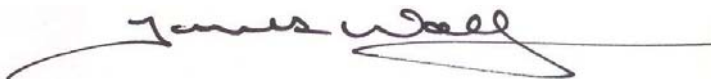
Results

Sampling results indicate that the Case C criteria has not been met for any of the constituents of concern in any of the selected wells. Therefore, the VE/GE system will remain in a stand-by condition. The greatest rebound for any rebound evaluation constituent in any selected well is 0.196 or 19.6% for naphthalene in RW-11. Rebound results for all wells are included in Table 1 of Attachment B. Laboratory analytical results and chain of custody documentation is included as Attachment C.

In addition to benzene, total BTEX, and naphthalene; methyl-tert butyl ether (MTBE) is also included in all laboratory analysis for this Rebound Evaluation at the request of MDE. MTBE was not reported above laboratory detection limits in samples from the selected rebound evaluation wells.

Sincerely,

Advantage Environmental Consultants, LLC

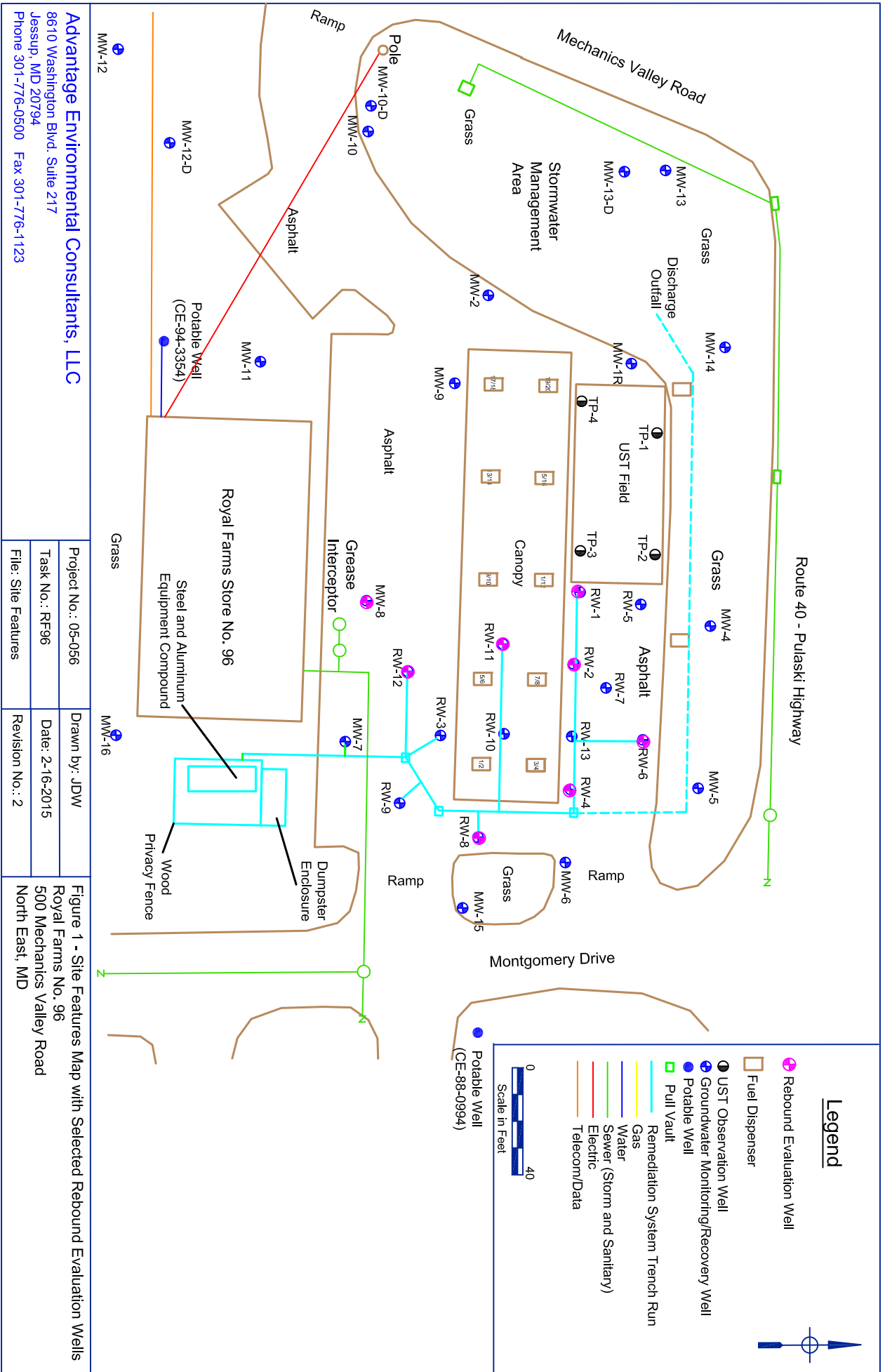


James Wolf
Project Manager

Attachments

cc: T. Ruszin

ATTACHMENT A



Advantage Environmental Consultants, LLC
 8610 Washington Blvd. Suite 217
 Jessup, MD 20794
 Phone 301-776-0500 Fax 301-776-1123

| | |
|---------------------|-----------------|
| Project No.: 05-056 | Drawn by: JDW |
| Task No.: RF96 | Date: 2-16-2015 |
| File: Site Features | Revision No.: 2 |

Figure 1 - Site Features Map with Selected Rebound Evaluation Wells
 Royal Farms No. 96
 500 Mechanics Valley Road
 North East, MD

ATTACHMENT B

Table 1 - Rebound Evaluation Analysis Worksheet
Gasoline Fueling Station – Royal Farms #96
500 Mechanics Valley Road, North East, MD 21901

| Well ID | Sample Date | Analyte | Pre-Start-up Mean (C ₀): | Case C Threshold | Current Concentration (C) | Rebound Ratio (C/C ₀) | Rebound Condition | Restart Criteria Met? | |
|-----------|-------------|---------|--------------------------------------|------------------|---------------------------|-----------------------------------|-------------------|-----------------------|----|
| MW-8 | 5/28/2015 | Benzene | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 6/29/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 7/29/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 9/8/2015 | | 15 | 11.3 | 6.8 | 0.453 | Case B | No | |
