April 20, 2009

Mr. Herbert M. Meade and Ms. Ellen Jackson
Maryland Department of the Environment
Oil Control Program, Suite 620
1800 Washington Boulevard
Baltimore, Maryland 21230

RE: SVE In-fill Well Installation and Pilot Test Summary Report
Inactive Exxon Service Station #28077
14258 Jarrettsville Pike
Phoenix, Baltimore County, Maryland
Facility I.D. No. 12342
Case No. 2006-0303-BA2

Dear Mr. Meade and Ms. Jackson:

This letter report is submitted by Kleinfelder East, Inc. (Kleinfelder), for ExxonMobil Environmental Services Company (ExxonMobil) on behalf of Exxon Mobil Corporation, to summarize soil vapor extraction test (SVE test) well installation status and the results of the recent soil vapor extraction (SVE) pilot test completed at the above-referenced site. Installation and pilot test activities were performed in accordance with the scope of work outlined in an email submitted to the Maryland Department of the Environment (MDE) dated November 20, 2008. The MDE approved the proposal in an email dated December 11, 2008.

Background

In February 2008, Kleinfelder installed two replacement recovery wells (MW-16R and MW-27R) approximately ten feet from the original recovery wells (MW-16 and MW-27) and adjacent to the former underground storage tank (UST) field. Locations of the aforementioned wells are presented in Figure 1. MW-16R and MW-27R were installed to a depth of 60 feet below grade, which is approximately 20 feet deeper than MW-16 and MW-27. Following installation and connection of MW-16R and MW-27R, total petroleum hydrocarbon (TPH) concentrations in the recovered vapor stream originating from the former UST area increased.

To evaluate the potential for further increased recovery rates of petroleum constituents in the vicinity of the former UST field, Kleinfelder proposed a SVE pilot test to be performed on three newly installed wells. The three pilot test wells SVE-1, SVE-2, and SVE-3 were proposed for installation in the area of the former tank field. Pilot test objectives included identifying potential enhancements to current remediation system operations.

Soil Vapor Extraction Well Installation and Sampling

On January 19 to 23, 2009, Kleinfelder supervised the installation of SVE wells SVE-1 through SVE-3 utilizing an air rotary drill rig. Borings SVE-1 and SVE-3 were first cleared using an air knife/vacuum excavation to a depth of five feet below ground surface. Boring SVE-2 was first cleared using an air knife/vacuum excavation to a depth of eight feet below ground surface. SVE well locations were selected based on discussions with the MDE in the field prior to drilling. The locations of SVE-1 though SVE-3 are presented in Figure 1. The SVE wells SVE-1 and SVE-3 were installed to total depths of 69 feet below grade, and were constructed of 45 feet of 6-inch diameter, 0.020 slot, schedule 40 polyvinyl chloride (PVC) screen and 24 feet of 6-inch diameter schedule 40 PVC casing to grade. SVE well SVE-2 was installed to a total depth of 70.75 feet and was constructed of 45 feet of 6-inch diameter, 0.020 slot, schedule 40 PVC screen with 25.75 feet of 6-inch diameter schedule 40 PVC casing below grade.
The annular spaces for all three wells were filled with #2 sand filter pack to approximately 5 feet above the top of screen and sealed with approximately 22 feet of bentonite slurry grout to surface. The SVE well boring logs/construction diagrams are included in Appendix A. A well construction table including the newly installed wells is presented as Table 1.

The borehole for SVE-1 was drilled through approximately ten feet of crushed stone backfill material installed within the former UST site area following UST removal activities. Saprolite (weathered bedrock) was first encountered at approximately ten feet below ground surface and was primarily schist. Gneiss bedrock was then encountered at a depth of approximately thirty two feet below grade. Silty clay and silty sand were encountered in the borehole for SVE-2 during drilling until weathered bedrock was reached at a depth of approximately 21 feet below ground surface. Bedrock encountered in SVE-2 was primarily schist until approximately 25 feet below ground surface where gneiss was encountered. The borehole for SVE-3 was drilled through approximately twelve feet of crushed stone backfill material installed within the former UST field area following UST removal activities. Saprolite was first encountered at approximately twelve feet bgs and was primarily schist. Gneiss bedrock was then encountered at a depth of approximately thirty one feet below grade. Lithology was determined from cuttings collected from the SVE test wells and cores collected from SVE-1 and SVE-2. The lithology is presented in the boring/construction logs included in Appendix A. Initial elevations and global positioning system (GPS) locations for the wells were collected on March 5, 2009 relative to existing site monitoring wells with known positions and elevations. Elevations are listed on boring logs included in Appendix A.

Cuttings were collected from the SVE test wells at two to five foot intervals in SVE-1 and SVE-2 to depths of approximately fifty feet below ground surface. Cutting samples were collected at approximately ten foot intervals for SVE-3. The samples were field screened for volatile organic compounds (VOCs) with a photoionization detector (PID) The PID was calibrated using an isobutylene standard calibration gas prior to screening activities. PID readings and corresponding depths are displayed in Appendix A.

Soil and bedrock cuttings generated during well installation activities were stockpiled on-site. Two composite samples were collected from the stockpile. Soil samples were analyzed for benzene, toluene, ethyl-benzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) in accordance with Environmental Protection Agency (EPA) Method 8260. The Accutest Laboratories Technical Report is included in Appendix B. The samples displayed no detectable analytes and were used for on-site regrading and reseeding activities.

The SVE wells were developed approximately one week after installation on January 27, 2009, and groundwater samples were collected the following day, January 28, 2009. Samples were analyzed for full-suite VOCs including fuel oxygenates by EPA Method 8260 and Total Petroleum Hydrocarbons, Gasoline Range Organics and Diesel Range Organics (TPH-GRO and DRO) by EPA Method 8015B to establish baseline conditions. SVE well groundwater analytical data is presented in Table 2 and the Accutest Laboratories Technical Report is included in Appendix C.

**Soil Vapor Extraction Pilot Test Operations**

For soil vapor extraction pilot test activities, the three SVE test wells were individually connected to an existing SVE unit (MLE DPE Claw) consisting of one trailer-mounted 20 horsepower Busch positive displacement blower and a moisture separator tank with necessary controls and failsafes. The unit is capable of operating at varying speeds with a variable frequency drive (VFD). One 1,400-pound vapor granular activated carbon (VGAC) vessel was used for SVE offgas treatment. The SVE trailer was connected to the wells individually via temporary, aboveground hoses and fittings. Groundwater recovery from onsite remediation wells continued during pilot test activities and localized soil vapor extraction systems (MLE DPE Claw and ESD Tri-Lobe) were shutdown during the step pilot test to conduct vapor extraction solely from the SVE test wells. On February 4, 2009, baseline water levels were measured in each well and surrounding monitoring wells. After collecting baseline data, the SVE system was started up on SVE-1. The unit was operated on each well individually for approximately two hours to monitor vacuum, air flow, and influent PID concentrations at the SVE blower. In addition, vacuum influence at surrounding monitoring wells was monitored. Each well operated for an hour under two conditions: the typical vacuum of the current SVE units onsite, which is approximately 11 inches of Mercury ("Hg), and maximum speed for the SVE blower (VFD set at 100%). The step test progressed from lower to higher vacuum for the three SVE test wells. Operating data for the step tests is presented in Table 3.
Vacuum influence data collected from surrounding monitoring wells is presented in Table 4. Vacuum readings listed at a time of 0 minutes are the initial readings under vacuum conditions. Soil vapor samples were collected from each SVE well with Tedlar airbags from the blower effluent during SVE activities. The results are presented in Table 5 and the airbag Accutest Laboratory Technical Report is included in Appendix D.

In order to evaluate the effect of groundwater recovery from the SVE test wells on vapor phase hydrocarbon recovery, a second phase of pilot testing was conducted on February 16, 2009. Pilot test activities were performed with an active submersible pump in the SVE test wells, while simultaneously operating the SVE blower on the SVE test wells to recover soil vapors. Each unit was connected for one hour to the SVE unit set to maximum VFD speed. One QED Environmental pneumatic pump (AP-4 Long AutoPump®) was temporarily installed in the well and pumped for one hour during SVE activities. The bottom loading pump was set with the intake located at approximately one foot above the bottom of each well. Recovered groundwater was directed to the on-site groundwater treatment system via temporary, aboveground hoses and fittings. The SVE blower was connected as described previously. Operating data for the SVE pilot test with pumping, including estimated groundwater recovery, is presented in Table 6. Soil vapor samples were collected with Tedlar airbags from the blower effluent during pilot test activities. The results are presented in Table 7 and the Accutest Laboratory Technical Report is included in Appendix D.