| | 10/6/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 11/6/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 12/9/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 5/28/2015 | | Total BTEX | 356.8 | 267.6 | 0.1 | 0.000 | Case A | No |
| | 6/29/2015 | | | 356.8 | 267.6 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | | 356.8 | 267.6 | 0.1 | 0.000 | Case A | No |
| | 9/8/2015 | | | 356.8 | 267.6 | 6.8 | 0.019 | Case A | No |
| | 10/6/2015 | | | 356.8 | 267.6 | 0.1 | 0.000 | Case A | No |
| 11/6/2015 | 356.8 | 267.6 | | 0.1 | 0.000 | Case A | No | | |
| 12/9/2015 | 356.8 | 267.6 | 0.1 | 0.000 | Case A | No | | | |
| 5/28/2015 | Naphthalene | 26 | 19.5 | 0.1 | 0.004 | Case A | No | | |
| 6/29/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No | | |
| 7/29/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No | | |
| 9/8/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No | | |
| 10/6/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No | | |
| 11/6/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No | | |
| 12/9/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No | | |
| 5/28/2015 | | MTBE | NA | NA | BDL | NA | NA | NA | |
| 6/29/2015 | | | NA | NA | BDL | NA | NA | NA | |
| 7/29/2015 | | | NA | NA | BDL | NA | NA | NA | |
| 9/8/2015 | | | NA | NA | BDL | NA | NA | NA | |
| 10/6/2015 | | | NA | NA | BDL | NA | NA | NA | |
| 11/6/2015 | NA | | NA | BDL | NA | NA | NA | | |
| 12/9/2015 | NA | NA | BDL | NA | NA | NA | | | |
| RW-1 | 5/29/2015 | Benzene | 959.3 | 719.5 | 0.1 | 0.000 | Case A | No | |
| | 6/29/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 7/29/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 9/8/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 10/6/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 11/6/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 12/9/2015 | | 15 | 11.3 | 0.1 | 0.007 | Case A | No | |
| | 5/29/2015 | | Total BTEX | 205428.3 | 154071.2 | 0.1 | 0.000 | Case A | No |