Groundwater samples were collected from the SVE test wells approximately one week following the final pilot test activities. SVE well groundwater analytical data is presented in Table 8 and the Accutest Laboratories Technical Report is included in Appendix C.

**Soil Vapor Extraction Pilot Test Results**

Normalized vacuum influence was determined by dividing the vacuum influence from the monitoring points by the interstitial vacuum at the operating SVE test wells. Normalized vacuum response is presented for the three step tests conducted on February 4 and 5, 2009 in Tables 9 through 11. Vacuum influence and normalized vacuum influence are depicted on Figures 2 through 4 for monitoring wells surrounding the SVE test wells. Normalized vacuum influence monitoring wells surrounding SVE-1 ranged from 0.000 (MW-25) to 0.055 (MW-16R). Normalized vacuum influence surrounding SVE-2 ranged from 0.000 (MW-5) to 0.055 (MW-16R). Normalized vacuum influence surrounding SVE-3 ranged from 0.000 (MW-151) to 0.043 (MW-2).

Maximum vacuum influence was observed at the surrounding monitoring wells during maximum vacuum recorded at the SVE test well. Following pilot test completion, wellhead vacuum was measured at the SVE test wells on March 18, 2009 to determine if these wells are under vacuum influence of the current remediation system. Vacuum influence was observed at wells SVE-1 and SVE-3 at 0.8 and 0.1 inches of water column (WC) respectively. Vacuum influence was not observed during current system operations on SVE-2.

Vacuum influence was reviewed based on 1) distance from the active well, 2) direction from active well with regard to foliation, and 3) exposed screen interval overlap. There is not an observable correlation between vacuum influence and these three factors. However, it was noted that the greatest recorded vacuum influence measurements was recorded at MW-16R which was the most recently installed monitoring well and was also recently rehabilitated prior to pilot test activities.

During the step pilot test, air flow rates for SVE-1 and SVE-3 exhibited higher air flow during the second step. SVE-1 air flow recorded into the SVE unit ranged from 122.6 actual cubic feet per minute (acfm) to 251.8 acfm. SVE-3 air flow recorded into the SVE unit ranged from 119.1 acfm to 184.6 acfm. SVE-2 exhibited decreased air flow during the second step. SVE-2 air flow recorded into the SVE unit ranged from 66.3 acfm to 55.9 acfm observed during the second step.

During the step pilot test, the average estimated vapor phase hydrocarbon recovery rate from SVE test well SVE-1 was 0.114 pounds per hour (lb/hr). From SVE test wells SVE-2 and SVE-3, the average estimated vapor phase hydrocarbon recovery rates were 0.026 and 0.031 lb/hr. Hydrocarbon recovery was estimated based on the reported concentrations of TPH as equivalent hexane. As reported to the MDE in the Groundwater Monitoring and Remedial Status Report from the fourth quarter of 2008, average estimated hydrocarbon recovery rate from the DPE Claw, which was used for pilot test activities, was 0.170 lbs/hr.
During pumping conditions on SVE-1, influent hydrocarbon concentrations detected in air bag analytical samples increased slightly, but remained within the same order of magnitude of the non-pumping concentrations. During pumping conditions on SVE-2 and SVE-3, influent hydrocarbon concentrations decreased when compared to non-pumping concentrations, with some concentrations below the detectable limits. During SVE and pumping conditions, groundwater was recovered from the three wells at estimated rates of 0.6, 1.2, and 3.1 gallons per minute for SVE-1, SVE-2, and SVE-3 respectively.

Conclusions and Recommendations

Based on the results presented in this letter report and following approval by the MDE, SVE operations will be continued on SVE-1 and groundwater recovery operations will be continued on SVE-3 for one month to further evaluate hydrocarbon recovery from these areas. The systems will be connected using temporary connections and aboveground hosing. Airbag samples will be collected biweekly and submitted for laboratory analysis from SVE-1. Groundwater samples will be collected biweekly from SVE-3 and submitted for laboratory analysis. Following one month of operations and review of operating data and recovery rates, continued operation at these wells will be evaluated and discussed with the MDE. Please contact us with questions or comments pertaining to the information and recommendations provided. Thank you.

Sincerely,
Kleinfelder East, Inc.

Matthew R. Newman
Project Engineer

Leslie D. Schultheis, P.E.
Project Manager

Attachments

Figure 1 – Site Plan
Figure 2 – SVE-1 Pilot Test Data
Figure 3 – SVE-2 Pilot Test Data
Figure 4 – SVE-3 Pilot Test Data
Table 1 – SVE Pilot Test - Well Construction Summary
Table 2 – Summary of Pre-Pilot Test Groundwater Data
Table 3 – Summary of SVE Pilot Test Operating Data
Table 4 – Summary of SYE Pilot Test Data - Monitoring Point Data
Table 5 – Vapor Analytical Data and Estimated Recovery
Table 6 – Summary of SVE Pilot Test with Pumping System Data
Table 7 – Summary of SVE/Pumping Pilot Test Data - Vapor Analytical Data
Table 8 – Summary of Post-Pilot Test Groundwater Data
Table 9 – Summary of SVE-1 Pilot Test Data - Normalized Vacuum Response
Table 10 – Summary of SVE-2 Pilot Test Data - Normalized Vacuum Response
Table 11 – Summary of SVE-3 Pilot Test Data - Normalized Vacuum Response

Appendix A – Boring Logs
Appendix B – Accutest Laboratory Technical Reports – Soil Data
Appendix C – Accutest Laboratory Technical Reports – SVE Test Well Groundwater Data
Appendix D – Accutest Laboratory Technical Reports – SVE Pilot Test Airbag Data

cc: James F. Medlin – ExxonMobil (Kleinfelder file)
    Greg Martin – Roux, Inc.
    Project File
Figures
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SVE-1 Pilot Test Data

Inactive Exxon Facility # 28077
14258 Jarrettsville Pike
Phoenix, Baltimore County, Maryland

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FIGURE 2

Legend
- Monitoring Only
- Dual Phase Extraction (DPE)
- Pneumatic Pump
- Soil Vapor Extraction (SVE)
- SVE/Pneumatic Pump
- Blasting
- Abandoned Well
- Tank Field
- Jersey Wall
- Fence Area
- Arduino

Well ID
Step #1
Vacuum Influence ("WC")
Normalized Vac. Influence

SVE Well ID
Step #1
Avg. Vac. ("WC")
Avg. Flow (ACFM)

"WC = inches of water column
ACFM = actual cubic feet per minute
SVE-2 Pilot Test Data

Inactive Exxon Facility # 28077
14258 Jarrettsville Pike
Phoenix, Baltimore County, Maryland