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Gasoline Fueling Station – Royal Farms #96
500 Mechanics Valley Road, North East, MD 21901

| Well ID | Sample Date | Analyte | Pre-Start-up Mean (C ₀): | Case C Threshold | Current Concentration (C) | Rebound Ratio (C/C ₀) | Rebound Condition | Restart Criteria Met? |
|---------|-------------|-------------|--------------------------------------|------------------|---------------------------|-----------------------------------|-------------------|-----------------------|
| | 6/29/2015 | | 205428.3 | 154071.2 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | 205428.3 | 154071.2 | 0.1 | 0.000 | Case A | No |
| | 9/8/2015 | | 205428.3 | 154071.2 | 0.1 | 0.000 | Case A | No |
| | 10/6/2015 | | 205428.3 | 154071.2 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 205428.3 | 154071.2 | 6.1 | 0.000 | Case A | No |
| | 12/9/2015 | | 205428.3 | 154071.2 | 6.1 | 0.000 | Case A | No |
| | 5/29/2015 | Naphthalene | 1351.8 | 1013.9 | 0.1 | 0.000 | Case A | No |
| | 6/29/2015 | | 1351.8 | 1013.9 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | 1351.8 | 1013.9 | 0.1 | 0.000 | Case A | No |
| | 9/8/2015 | | 1351.8 | 1013.9 | 0.1 | 0.000 | Case A | No |
| | 10/6/2015 | | 1351.8 | 1013.9 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 1351.8 | 1013.9 | 0.1 | 0.000 | Case A | No |
| | 12/9/2015 | | 1351.8 | 1013.9 | 0.1 | 0.000 | Case A | No |
| | 5/28/2015 | MTBE | NA | NA | BDL | NA | NA | NA |
| | 6/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 7/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 9/8/2015 | | NA | NA | BDL | NA | NA | NA |
| | 10/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 11/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 12/9/2015 | | NA | NA | BDL | NA | NA | NA |
| RW-2 | 5/29/2015 | Benzene | 8731 | 6548.3 | 5.4 | 0.001 | Case A | No |
| | 6/29/2015 | | 8731 | 6548.3 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | 8731 | 6548.3 | 2.5 | 0.000 | Case A | No |
| | 9/8/2015 | | 8731 | 6548.3 | 0.1 | 0.000 | Case A | No |
| | 10/6/2015 | | 8731 | 6548.3 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 8731 | 6548.3 | 0.1 | 0.000 | Case A | No |
| | 12/9/2015 | | 8731 | 6548.3 | 0.1 | 0.000 | Case A | No |
| | 5/29/2015 | Total BTEX | 35956 | 26967.0 | 41.9 | 0.001 | Case A | No |
| | 6/29/2015 | | 35956 | 26967.0 | 116.6 | 0.003 | Case A | No |
| | 7/29/2015 | | 35956 | 26967.0 | 53.9 | 0.001 | Case A | No |
| | 9/8/2015 | | 35956 | 26967.0 | 0.1 | 0.000 | Case A | No |
| | 10/6/2015 | | 35956 | 26967.0 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 35956 | 26967.0 | 0.1 | 0.000 | Case A | No |
| | 12/9/2015 | | 35956 | 26967.0 | 0.1 | 0.000 | Case A | No |
| | 5/28/2015 | Naphthalene | 26 | 19.5 | 0.1 | 0.004 | Case A | No |
| | 6/29/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No |

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Gasoline Fueling Station – Royal Farms #96
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| Well ID | Sample Date | Analyte | Pre-Start-up Mean (C ₀): | Case C Threshold | Current Concentration (C) | Rebound Ratio (C/C ₀) | Rebound Condition | Restart Criteria Met? |
|---------|-------------|-------------|--------------------------------------|------------------|---------------------------|-----------------------------------|-------------------|-----------------------|
| | 7/29/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No |
| | 9/8/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No |
| | 10/6/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No |
| | 11/6/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No |
| | 12/9/2015 | | 26 | 19.5 | 0.1 | 0.004 | Case A | No |
| | 5/28/2015 | MTBE | NA | NA | BDL | NA | NA | NA |
| | 6/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 7/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 9/8/2015 | | NA | NA | BDL | NA | NA | NA |
| | 10/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 11/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 12/9/2015 | | NA | NA | BDL | NA | NA | NA |
| RW-4 | 5/29/2015 | Benzene | 14250 | 10687.5 | 139 | 0.010 | Case A | No |
| | 6/29/2015 | | 14250 | 10687.5 | 215 | 0.015 | Case A | No |
| | 7/29/2015 | | 14250 | 10687.5 | 203 | 0.014 | Case A | No |
| | 9/8/2015 | | 14250 | 10687.5 | 6.4 | 0.000 | Case A | No |
| | 10/6/2015 | | 14250 | 10687.5 | 13.1 | 0.001 | Case A | No |
| | 11/6/2015 | | 14250 | 10687.5 | 5.1 | 0.000 | Case A | No |
| | 12/9/2015 | | 14250 | 10687.5 | 5.9 | 0.000 | Case A | No |
| | 5/29/2015 | Total BTEX | 59880 | 44910.0 | 2397 | 0.040 | Case A | No |
| | 6/29/2015 | | 59880 | 44910.0 | 5661 | 0.095 | Case A | No |
| | 7/29/2015 | | 59880 | 44910.0 | 4683 | 0.078 | Case A | No |
| | 9/8/2015 | | 59880 | 44910.0 | 187.7 | 0.003 | Case A | No |
| | 10/6/2015 | | 59880 | 44910.0 | 287 | 0.005 | Case A | No |
| | 11/6/2015 | | 59880 | 44910.0 | 54.0 | 0.001 | Case A | No |
| | 12/9/2015 | | 59880 | 44910.0 | 59.1 | 0.001 | Case A | No |
| | 5/29/2015 | Naphthalene | 1629 | 1221.8 | 81.9 | 0.050 | Case A | No |
| | 6/29/2015 | | 1629 | 1221.8 | 202 | 0.124 | Case A | No |
| | 7/29/2015 | | 1629 | 1221.8 | 388 | 0.238 | Case A | No |
| | 9/8/2015 | | 1629 | 1221.8 | 14.9 | 0.009 | Case A | No |
| | 10/6/2015 | | 1629 | 1221.8 | 17.3 | 0.011 | Case A | No |
| | 11/6/2015 | | 1629 | 1221.8 | 8.6 | 0.005 | Case A | No |
| | 12/9/2015 | | 1629 | 1221.8 | 10.1 | 0.006 | Case A | No |
| | 5/28/2015 | MTBE | NA | NA | BDL | NA | NA | NA |
| | 6/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 7/29/2015 | | NA | NA | BDL | NA | NA | NA |

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Gasoline Fueling Station – Royal Farms #96
500 Mechanics Valley Road, North East, MD 21901

| Well ID | Sample Date | Analyte | Pre-Start-up Mean (C ₀): | Case C Threshold | Current Concentration (C) | Rebound Ratio (C/C ₀) | Rebound Condition | Restart Criteria Met? |
|---------|-------------|-------------|--------------------------------------|------------------|---------------------------|-----------------------------------|-------------------|-----------------------|
| | 9/8/2015 | | NA | NA | BDL | NA | NA | NA |
| | 10/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 11/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 12/9/2015 | | NA | NA | BDL | NA | NA | NA |
| RW-6 | 5/29/2015 | Benzene | 1378 | 1033.5 | 0.1 | 0.000 | Case A | No |
| | 6/29/2015 | | 1378 | 1033.5 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | 1378 | 1033.5 | 0.1 | 0.000 | Case A | No |
| | 9/8/2015 | | 1378 | 1033.5 | 0.1 | 0.000 | Case A | No |
| | 10/6/2015 | | 1378 | 1033.5 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 1378 | 1033.5 | 0.1 | 0.000 | Case A | No |
| | 12/9/2015 | | 1378 | 1033.5 | 0.1 | 0.000 | Case A | No |
| | 5/29/2015 | Total BTEX | 7674.6 | 5756.0 | 0.1 | 0.000 | Case A | No |
| | 6/29/2015 | | 7674.6 | 5756.0 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | 7674.6 | 5756.0 | 2.6 | 0.000 | Case A | No |
| | 9/8/2015 | | 7674.6 | 5756.0 | 77.2 | 0.010 | Case A | No |
| | 10/6/2015 | | 7674.6 | 5756.0 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 7674.6 | 5756.0 | 11.0 | 0.001 | Case A | No |
| | 12/9/2015 | | 7674.6 | 5756.0 | 0.1 | 0.000 | Case A | No |
| | 5/29/2015 | Naphthalene | 400.3 | 300.2 | 0.1 | 0.000 | Case A | No |
| | 6/29/2015 | | 400.3 | 300.2 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | 400.3 | 300.2 | 0.1 | 0.000 | Case A | No |
| | 9/8/2015 | | 400.3 | 300.2 | 14.3 | 0.036 | Case A | No |
| | 10/6/2015 | | 400.3 | 300.2 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 400.3 | 300.2 | 3.8 | 0.009 | Case A | No |
| | 12/9/2015 | | 400.3 | 300.2 | 0 | 0.000 | Case A | No |
| | 5/28/2015 | MTBE | NA | NA | BDL | NA | NA | NA |
| | 6/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 7/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 9/8/2015 | | NA | NA | BDL | NA | NA | NA |
| | 10/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 11/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 12/9/2015 | | NA | NA | BDL | NA | NA | NA |
| RW-8 | 5/29/2015 | Benzene | 2460 | 1845.0 | 0.1 | 0.000 | Case A | No |
| | 6/29/2015 | | 2460 | 1845.0 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | 2460 | 1845.0 | 0.1 | 0.000 | Case A | No |
| | 9/8/2015 | | 2460 | 1845.0 | 0.1 | 0.000 | Case A | No |