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Tables
## Table 1

**SVE Pilot Test - Well Construction Summary**

Inactive Exxon Facility # 28077  
14258 Jarrettsville Pike  
Phoenix, MD

<table>
<thead>
<tr>
<th>Well ID</th>
<th>Borehole Diameter (inch)</th>
<th>Well Diameter (inch)</th>
<th>Riser/Casing Length (feet)</th>
<th>Screen Length/Open Interval (feet)</th>
<th>Total Borehole Depth (feet)</th>
<th>Screen Interval (feet below TOC)</th>
<th>TOC Elevation</th>
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</thead>
<tbody>
<tr>
<td>SVE-01</td>
<td>10</td>
<td>6</td>
<td>24</td>
<td>45</td>
<td>69</td>
<td>24-69</td>
<td>592.38</td>
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<tr>
<td>SVE-02</td>
<td>10</td>
<td>6</td>
<td>25</td>
<td>45</td>
<td>70.75</td>
<td>24.75-70.75</td>
<td>589.44</td>
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<tr>
<td>SVE-03</td>
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<td>6</td>
<td>24</td>
<td>45</td>
<td>69</td>
<td>24-69</td>
<td>589.38</td>
</tr>
<tr>
<td>MW-2</td>
<td>6</td>
<td>2</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>20-50</td>
<td>588.28</td>
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<tr>
<td>MW-3P</td>
<td>6</td>
<td>2</td>
<td>30</td>
<td>20</td>
<td>50</td>
<td>30-50</td>
<td>590.09</td>
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<td>MW-5</td>
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<td>20</td>
<td>25</td>
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<td>20-45</td>
<td>589.74</td>
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<td>MW-13</td>
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<td>MW-16</td>
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<td>20</td>
<td>18</td>
<td>38</td>
<td>20-38</td>
<td>591.99</td>
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<td>MW-16R</td>
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<td>15</td>
<td>60</td>
<td>45-60</td>
<td>591.89</td>
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<td>MW-25</td>
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<td>25</td>
<td>30</td>
<td>55</td>
<td>25-55</td>
<td>592.34</td>
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<td>MW-27</td>
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<td>6</td>
<td>27</td>
<td>16</td>
<td>43</td>
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<td>MW-152</td>
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<td>4</td>
<td>35</td>
<td>25</td>
<td>60</td>
<td>35-60</td>
<td>591.94</td>
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# Table 2
Summary of Pre-Pilot Test Groundwater Data

Inactive Exxon Facility # 28077  
14258 Jarrettsville Pike  
Phoenix, MD  
January 28, 2009

<table>
<thead>
<tr>
<th>Sample ID: SVE001 Concentration (µg/L)</th>
<th>Sample ID: SVE002 Concentration (µg/L)</th>
<th>Sample ID: SVE003 Concentration (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>8.70</td>
<td>191</td>
</tr>
<tr>
<td>Toluene</td>
<td>ND (20)</td>
<td>3,410</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>ND (20)</td>
<td>71</td>
</tr>
<tr>
<td>Xylenes (total)</td>
<td>10.0</td>
<td>1,120</td>
</tr>
<tr>
<td>total BTEX</td>
<td>18.7</td>
<td>4,792</td>
</tr>
<tr>
<td>MTBE</td>
<td>13,600</td>
<td>282</td>
</tr>
</tbody>
</table>

Notes:
- BTEX - sum of benzene, toluene, ethylbenzene, xylenes
- µg/L - micrograms per liter
- MTBE - Methyl tert-butyl ether
### Table 3
Summary of SVE Pilot Test Operating Data

Inactive Exxon Facility #28077
14258 Jarrettsville Pike
Phoenix, MD
February 4, 2009 - February 5, 2009

<table>
<thead>
<tr>
<th>Elapsed Time (min)</th>
<th>SVE1</th>
<th>SVE2</th>
<th>SVE3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interstitial Vacuum</strong>&lt;br&gt;&quot;WC&quot;&lt;br&gt;<strong>VOC Concentration</strong>&lt;br&gt;ppm&lt;sub&gt;v&lt;/sub&gt;</td>
<td>Velocity&lt;br&gt;ft/min</td>
<td>Flow Rate&lt;br&gt;scfm</td>
<td>Flow Rate&lt;br&gt;acfm</td>
</tr>
<tr>
<td>0</td>
<td>129.9</td>
<td>45.1</td>
<td>1489.7</td>
</tr>
<tr>
<td>15</td>
<td>131.1</td>
<td>49.3</td>
<td>1405.0</td>
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<td>30</td>
<td>125.5</td>
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<td>--</td>
</tr>
<tr>
<td>45</td>
<td>99.6</td>
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<td>1625.0</td>
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<td>60</td>
<td>158.4</td>
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<td>1405.0</td>
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<tr>
<td>90</td>
<td>149.9</td>
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<td>105</td>
<td>148.7</td>
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<tr>
<td>120</td>
<td>128.8</td>
<td>15.3</td>
<td>2750.0</td>
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</table>

Static depth to water measured at 47.5 feet below top of casing

<table>
<thead>
<tr>
<th>Elapsed Time (min)</th>
<th>SVE1</th>
<th>SVE2</th>
<th>SVE3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interstitial Vacuum</strong>&lt;br&gt;&quot;WC&quot;&lt;br&gt;<strong>VOC Concentration</strong>&lt;br&gt;ppm&lt;sub&gt;v&lt;/sub&gt;</td>
<td>Velocity&lt;br&gt;ft/min</td>
<td>Flow Rate&lt;br&gt;scfm</td>
<td>Flow Rate&lt;br&gt;acfm</td>
</tr>
<tr>
<td>0</td>
<td>206.8</td>
<td>9.0</td>
<td>760.0</td>
</tr>
<tr>
<td>15</td>
<td>48.5</td>
<td>9.0</td>
<td>720.0</td>
</tr>
<tr>
<td>30</td>
<td>25.0</td>
<td>8.9</td>
<td>755.0</td>
</tr>
<tr>
<td>45</td>
<td>25.0</td>
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<td>710.0</td>
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<td>60</td>
<td>25.3</td>
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<td>57.8</td>
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<td>105</td>
<td>179.6</td>
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<td>725.0</td>
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<tr>
<td>120</td>
<td>179.1</td>
<td>11.3</td>
<td>720.0</td>
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Static depth to water measured at 42.8 feet below top of casing

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<th>Elapsed Time (min)</th>
<th>SVE1</th>
<th>SVE2</th>
<th>SVE3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interstitial Vacuum</strong>&lt;br&gt;&quot;WC&quot;&lt;br&gt;<strong>VOC Concentration</strong>&lt;br&gt;ppm&lt;sub&gt;v&lt;/sub&gt;</td>
<td>Velocity&lt;br&gt;ft/min</td>
<td>Flow Rate&lt;br&gt;scfm</td>
<td>Flow Rate&lt;br&gt;acfm</td>
</tr>
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<td>0</td>
<td>124.4</td>
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<td>1480.0</td>
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<td>125.0</td>
<td>3.1</td>
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<td>90</td>
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<td>178.3</td>
<td>2.9</td>
<td>2030.0</td>
</tr>
</tbody>
</table>

Note:
- SVE - soil vapor extraction
- VOC- soil vapor samples measured with a photoionization detector (PID) calibrated to read total volatile organic compounds (VOCs) as benzene.
- "WC - inches of water column
- ppmv - parts per million by volume
- ft/min - feet per minute
- scfm - standard cubic feet per minute
- lb/day - pound per day
- acfm - actual cubic feet per minute
- Not measured
Table 4
Summary of SVE Pilot Test Data - Monitoring Point Data - SVE-1
Inactive Exxon Facility # 28077
14258 Jarrettsville Pike
Phoenix, MD
February 4, 2009 - February 5, 2009

<table>
<thead>
<tr>
<th>Elapsed Time (min)</th>
<th>Monitoring Point ID: MW-151</th>
<th>Monitoring Point ID: MW-27</th>
<th>Monitoring Point ID: MW-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Static DTW 56.70' below top of casing</td>
<td>Static DTW 38.21' below top of casing</td>
<td>Static DTW 36.49' below top of casing</td>
</tr>
<tr>
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</tr>
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<td></td>
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</tr>
<tr>
<td>120</td>
<td>0.00</td>
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<td>1.10</td>
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<table>
<thead>
<tr>
<th>Elapsed Time (min)</th>
<th>Monitoring Point ID: MW-16R</th>
<th>Monitoring Point ID: MW-25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Static DTW 57.40' below top of casing</td>
<td>Static DTW 48.39' below top of casing</td>
</tr>
<tr>
<td></td>
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<td>('WC)</td>
</tr>
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<tr>
<td>90</td>
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<td>0.00</td>
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<tr>
<td>105</td>
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<td>0.00</td>
</tr>
<tr>
<td>120</td>
<td>5.20</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Note:
SVE - soil vapor extraction
Elapsed Time - time from beginning of pilot tests in minutes
*WC - inches of water column
DTW - depth to water
-- not measured
### Table 4
Summary of SVE Pilot Test Data - Monitoring Point Data - SVE-2