Table 1 - Rebound Evaluation Analysis Worksheet
Gasoline Fueling Station – Royal Farms #96
500 Mechanics Valley Road, North East, MD 21901

| Well ID | Sample Date | Analyte | Pre-Start-up Mean (C ₀): | Case C Threshold | Current Concentration (C) | Rebound Ratio (C/C ₀) | Rebound Condition | Restart Criteria Met? |
|---------|-------------|-------------|--------------------------------------|------------------|---------------------------|-----------------------------------|-------------------|-----------------------|
| | 10/6/2015 | | 2460 | 1845.0 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 2460 | 1845.0 | 0.1 | 0.000 | Case A | No |
| | 12/9/2015 | | 2460 | 1845.0 | 0.1 | 0.000 | Case A | No |
| | 5/29/2015 | Total BTEX | 10688 | 8016.0 | 1174.8 | 0.110 | Case A | No |
| | 6/29/2015 | | 10688 | 8016.0 | 683.2 | 0.064 | Case A | No |
| | 7/29/2015 | | 10688 | 8016.0 | 592.2 | 0.055 | Case A | No |
| | 9/8/2015 | | 10688 | 8016.0 | 0.1 | 0.000 | Case A | No |
| | 10/6/2015 | | 10688 | 8016.0 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 10688 | 8016.0 | 56 | 0.005 | Case A | No |
| | 12/9/2015 | | 10688 | 8016.0 | 84.3 | 0.008 | Case A | No |
| | 5/29/2015 | Naphthalene | 100 | 75.0 | 19.0 | 0.190 | Case A | No |
| | 6/29/2015 | | 100 | 75.0 | 20.4 | 0.204 | Case A | No |
| | 7/29/2015 | | 100 | 75.0 | 20.8 | 0.208 | Case A | No |
| | 9/8/2015 | | 100 | 75.0 | 0.1 | 0.001 | Case A | No |
| | 10/6/2015 | | 100 | 75.0 | 0.1 | 0.001 | Case A | No |
| | 11/6/2015 | | 100 | 75.0 | 2.3 | 0.023 | Case A | No |
| | 12/9/2015 | | 100 | 75.0 | 2.7 | 0.027 | Case A | No |
| | 5/29/2015 | MTBE | NA | NA | BDL | NA | NA | NA |
| | 6/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 7/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 9/8/2015 | | NA | NA | BDL | NA | NA | NA |
| | 10/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 11/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 12/9/2015 | | NA | NA | BDL | NA | NA | NA |
| RW-11 | 5/29/2015 | Benzene | 5065 | 3798.8 | 278 | 0.055 | Case A | No |
| | 6/29/2015 | | 5065 | 3798.8 | 193 | 0.038 | Case A | No |
| | 7/29/2015 | | 5065 | 3798.8 | 265 | 0.052 | Case A | No |
| | 9/8/2015 | | 5065 | 3798.8 | 206 | 0.041 | Case A | No |
| | 10/6/2015 | | 5065 | 3798.8 | 170 | 0.034 | Case A | No |
| | 11/6/2015 | | 5065 | 3798.8 | 134 | 0.026 | Case A | No |
| | 12/9/2015 | | 5065 | 3798.8 | 100 | 0.020 | Case A | No |
| | 5/29/2015 | Total BTEX | 25170 | 18877.5 | 1550 | 0.062 | Case A | No |
| | 6/29/2015 | | 25170 | 18877.5 | 4067 | 0.162 | Case A | No |
| | 7/29/2015 | | 25170 | 18877.5 | 2609 | 0.104 | Case A | No |
| | 9/8/2015 | | 25170 | 18877.5 | 1991 | 0.079 | Case A | No |
| | 10/6/2015 | | 25170 | 18877.5 | 2843 | 0.113 | Case A | No |

**Table 1 - Rebound Evaluation Analysis Worksheet
Gasoline Fueling Station – Royal Farms #96
500 Mechanics Valley Road, North East, MD 21901**

| Well ID | Sample Date | Analyte | Pre-Start-up Mean (C ₀): | Case C Threshold | Current Concentration (C) | Rebound Ratio (C/C ₀) | Rebound Condition | Restart Criteria Met? |
|---------|-------------|-------------|--------------------------------------|------------------|---------------------------|-----------------------------------|-------------------|-----------------------|
| | 11/6/2015 | | 25170 | 18877.5 | 1225 | 0.049 | Case A | No |
| | 12/9/2015 | | 25170 | 18877.5 | 1199 | 0.048 | Case A | No |
| | 5/29/2015 | Naphthalene | 304.5 | 228.4 | 158 | 0.519 | Case B | No |
| | 6/29/2015 | | 304.5 | 228.4 | 283 | 0.929 | Case C | No |
| | 7/29/2015 | | 304.5 | 228.4 | 297 | 0.975 | Case C | YES |
| | 9/8/2015 | | 304.5 | 228.4 | 92.6 | 0.304 | Case B | No |
| | 10/6/2015 | | 304.5 | 228.4 | 184 | 0.604 | Case B | No |
| | 11/6/2015 | | 304.5 | 228.4 | 95.9 | 0.315 | Case B | No |
| | 12/9/2015 | | 304.5 | 228.4 | 59.8 | 0.196 | Case A | No |
| | 5/28/2015 | MTBE | NA | NA | BDL | NA | NA | NA |
| | 6/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 7/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 9/8/2015 | | NA | NA | BDL | NA | NA | NA |
| | 10/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 11/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 12/9/2015 | | NA | NA | BDL | NA | NA | NA |
| RW-12 | 5/29/2015 | Benzene | 184 | 138.0 | 0.1 | 0.001 | Case A | No |
| | 6/29/2015 | | 184 | 138.0 | 0.1 | 0.001 | Case A | No |
| | 7/29/2015 | | 184 | 138.0 | 0.1 | 0.001 | Case A | No |
| | 9/8/2015 | | 184 | 138.0 | 0.1 | 0.001 | Case A | No |
| | 10/6/2015 | | 184 | 138.0 | 0.1 | 0.001 | Case A | No |
| | 11/6/2015 | | 184 | 138.0 | 0.1 | 0.001 | Case A | No |
| | 12/9/2015 | | 184 | 138.0 | 0.1 | 0.001 | Case A | No |
| | 5/29/2015 | Total BTEX | 2045.9 | 1534.4 | 0.1 | 0.000 | Case A | No |
| | 6/29/2015 | | 2045.9 | 1534.4 | 0.1 | 0.000 | Case A | No |
| | 7/29/2015 | | 2045.9 | 1534.4 | 0.1 | 0.000 | Case A | No |
| | 9/8/2015 | | 2045.9 | 1534.4 | 0.1 | 0.000 | Case A | No |
| | 10/6/2015 | | 2045.9 | 1534.4 | 0.1 | 0.000 | Case A | No |
| | 11/6/2015 | | 2045.9 | 1534.4 | 0.1 | 0.000 | Case A | No |
| | 12/9/2015 | | 2045.9 | 1534.4 | 0.1 | 0.000 | Case A | No |
| | 5/29/2015 | Naphthalene | 26.3 | 19.7 | 0.1 | 0.004 | Case A | No |
| | 6/29/2015 | | 26.3 | 19.7 | 0.1 | 0.004 | Case A | No |
| | 7/29/2015 | | 26.3 | 19.7 | 0.1 | 0.004 | Case A | No |
| | 9/8/2015 | | 26.3 | 19.7 | 0.1 | 0.004 | Case A | No |
| | 10/6/2015 | | 26.3 | 19.7 | 0.1 | 0.004 | Case A | No |
| | 11/6/2015 | | 26.3 | 19.7 | 0.1 | 0.004 | Case A | No |

**Table 1 - Rebound Evaluation Analysis Worksheet
Gasoline Fueling Station – Royal Farms #96
500 Mechanics Valley Road, North East, MD 21901**

| Well ID | Sample Date | Analyte | Pre-Start-up Mean (C ₀): | Case C Threshold | Current Concentration (C) | Rebound Ratio (C/C ₀) | Rebound Condition | Restart Criteria Met? |
|---------|-------------|---------|--------------------------------------|------------------|---------------------------|-----------------------------------|-------------------|-----------------------|
| | 12/9/2015 | | 26.3 | 19.7 | 0.1 | 0.004 | Case A | No |
| | 5/28/2015 | MTBE | NA | NA | BDL | NA | NA | NA |
| | 6/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 7/29/2015 | | NA | NA | BDL | NA | NA | NA |
| | 9/8/2015 | | NA | NA | BDL | NA | NA | NA |
| | 10/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 11/6/2015 | | NA | NA | BDL | NA | NA | NA |
| | 12/9/2015 | | NA | NA | BDL | NA | NA | NA |