Inactive Exxon Facility # 28077  
14258 Jarrettsville Pike  
Phoenix, MD  
February 4, 2009 - February 5, 2009

**Note:**  
SVE - soil vapor extraction  
Elapsed Time - time from beginning of pilot tests in minutes  
"WC" - inches of water column  
DTW - depth to water  
-- not measured

<table>
<thead>
<tr>
<th>Elapsed Time (min)</th>
<th>Monitoring Point ID: MW-144</th>
<th>Monitoring Point ID: MW-3P</th>
<th>Monitoring Point ID: MW-5</th>
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<tr>
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<td>21.8 ft to SVE2</td>
<td>19.6 ft to SVE2</td>
<td>8.2 ft to SVE2</td>
</tr>
<tr>
<td></td>
<td>Static DTW 43.21' below top of casing</td>
<td>Static DTW 43.82' below top of casing</td>
<td>Static DTW 42.21' below top of casing</td>
</tr>
<tr>
<td></td>
<td>Vacuum</td>
<td>Vacuum</td>
<td>Vacuum</td>
</tr>
<tr>
<td></td>
<td>(&quot;WC&quot;)</td>
<td>(&quot;WC&quot;)</td>
<td>(&quot;WC&quot;)</td>
</tr>
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<td>0.00</td>
<td>0.00</td>
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<td>0.10</td>
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<td>0.50</td>
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<td>0.00</td>
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<td>0.00</td>
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<td>0.00</td>
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<th>Monitoring Point ID: MW-152</th>
<th>Monitoring Point ID: MW-16R</th>
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</thead>
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<td>29.1 ft to SVE2</td>
<td>31.8 ft to SVE2</td>
</tr>
<tr>
<td></td>
<td>Static DTW 37.85' below top of casing</td>
<td>Static DTW 57.61' below top of casing</td>
<td>Static DTW 57.40' below top of casing</td>
</tr>
<tr>
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<td>Vacuum</td>
<td>Vacuum</td>
<td>Vacuum</td>
</tr>
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<td>(&quot;WC&quot;)</td>
<td>(&quot;WC&quot;)</td>
<td>(&quot;WC&quot;)</td>
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<td>0.30</td>
<td>1.30</td>
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<tr>
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<td>0.30</td>
<td>1.30</td>
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<tr>
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<td>1.20</td>
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<tr>
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<td>0.40</td>
<td>1.20</td>
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### Table 4
Summary of SVE Pilot Test Data - Monitoring Point Data - SVE-3
Inactive Exxon Facility # 28077
14258 Jarrettsville Pike
Phoenix, MD
February 4, 2009 - February 5, 2009

<table>
<thead>
<tr>
<th>Elapsed Time (min)</th>
<th>Monitoring Point ID: MW-151</th>
<th>Monitoring Point ID: MW-152</th>
<th>Monitoring Point ID: MW-25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>36.2 ft to SVE3</td>
<td>18.2 ft to SVE3</td>
<td>33.6 ft to SVE3</td>
</tr>
<tr>
<td></td>
<td>Static DTW 56.10' below top of casing</td>
<td>Static DTW 57.51' below top of casing</td>
<td>Static DTW 48.39' below top of casing</td>
</tr>
<tr>
<td></td>
<td>Vacuum</td>
<td>Vacuum</td>
<td>Vacuum</td>
</tr>
<tr>
<td></td>
<td>('WC)</td>
<td>('WC)</td>
<td>('WC)</td>
</tr>
<tr>
<td>Static</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
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<td>0.10</td>
</tr>
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</tr>
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<td>0.40</td>
</tr>
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<tr>
<td>90</td>
<td>0.10</td>
<td>0.20</td>
<td>0.60</td>
</tr>
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<table>
<thead>
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<th>Elapsed Time (min)</th>
<th>Monitoring Point ID: MW-2</th>
<th>Monitoring Point ID: MW-144</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35.3 ft to SVE3</td>
<td>34.9 ft to SVE3</td>
</tr>
<tr>
<td></td>
<td>Static DTW 40.01' below top of casing</td>
<td>Static DTW 43.08' below top of casing</td>
</tr>
<tr>
<td></td>
<td>Vacuum</td>
<td>Vacuum</td>
</tr>
<tr>
<td></td>
<td>('WC)</td>
<td>('WC)</td>
</tr>
<tr>
<td>Static</td>
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<td>0.00</td>
</tr>
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<td>5.20</td>
<td>0.50</td>
</tr>
<tr>
<td>15</td>
<td>5.40</td>
<td>0.70</td>
</tr>
<tr>
<td>30</td>
<td>5.40</td>
<td>0.70</td>
</tr>
<tr>
<td>45</td>
<td>5.20</td>
<td>0.50</td>
</tr>
<tr>
<td>60</td>
<td>5.30</td>
<td>0.60</td>
</tr>
<tr>
<td>75</td>
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<td>0.80</td>
</tr>
<tr>
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<td>0.70</td>
</tr>
<tr>
<td>105</td>
<td>5.40</td>
<td>0.70</td>
</tr>
<tr>
<td>120</td>
<td>5.50</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Note:
SVE - soil vapor extraction
Elapsed Time - time from beginning of pilot tests in minutes
WC - inches of water column
DTW - depth to water
-- not measured
# Table 5

Summary of SVE Pilot Test Data - Vapor Analytical Data and Estimated Recovery

Inactive Exxon Facility # 28077  
14258 Jarrettsville Pike  
Phoenix, MD  
February 4, 2009 - February 5, 2009

<table>
<thead>
<tr>
<th>Sample ID: SVE001</th>
<th>Sample ID: SVE002</th>
<th>Sample ID: SVE003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowrate: 238.20 cfm</td>
<td>Flowrate: 68.22 cfm</td>
<td>Flowrate: 192.08 cfm</td>
</tr>
<tr>
<td><strong>Concentration (mg/m³)</strong></td>
<td><strong>Estimated Recovery (lb/hr)</strong></td>
<td><strong>Concentration (mg/m³)</strong></td>
</tr>
<tr>
<td>Benzene</td>
<td>0.22</td>
<td>1.96E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>1.2</td>
<td>1.07E-03</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>0.33</td>
<td>2.94E-04</td>
</tr>
<tr>
<td>Xylenes (total)</td>
<td>2.1</td>
<td>1.87E-03</td>
</tr>
<tr>
<td>total BTEX</td>
<td>3.9</td>
<td>3.44E-03</td>
</tr>
<tr>
<td>TPH (as hexane)</td>
<td>128</td>
<td>1.14E-01</td>
</tr>
<tr>
<td>TPH (C1-C4)</td>
<td>24</td>
<td>2.18E-02</td>
</tr>
<tr>
<td>TPH (C5-C10)</td>
<td>116</td>
<td>1.03E-01</td>
</tr>
</tbody>
</table>

Notes:  
BTEX - benzene, toluene, ethylbenzene, xylenes  
VOCs - volatile organic compounds  
mg/m³ - milligrams per cubic meter  
Samples collected at maximum vacuum for each well, recovery based on flowrate at maximum vacuum  
ND (##) - Not detectable at detection limits (##)
## Table 6
Summary of SVE Pilot Test with Pumping Operating Data

Inactive Exxon Facility # 28077  
14258 Jarrettsville Pike  
Phoenix, MD  
February 16, 2009