VE/GE - Vapor Extraction / Groundwater Extraction

All results in micrograms per liter (µg/L)

VE/GE System restart is necessary if an analyte in a single well meets the Case C criteria during two consecutive sampling events

Case C - Rapid Rebound Criteria (Rebound ratio greater than or equal to 0.75)

Case B - Gradual Rebound Criteria (Rebound ratio between 0.25 and 0.75)

Case A - Little-to-No Rebound Scenario (Rebound ratio less than or equal to 0.25)

Dotted line indicates a period of VE/GE System operation between the above and below sampling dates.

0.1 - placeholder for a result reported below detection limits for computational purposes

COC - Contaminant of Concern

B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene

MTBE = Methyl-tert-butyl-ether

NA - MTBE concentrations are monitored, but there is no associated restart criteria

BDL - MTBE result below laboratory detection limits

ATTACHMENT C

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

Project: RF-096

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Report Issued: 12/14/15 14:27

Jessup MD, 20794

| CLIENT SAMPLE ID: | MW-8 | RW-12 | RW-2 | RW-1 | RW-8 | RW-6 |
|-----------------------|------------|------------|------------|------------|------------|------------|
| LAB SAMPLE ID: | 5120906-01 | 5120906-02 | 5120906-03 | 5120906-04 | 5120906-05 | 5120906-06 |
| SAMPLE DATE: | 12/09/15 | 12/09/15 | 12/09/15 | 12/09/15 | 12/09/15 | 12/09/15 |
| RECEIVED DATE: | 12/09/15 | 12/09/15 | 12/09/15 | 12/09/15 | 12/09/15 | 12/09/15 |
| MATRIX | Units | Water | Water | Water | Water | Water |

VOLATILE ORGANICS (MBTEXN+) BY EPA METHOD 8260B (GC/MS) (Water)

| | | | | | | | |
|--------------------------------|--------|--------------|--------------|--------------|--------------|----------------|--------------|
| Benzene | ug/L | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| Ethylbenzene | ug/L | <2.0 | <2.0 | <2.0 | <2.0 | 12.1 | <2.0 |
| 4-Isopropyltoluene | ug/L | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| Methyl tert-butyl ether (MTBE) | ug/L | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| Naphthalene | ug/L | <2.0 | <2.0 | <2.0 | <2.0 | 2.7 [1] | <2.0 |
| Toluene | ug/L | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| o-Xylene | ug/L | <2.0 | <2.0 | <2.0 | <2.0 | 34.4 | <2.0 |
| m- & p-Xylenes | ug/L | <2.0 | <2.0 | <2.0 | <2.0 | 37.8 | <2.0 |
| 1,2-Dichloroethane-d4 | [surr] | <u>90.1%</u> | <u>96.9%</u> | <u>94.5%</u> | <u>93.8%</u> | <u>95.7%</u> | <u>92.6%</u> |
| Toluene-d8 | [surr] | <u>99.7%</u> | <u>98.3%</u> | <u>98.7%</u> | <u>97.9%</u> | <u>98.7%</u> | <u>96.6%</u> |
| 4-Bromofluorobenzene | [surr] | <u>87.3%</u> | <u>85.9%</u> | <u>86.7%</u> | <u>85.0%</u> | <u>96.7%</u> | <u>85.9%</u> |

1 = Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

Project: RF-096

Project Number: 05-056-RF96

Project Manager: Jeffery Stein

Report Issued: 12/14/15 14:27

Advantage Environmental Consultants, LLC

8610 Baltimore Washington Blvd, Suite 217

Jessup MD, 20794

| | | |
|--------------------------|------------|------------|
| CLIENT SAMPLE ID: | RW-4 | RW-11 |
| LAB SAMPLE ID: | 5120906-07 | 5120906-08 |
| SAMPLE DATE: | 12/09/15 | 12/09/15 |
| RECEIVED DATE: | 12/09/15 | 12/09/15 |
| MATRIX | Units | Water |