<table>
<thead>
<tr>
<th>SVE001</th>
<th>Total Water Pumped</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Startup Time:</strong> 11:26</td>
<td></td>
</tr>
<tr>
<td><strong>Elapsed Time (min)</strong></td>
<td><strong>VOC (ppm)</strong></td>
</tr>
<tr>
<td>0</td>
<td>20.3</td>
</tr>
<tr>
<td>15</td>
<td>19.0</td>
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<tr>
<td>30</td>
<td>18.9</td>
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<tr>
<td>45</td>
<td>18.1</td>
</tr>
<tr>
<td>60</td>
<td>15.7</td>
</tr>
<tr>
<td><strong>Depth to Groundwater</strong>*</td>
<td></td>
</tr>
<tr>
<td><strong>Initial</strong></td>
<td>46.78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SVE002</th>
<th>Total Water Pumped</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Startup Time:</strong> 13:48</td>
<td></td>
</tr>
<tr>
<td><strong>Elapsed Time (min)</strong></td>
<td><strong>VOC (ppm)</strong></td>
</tr>
<tr>
<td>0</td>
<td>6.4</td>
</tr>
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<td>15</td>
<td>8.2</td>
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</tr>
<tr>
<td>60</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Depth to Groundwater</strong>*</td>
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</tr>
<tr>
<td><strong>Initial</strong></td>
<td>43.92</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SVE003</th>
<th>Total Water Pumped</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Startup Time:</strong> 12:45</td>
<td></td>
</tr>
<tr>
<td><strong>Elapsed Time (min)</strong></td>
<td><strong>VOC (ppm)</strong></td>
</tr>
<tr>
<td>0</td>
<td>0.0</td>
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<td>15</td>
<td>0.0</td>
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<tr>
<td>30</td>
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<tr>
<td>45</td>
<td>1.4</td>
</tr>
<tr>
<td>60</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Depth to Groundwater</strong>*</td>
<td></td>
</tr>
<tr>
<td><strong>Initial</strong></td>
<td>41.88</td>
</tr>
</tbody>
</table>

* GW levels collected from top of fitting  
** GW levels collected from top of casing  
*** Groundwater estimated based on factory conversion factor of 0.65 per pump cycle

Kleinfelder  
1340 Charwood Road, Suite I  
Hanover, MD
### Table 7
Summary of SVE/Pumping Pilot Test Data - Vapor Analytical Data

Inactive Exxon Facility # 28077  
14258 Jarrettsville Pike  
Phoenix, MD  
February 16, 2009

<table>
<thead>
<tr>
<th>Sample ID: SVE001 Concentrations (mg/m³)</th>
<th>Sample ID: SVE002 Concentrations (mg/m³)</th>
<th>Sample ID: SVE003 Concentrations (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>0.42</td>
<td>ND (0.16)</td>
</tr>
<tr>
<td>Toluene</td>
<td>1.5</td>
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</tr>
<tr>
<td>Ethylbenzene</td>
<td>0.43</td>
<td>ND (0.22)</td>
</tr>
<tr>
<td>Xylenes (total)</td>
<td>3.1</td>
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<tr>
<td>total BTEX</td>
<td>5.5</td>
<td>0.88</td>
</tr>
<tr>
<td>TPH (as hexane)</td>
<td>136</td>
<td>18</td>
</tr>
<tr>
<td>TPH (C1-C4)</td>
<td>19.6</td>
<td>10.3</td>
</tr>
<tr>
<td>TPH (C5-C10)</td>
<td>115</td>
<td>ND (18)</td>
</tr>
</tbody>
</table>

**Notes:**  
BTEX - benzene, toluene, ethylbenzene, xylenes  
mg/m³ - milligrams per cubic meter
Table 8
Summary of Post-Pilot Test Groundwater Data

Inactive Exxon Facility # 28077
14258 Jarrettsville Pike
Phoenix, MD
February 26, 2009

<table>
<thead>
<tr>
<th>Sample ID: SVE001 Concentrations (µg/L)</th>
<th>Sample ID: SVE002 Concentrations (µg/L)</th>
<th>Sample ID: SVE003 Concentrations (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>10.6</td>
<td>3.3</td>
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<tr>
<td></td>
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<td>ND (1.0)</td>
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<td>Ethylbenzene</td>
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<td></td>
<td>ND (1.0)</td>
</tr>
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<td>Xylenes (total)</td>
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<td></td>
<td>306</td>
</tr>
</tbody>
</table>

Notes:
BTEX - benzene, toluene, ethylbenzene, xylenes
VOCs - volatile organic compounds
µg/L - micrograms per liter
MTBE - Methyl tert-butyl ether
Sample collected following SVE pilot test activities
Table 9
Summary of SVE-1 Pilot Test Data - Normalized Vacuum Response

Inactive Exxon Facility #28077
14258 Jarrettsville Pike
Phoenix, MD
February 4, 2009 - February 5, 2009

RADIUS OF INFLUENCE (ROI) DATA:

<table>
<thead>
<tr>
<th>Step #1</th>
<th>Vacuum at SVE-1: 100 &quot;WC 45</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MW-151 11.75 0.10 0.001</td>
</tr>
<tr>
<td></td>
<td>MW-27 17.50 0.10 0.001</td>
</tr>
<tr>
<td></td>
<td>MW-16 24.20 0.90 0.009</td>
</tr>
<tr>
<td></td>
<td>MW-16R 18.90 5.50 0.055</td>
</tr>
<tr>
<td></td>
<td>MW-25 43.70 0.00 0.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step #2</th>
<th>Vacuum at SVE-1: 129 &quot;WC 120</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MW-151 11.75 0.00 0.000</td>
</tr>
<tr>
<td></td>
<td>MW-27 17.50 0.20 0.002</td>
</tr>
<tr>
<td></td>
<td>MW-16 24.20 1.10 0.009</td>
</tr>
<tr>
<td></td>
<td>MW-16R 18.90 5.20 0.040</td>
</tr>
<tr>
<td></td>
<td>MW-25 43.70 0.00 0.000</td>
</tr>
</tbody>
</table>

Note:
SVE - soil vapor extraction
"WC - inches of water column
min - minutes
Normalized vacuum influence is determined by dividing the vacuum influence by the interstitial vacuum at the extraction well.
### RADIUS OF INFLUENCE (ROI) DATA:

#### Step #1

<table>
<thead>
<tr>
<th>Vacuum at SVE-2:</th>
<th>25</th>
<th>&quot;WC</th>
<th>Time (min):</th>
<th>60</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MW-5</td>
<td>MW-3P</td>
<td>MW-144</td>
<td>MW-152</td>
<td>MW-16R</td>
</tr>
<tr>
<td>Distance From Extraction Well (Feet)</td>
<td>8.20</td>
<td>19.60</td>
<td>21.78</td>
<td>29.10</td>
<td>31.80</td>
</tr>
<tr>
<td>Vacuum Influence (&quot;WC&quot;)</td>
<td>0.00</td>
<td>0.10</td>
<td>0.50</td>
<td>0.40</td>
<td>1.40</td>
</tr>
<tr>
<td>Normalized Vacuum Influence</td>
<td>0.000</td>
<td>0.004</td>
<td>0.020</td>
<td>0.016</td>
<td>0.055</td>
</tr>
</tbody>
</table>

#### Step #2

<table>
<thead>
<tr>
<th>Vacuum at SVE-2:</th>
<th>179</th>
<th>&quot;WC</th>
<th>Time (min):</th>
<th>60</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MW-5</td>
<td>MW-3P</td>
<td>MW-144</td>
<td>MW-152</td>
<td>MW-16R</td>
</tr>
<tr>
<td>Distance From Extraction Well (Feet)</td>
<td>8.20</td>
<td>19.60</td>
<td>21.78</td>
<td>29.10</td>
<td>31.80</td>
</tr>
<tr>
<td>Vacuum Influence (&quot;WC&quot;)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.60</td>
<td>0.40</td>
<td>1.20</td>
</tr>
<tr>
<td>Normalized Vacuum Influence</td>
<td>0.000</td>
<td>0.000</td>
<td>0.003</td>
<td>0.002</td>
<td>0.007</td>
</tr>
</tbody>
</table>

Note:
SVE - soil vapor extraction
*WC - inches of water column
min - minutes
Normalized vacuum influence is determined by dividing the vacuum influence by the interstitial vacuum at the extraction well.
## Table 11
Summary of SVE-3 Pilot Test Data - Normalized Vacuum Response

Inactive Exxon Facility #28077
14258 Jarrettsville Pike
Phoenix, MD
February 4, 2009 - February 5, 2009

### RADIUS OF INFLUENCE (ROI) DATA:

#### Step #1

<table>
<thead>
<tr>
<th>Vacuum at SVE-3:</th>
<th>124 &quot;WC</th>
<th>Time (min): 60</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MW-152</td>
<td>MW-25</td>
</tr>
<tr>
<td>Distance From Extraction Well (Feet)</td>
<td>18.20</td>
<td>33.60</td>
</tr>
<tr>
<td>Vacuum Influence (&quot;WC&quot;)</td>
<td>0.10</td>
<td>0.40</td>
</tr>
<tr>
<td>Normalized Vacuum Influence</td>
<td>0.001</td>
<td>0.003</td>
</tr>
</tbody>
</table>

#### Step #2

<table>
<thead>
<tr>
<th>Vacuum at SVE-3:</th>
<th>178 &quot;WC</th>
<th>Time (min): 120</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MW-152</td>
<td>MW-25</td>
</tr>
<tr>
<td>Distance From Extraction Well (Feet)</td>
<td>18.20</td>
<td>33.60</td>
</tr>
<tr>
<td>Vacuum Influence (&quot;WC&quot;)</td>
<td>0.10</td>
<td>0.60</td>
</tr>
<tr>
<td>Normalized Vacuum Influence</td>
<td>0.001</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Note:
SVE - soil vapor extraction
"WC - inches of water column
min - minutes
Normalized vacuum influence is determined by dividing the vacuum influence by the interstitial vacuum at the extraction well.
Appendix A – Boring Logs
**DRILLING LOG**

**Well No. SVE-1**

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Soil/Geologic Description</th>
<th>RQD %</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
<th>Depth (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>GROUND SURFACE</td>
<td></td>
<td>0</td>
<td></td>
<td>0.0</td>
</tr>
<tr>
<td>5.0</td>
<td>Asphalt</td>
<td></td>
<td>0</td>
<td></td>
<td>5.0</td>
</tr>
<tr>
<td>10.0</td>
<td>Crushed stone backfill</td>
<td></td>
<td>0</td>
<td></td>
<td>10.0</td>
</tr>
<tr>
<td>15.0</td>
<td>SCHIST, brown, saprolitic, dry</td>
<td></td>
<td>0</td>
<td></td>
<td>15.0</td>
</tr>
<tr>
<td>20.0</td>
<td></td>
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<tr>
<td>25.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25.0</td>
</tr>
</tbody>
</table>

**Logged By:** AW
**Permit No.:** BA-95-2793
**Checked By:** MRN, JRH
**Notes:** Air Knifed to 5’; 1992 CMTe used for coring (31-54’ bgs); Weathered bedrock at 10’

**Project Name:** Inactive Exxon Facility # 28077
**Site Location:** 14258 Jarrettsvile Pike, Phoenix, MD
**Project No:** 100891
**Client:** ExxonMobil
**Drilling Company:** Eichelbergers
**Driller:** T. Toland, J. Malecki
**Drill Rig Type:** 2004 Schramm Model T450WS
**Drilling Method:** Air Rotary-HSA
**Sampling Method:** Cuttings-Coring

**Start Date:** 01-21-09
**End Date:** 01-23-09
**Total Hole Depth:** 69 feet
**Hole Diameter:** 12” to 31’, 10” to 69’
**Depth to Bedrock:** 26 feet
**Well Diameter:** 6 inches
**Water Level (Initial):** NA
**Screen Length:** 45 feet
**TOC Elevation:** 592.38

**PID - Photoionization Detector**
**ppm - Parts per million**
**NA - Not Applicable**
* Sample submitted for laboratory analysis

- Water Level Initial Measurement
- Water Level Subsequent Measurement

**Sample ID:**
HA - Hand Auger Sample
S - Split Spoon Sample
GS - Grab Sample
C - Macrocore Sleeve

1340 Charwood Road, Suite I
Hanover, MD 21076
(410) 850-0404
## DRILLING LOG

**Well No. SVE-1**

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Soil/Geologic Description</th>
<th>RQD %</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.0</td>
<td>BR SCHIST, brown, dry, odor noted</td>
<td>0</td>
<td>0</td>
<td>#2 Silica Sand</td>
</tr>
<tr>
<td>35.0</td>
<td>BR GNEISS, gray</td>
<td>46</td>
<td>0</td>
<td>6&quot; Diameter - 0.020&quot; Slotted PVC Screen</td>
</tr>
<tr>
<td>40.0</td>
<td>BR SCHIST, brown, moist to wet (fracture zone noted)</td>
<td>0</td>
<td>0</td>
<td>Water Level Initial Measurement</td>
</tr>
<tr>
<td>45.0</td>
<td>BR GNEISS, gray</td>
<td>73</td>
<td>93.1</td>
<td>Water Level Subsequent Measurement</td>
</tr>
<tr>
<td>50.0</td>
<td>BR GNEISS, dark gray, wet</td>
<td>0</td>
<td>3.7</td>
<td></td>
</tr>
</tbody>
</table>

**Legend**
- PID - Photoionization Detector
- ppm - Parts per million
- NA - Not Applicable
- * Sample submitted for laboratory analysis

**Project Name:** Inactive Exxon Facility # 28077
**Site Location:** 14258 Jarrettsville Pike, Phoenix, MD
**Project No.:** 100891
**Client:** ExxonMobil
**Drilling Company:** Eichelbergers
**Driller:** T. Toland, J. Malecki
**Drill Rig Type:** 2004 Schramm Model T450WS
**Drilling Method:** Air Rotary-HSA
**Sampling Method:** Cuttings-Coring

**Logged By:** AW
**Permit No.:** BA-95-2793
**Checked By:** MRN, JRH

**Start Date:** 01-21-09
**End Date:** 01-23-09
**Total Hole Depth:** 69 feet
**Hole Diameter:** 12" to 31', 10" to 69'
**Depth to Bedrock:** 26 feet
**Well Diameter:** 6 inches
**Water Level (Initial):** NA
**Screen Length:** 45 feet
**TOC Elevation:** 592.38

**Notes:**
- Water Level Initial Measurement
- Water Level Subsequent Measurement

**Sample ID:**
- HA - Hand Auger Sample
- S - Split Spoon Sample
- GS - Grab Sample
- C - Macrocore Sleeve
### Drilling Log

**Well No. SVE-1**

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Inactive Exxon Facility # 28077</th>
<th>Start Date:</th>
<th>01-21-09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Location:</td>
<td>14258 Jarrettsville Pike, Phoenix, MD</td>
<td>End Date:</td>
<td>01-23-09</td>
</tr>
<tr>
<td>Project No:</td>
<td>100891</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client:</td>
<td>ExxonMobil</td>
<td>Total Hole Depth:</td>
<td>69 feet</td>
</tr>
<tr>
<td>Drilling Company:</td>
<td>Eichelbergers</td>
<td>Hole Diameter:</td>
<td>12&quot; to 31', 10&quot; to 69'</td>
</tr>
<tr>
<td>Driller:</td>
<td>T. Toland, J. Malecki</td>
<td>Depth to Bedrock:</td>
<td>26 feet</td>
</tr>
<tr>
<td>Drill Rig Type:</td>
<td>2004 Schramm Model T450WS</td>
<td>Well Diameter:</td>
<td>6 inches</td>
</tr>
<tr>
<td>Drilling Method:</td>
<td>Air Rotary-HSA</td>
<td>Water Level (Initial):</td>
<td>NA</td>
</tr>
<tr>
<td>Sampling Method:</td>
<td>Cuttings-Coring</td>
<td>Screen Length:</td>
<td>45 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOC Elevation:</td>
<td>592.38</td>
</tr>
</tbody>
</table>

### Soil/Geologic Description

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Graphic Log</th>
<th>Soil/Geologic Description</th>
<th>RQD %</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
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</thead>
<tbody>
<tr>
<td>55.0</td>
<td></td>
<td></td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55.0</td>
<td></td>
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<tr>
<td>55.0</td>
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<td>55.0</td>
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<tr>
<td>55.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Water Level Initial Measurement
- Water Level Subsequent Measurement

* Sample submitted for laboratory analysis

---

- PID - Photoionization Detector
- ppm - Parts per million
- NA - Not Applicable
- Sample ID:
- HA - Hand Auger Sample
- S - Split Spoon Sample
- GS - Grab Sample
- C - Macrocore Sleeve

Terminated at 69.0 feet

Logged By: AW
Permit No.: BA-95-2793
Checked By: MRN, JRH
Air Knife to 5'; 1992 CM Te used for coring (31-54' bgs); Weathered bedrock at 10'