VOLATILE ORGANICS (MBTEXN+) BY EPA METHOD 8260B (GC/MS) (Water)

| | | | |
|--------------------------------|--------|-----------------------|--------------------|
| Benzene | ug/L | <u>5.9</u> | <u>100</u> |
| Ethylbenzene | ug/L | <u>4.0 [1]</u> | <u>238</u> |
| 4-Isopropyltoluene | ug/L | <2.0 | <10.0 |
| Methyl tert-butyl ether (MTBE) | ug/L | <2.0 | <10.0 |
| Naphthalene | ug/L | <u>10.1</u> | <u>59.8</u> |
| Toluene | ug/L | <u>8.8</u> | <u>245</u> |
| o-Xylene | ug/L | <u>19.3</u> | <u>230</u> |
| m- & p-Xylenes | ug/L | <u>21.1</u> | <u>386</u> |
| 1,2-Dichloroethane-d4 | [surr] | <u>98.9%</u> | <u>93.5%</u> |
| Toluene-d8 | [surr] | <u>102%</u> | <u>101%</u> |
| 4-Bromofluorobenzene | [surr] | <u>95.0%</u> | <u>94.9%</u> |

1 = Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).

| | | | | | | | | | | | | | | | | | | | |
|--|---------|---|--|--|--|--|--|--------------------------|--|--|--|--|---------|---|------------|-------|---|---|------------|
| Company Name: AEC | | Project Manager: J Stein | | Analysis Requested | | | | | | | | | | CHAIN-OF-CUSTODY RECORD | | | | | |
| Project Name: RF-0916 | | Project ID: 05-056-RF0916 | | No. of Containers BTEX/Naphthalene/MTBE/PAHs | | | | | | | | | | Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 labman@mdspectral.com | | | | | |
| Sampler(s): Kevin Pellegrini | | P.O. Number: 05-056-RF0916 | | | | | | | | | | | | Matrix Codes: NW (nonpotable water) PW (potable water) | | | | | |
| Field Sample ID | | Date | Time | | | | | | | | | | | Water | Soil | Other | Preservative: 1+1 HCL, H ₂ SO ₄ , Methanol, Na ₂ S ₂ O ₃ , NaHCO ₃ | Field pH, Residual Chlorine, QC Request, Trip Blank, Field Blank | MSS Lab ID |
| MW-8 | 12-9-15 | 12:40 | X | | | | 3 | X | | | | | 1+1 HCL | | 5120906-01 | | | | |
| RW-12 | | 12:50 | | | | | 3 | | | | | | | | -02 | | | | |
| RW-2 | | 13:00 | | | | | 3 | | | | | | | | -03 | | | | |
| RW-1 | | 13:10 | | | | | 3 | | | | | | | | -04 | | | | |
| RW-8 | | 13:20 | | | | | 3 | | | | | | | | -05 | | | | |
| RW-6 | | 13:35 | | | | | 6 | | | | | | | | -06 | | | | |
| RW-4 | | 13:50 | | | | | 3 | | | | | | | | -07 | | | | |
| RW-11 | | 14:10 | | | | | 3 | | | | | | | | -08 | | | | |
| Relinquished by: (Signature) <i>Kevin Pellegrini</i> | | Date/Time 12-9-2015 | Received by: (Signature) | | Relinquished by: (Signature) | | Date/Time | Received by: (Signature) | | | | | | | | | | | |
| (Printed) Kevin Pellegrini | | | (Printed) | | (Printed) | | | (Printed) | | | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time 12/9/15 | Received by Lab: (Signature) <i>Hannah Rosier</i> | | Turn Around Time: | | Lab Use: | | | | | | | | | | | | |
| (Printed) | | 1545 | (Printed) Hannah Rosier | | <input checked="" type="checkbox"/> Normal (7 day) <input type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 3 day <input type="checkbox"/> Rush (2 day) <input type="checkbox"/> Next Day <input type="checkbox"/> Other: _____ <input type="checkbox"/> Specific Due Date: _____ | | Temp: 8.8°C <input checked="" type="checkbox"/> Received on Ice <input checked="" type="checkbox"/> Received same day <input type="checkbox"/> Preservation Appropriate | | | | | | | | | | | | |
| Delivery Method: <input type="checkbox"/> Courier <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____ | | Special Instructions/QC Requirements & Comments: RESULTS to: <i>kpellegrini@aec-env.com</i> <i>Juelt</i> <i>jstein</i> | | | Sample Disposal: <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for _____ days | | | | | | | | | | | | | | |