- 1340 Charwood Road, Suite I
  Hanover, MD 21076
  (410) 850-0404

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<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Soil/Geologic Description</th>
<th>RQD %</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>GROUND SURFACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>AC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>Asphalt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>CL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>Silty CLAY, reddish-brown, medium plasticity, firm, moist</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>CL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>Silty CLAY, reddish-brown, medium plasticity, firm, moist</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trace pebbles, dry to moist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.0</td>
<td>MH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.0</td>
<td>Silty SAND with trace clay, brown, micaceous, dry to moist</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.0</td>
<td>MH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.0</td>
<td>Silty SAND with trace gravel, brown, micaceous, moist</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.5</td>
<td>BR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.5</td>
<td>SCHIST, brown, saprolitic, dry</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 feet</td>
<td>6&quot; Diameter - PVC Casing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>589.44</td>
<td>Bentonite Slurry</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PID - Photoionization Detector  
ppm - Parts per million  
NA - Not Applicable  
* Sample submitted for laboratory analysis  
- Water Level Initial Measurement  
- Water Level Subsequent Measurement  
Sample ID:  
HA - Hand Auger Sample  
S - Split Spoon Sample  
GS - Grab Sample  
C - Macrocore Sleeve
## DRILLING LOG

**Well No. SVE-2**

### Project Details

- **Project Name:** Inactive Exxon Facility # 28077
- **Site Location:** 14258 Jarrettsville Pike, Phoenix, MD
- **Project No:** 100891
- **Client:** ExxonMobil
- **Drilling Company:** Eichelbergers
- **Driller:** T. Toland, J. Malecki
- **Drill Rig Type:** 2004 Schramm Model T450WS
- **Drilling Method:** Air Rotary-HSA
- **Sampling Method:** Cuttings-Coring

### Soil/Geologic Description

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Graphic Log</th>
<th>Soil/Geologic Description</th>
<th>RQD %</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.0</td>
<td></td>
<td>BR GNEISS, gray, dry 3 inch quartz vein at 32 feet</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td></td>
<td>BR SCHIST, brown, saprolitic, wet, petro odor</td>
<td>70</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>40.0</td>
<td></td>
<td>BR GNEISS, gray, dry</td>
<td></td>
<td>18.0</td>
<td></td>
</tr>
<tr>
<td>45.0</td>
<td></td>
<td>BR SCHIST, brown, wet</td>
<td></td>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td>50.0</td>
<td></td>
<td>BR Quartz vein, dry</td>
<td></td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>55.0</td>
<td></td>
<td>BR GNEISS, gray, dry</td>
<td></td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td></td>
<td></td>
<td></td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

- **PID - Photoionization Detector**
- **ppm - Parts per million**
- **NA - Not Applicable**
- * Sample submitted for laboratory analysis

**Logged By:** AW
**Permit No.:** BA-95-2794
**Checked By:** MRN
**Notes:** Air Knifed to 8'; 1992 CMT used for coring (32-54' bgs); Weathered bedrock at 21'

### Well Completion Details

- **Start Date:** 01-22-09
- **End Date:** 01-23-09
- **Total Hole Depth:** 70.75'
- **Hole Diameter:** 12"-23', 10"-70.75'
- **Depth to Bedrock:** 23.5 feet
- **Well Diameter:** 6 inches
- **Water Level (Initial):** NA
- **Screen Length:** 45 feet
- **TOC Elevation:** 589.44

---

Sample ID:
- HA - Hand Auger Sample
- S - Split Spoon Sample
- GS - Grab Sample
- C - Macrocore Sleeve

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Hanover, MD 21076
(410) 850-0404
### DRILLING LOG

**Well No.: SVE-2**

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Graphic Log</th>
<th>Soil/Geologic Description</th>
<th>RQD %</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>55.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.0</td>
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<td>65.0</td>
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<tr>
<td>70.0</td>
<td></td>
<td>Terminated at 70.75 feet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Project Name:** Inactive Exxon Facility # 28077
- **Site Location:** 14258 Jarrettsville Pike, Phoenix, MD
- **Project No.:** 100891
- **Client:** ExxonMobil
- **Drilling Company:** Eichelbergers
- **Driller:** T. Toland, J. Malecki
- **Drill Rig Type:** 2004 Schramm Model T450WS
- **Drilling Method:** Air Rotary-HSA
- **Sampling Method:** Cuttings-Coring
- **Start Date:** 01-22-09
- **End Date:** 01-23-09
- **Total Hole Depth:** 70.75'
- **Hole Diameter:** 12"-23', 10"-70.75'
- **Well Diameter:** 6 inches
- **Depth to Bedrock:** 23.5 feet
- **Water Level (Initial):** NA
- **Screen Length:** 45 feet
- **TOC Elevation:** 589.44

- **Logged By:** AW
- **Permit No.:** BA-95-2794
- **Checked By:** MRN
- **Notes:** Air Knifed to 8'; 1992 CMT used for coring (32-54' bgs); Weathered bedrock at 21'

---

**Sample ID:**
- HA - Hand Auger Sample
- S - Split Spoon Sample
- GS - Grab Sample
- C - Macrocore Sleeve
### DRILLING LOG

**Well No. SVE-3**

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Inactive Exxon Facility # 28077</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Location:</td>
<td>14258 Jarrettsville Pike, Phoenix, MD</td>
</tr>
<tr>
<td>Project No:</td>
<td>100891</td>
</tr>
<tr>
<td>Client:</td>
<td>ExxonMobil</td>
</tr>
<tr>
<td>Drilling Company:</td>
<td>Eichelbergers</td>
</tr>
<tr>
<td>Driller:</td>
<td>T. Toland</td>
</tr>
<tr>
<td>Drill Rig Type:</td>
<td>2004 Schramm Model T450WS</td>
</tr>
<tr>
<td>Drilling Method:</td>
<td>Air Rotary</td>
</tr>
<tr>
<td>Sampling Method:</td>
<td>Cuttings</td>
</tr>
<tr>
<td>Start Date:</td>
<td>01-19-09</td>
</tr>
<tr>
<td>End Date:</td>
<td>01-21-09</td>
</tr>
<tr>
<td>Total Hole Depth:</td>
<td>69 feet</td>
</tr>
<tr>
<td>Hole Diameter:</td>
<td>12&quot; to 19', 10&quot; to 69'</td>
</tr>
<tr>
<td>Well Diameter:</td>
<td>6 inches</td>
</tr>
<tr>
<td>Depth to Bedrock:</td>
<td>19 feet</td>
</tr>
<tr>
<td>Water Level (Initial):</td>
<td>63 feet</td>
</tr>
<tr>
<td>Screen Length:</td>
<td>45 feet</td>
</tr>
<tr>
<td>TOC Elevation:</td>
<td>589.38</td>
</tr>
</tbody>
</table>

**Logged By:** AW  
**Permit No.:** BA-95-2793  
**Checked By:** MRN, JRH  
**Weathered bedrock at:** 12'  
**Air knifed to:** 5'

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Graphic Log</th>
<th>Soil/Geologic Description</th>
<th>RQD%</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
<th>Depth (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>GROUND SURFACE</td>
<td>AC Asphalt</td>
<td>-</td>
<td>0</td>
<td>Cement</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AF Crushed stone backfill, dry</td>
<td></td>
<td>0</td>
<td>6 Diameter - PVC Casing</td>
<td>0</td>
</tr>
<tr>
<td>5.0</td>
<td></td>
<td>BR Saprolite (weathered bedrock), dry</td>
<td></td>
<td>0</td>
<td>Bentonite Slurry</td>
<td>5.0</td>
</tr>
<tr>
<td>10.0</td>
<td></td>
<td>BR SCHIST, brown, dry, competent</td>
<td></td>
<td>0</td>
<td></td>
<td>10.0</td>
</tr>
<tr>
<td>15.0</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>20.0</td>
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<td>25.0</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td>25.0</td>
</tr>
</tbody>
</table>

**Notes:**

- PID - Photoionization Detector  
- ppm - Parts per million  
- NA - Not Applicable  
- * Sample submitted for laboratory analysis  

**- Water Level Initial Measurement**  
**- Water Level Subsequent Measurement**  
**Sample ID:**  
HA - Hand Auger Sample  
S - Split Spoon Sample  
GS - Grab Sample  
C - Macrocore Sleeve
**DRILLING LOG**

**Well No. SVE-3**

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Soil/Geologic Description</th>
<th>RQD %</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.0</td>
<td>BR GNEISS, gray, dry</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td>#2 Silica Sand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Logged By:** AW  
**Permit No.:** BA-95-2793  
**Checked By:** MRN, JRH  
**Weathered bedrock at: 12'**  
**Air knifed to 5'**

**PID - Photoionization Detector**  
**ppm - Parts per million**  
**NA - Not Applicable**  
* Sample submitted for laboratory analysis

---

**Project Name:** Inactive Exxon Facility # 28077  
**Site Location:** 14258 Jarrettsville Pike, Phoenix, MD  
**Project No.:** 100891  
**Start Date:** 01-19-09  
**End Date:** 01-21-09  
**Logged By:** AW  
**Permit No.:** BA-95-2793

**Client:** ExxonMobil  
**Total Hole Depth:** 69 feet

**Driller:** T. Toland  
**Hole Diameter:** 12' to 19', 10' to 69'

**Drill Rig Type:** 2004 Schramm Model T450WS  
**Well Diameter:** 6 inches

**Drilling Method:** Air Rotary  
**Screen Length:** 45 feet

**Sampling Method:** Cuttings  
**TOC Elevation:** 589.38
### DRILLING LOG

**Well No. SVE-3**

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Graphic Log</th>
<th>Soil/Geologic Description</th>
<th>RQD %</th>
<th>PID Headspace (ppm)</th>
<th>Well Completion Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>55.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td></td>
<td>GNEISS, dark gray, moist</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>65.0</td>
<td></td>
<td>GNEISS, dark gray, wet</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terminated at 69.0 feet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Soil/Geologic Description:**
- BR: GNEISS, dark gray, moist
- BR: GNEISS, dark gray, wet

**Well Completion Details:**
- Depth to Bedrock: 19 feet
- Water Level Initial Measurement: 63 feet
- Water Level Subsequent Measurement: 45 feet
- TOC Elevation: 589.38

**Notes:**
- Weathered bedrock at 12'
- Air knifed to 5'

**Logged By:** AW  
**Permit No.:** BA-95-2793  
**Checked By:** MRN, JRH  
**Notes:** Weathered bedrock at 12' Air knifed to 5'

**Sample ID:**
- HA - Hand Auger Sample
- S - Split Spoon Sample
- GS - Grab Sample
- C - Macrocore Sleeve
Appendix B – Accutest Laboratory Technical Reports – Soil Data
Technical Report for

ExxonMobil Corporation
GSC MD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD
PO #4510774144 WBS#08
Accutest Job Number: JA12483

Sampling Date: 02/18/09

Report to:
Kleinfelder
mnewman@kleinfelder.com
ATTN: Matthew Newman

Total number of pages in report: 9

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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-1-  

Section 1: Sample Summary ................................................................................................... 3  
Section 2: Sample Results ........................................................................................................ 4  
  2.1: JA12483-1: SVE_STOCKPILE001 ............................................................................. 5  
  2.2: JA12483-2: SVE_STOCKPILE002 ............................................................................. 6  
Section 3: Misc. Forms ............................................................................................................ 7  
  3.1: Chain of Custody ........................................................................................................... 8
Sample Summary

ExxonMobil Corporation

GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD
Project No: PO#4510774144 WBS#08

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Collected Date</th>
<th>Time</th>
<th>By</th>
<th>Received Date</th>
<th>Matrix</th>
<th>Code</th>
<th>Type</th>
<th>Sample ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>JA12483-1</td>
<td>02/18/09</td>
<td>10:30</td>
<td>MRN</td>
<td>02/19/09</td>
<td>SO</td>
<td>Soil</td>
<td>SVE_STOCKPILE001</td>
<td></td>
</tr>
<tr>
<td>JA12483-2</td>
<td>02/18/09</td>
<td>10:40</td>
<td>MRN</td>
<td>02/19/09</td>
<td>SO</td>
<td>Soil</td>
<td>SVE_STOCKPILE002</td>
<td></td>
</tr>
</tbody>
</table>

Soil samples reported on a dry weight basis unless otherwise indicated on result page.
Sample Results

Report of Analysis
Report of Analysis

Client Sample ID: SVE_STOCKPILE001
Lab Sample ID: JA12483-1
Matrix: SO - Soil
Method: SW846 8260B
Percent Solids: 89.9
Date Sampled: 02/18/09
Date Received: 02/19/09

<table>
<thead>
<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>Y85146.D</td>
<td>1</td>
<td>02/20/09</td>
<td>HJK</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
</tbody>
</table>

Initial Weight
- Run #1: 4.5 g
- Run #2: ...

Purgeable BTEX, MTBE, TBA, DIPE, TAME, ETBE

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>ND</td>
<td>0.0012</td>
<td>0.00044</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
<td>0.0012</td>
<td>0.00041</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>100-41-4</td>
<td>Ethylbenzene</td>
<td>ND</td>
<td>0.0012</td>
<td>0.00050</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylene (total)</td>
<td>ND</td>
<td>0.0025</td>
<td>0.00037</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
<td>ND</td>
<td>0.0012</td>
<td>0.00044</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>75-65-0</td>
<td>Tert Butyl Alcohol</td>
<td>ND</td>
<td>0.031</td>
<td>0.021</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>108-20-3</td>
<td>Di-Isopropyl ether</td>
<td>ND</td>
<td>0.0062</td>
<td>0.00045</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>994-05-8</td>
<td>tert-Amyl Methyl Ether</td>
<td>ND</td>
<td>0.0062</td>
<td>0.0011</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>637-92-3</td>
<td>tert-Butyl Ethyl Ether</td>
<td>ND</td>
<td>0.0062</td>
<td>0.00041</td>
<td>mg/kg</td>
<td></td>
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</tbody>
</table>

Surrogate Recoveries

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1868-53-7</td>
<td>Dibromofluoromethane</td>
<td>108%</td>
<td>67-125%</td>
<td></td>
</tr>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>123%</td>
<td>64-131%</td>
<td></td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>91%</td>
<td>73-124%</td>
<td></td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>93%</td>
<td>61-136%</td>
<td></td>
</tr>
</tbody>
</table>

ND = Not detected     MDL - Method Detection Limit
RL = Reporting Limit  J = Indicates an estimated value
N = Indicates presumptive evidence of a compound
# Report of Analysis

Client Sample ID: SVE_STOCKPILE002  
Lab Sample ID: JA12483-2  
Date Sampled: 02/18/09  
Matrix: SO - Soil  
Date Received: 02/19/09  
Method: SW846 8260B  
Percent Solids: 91.8  
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>Y85147.D</td>
<td>1</td>
<td>02/20/09</td>
<td>HJK</td>
<td>n/a</td>
<td>n/a</td>
<td>VY3540</td>
</tr>
</tbody>
</table>

| Run #2 | Initial Weight | 4.5 g |

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>ND</td>
<td>0.0012</td>
<td>0.00043</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
<td>0.0012</td>
<td>0.00040</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>100-41-4</td>
<td>Ethylbenzene</td>
<td>ND</td>
<td>0.0012</td>
<td>0.00049</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylene (total)</td>
<td>ND</td>
<td>0.0024</td>
<td>0.00036</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
<td>ND</td>
<td>0.0012</td>
<td>0.00043</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>75-65-0</td>
<td>Tert Butyl Alcohol</td>
<td>ND</td>
<td>0.030</td>
<td>0.020</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>108-20-3</td>
<td>Di-Isopropyl ether</td>
<td>ND</td>
<td>0.0061</td>
<td>0.00044</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>994-05-8</td>
<td>tert-Amyl Methyl Ether</td>
<td>ND</td>
<td>0.0061</td>
<td>0.0011</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>637-92-3</td>
<td>tert-Butyl Ethyl Ether</td>
<td>ND</td>
<td>0.0061</td>
<td>0.00040</td>
<td>mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1868-53-7</td>
<td>Dibromofluoromethane</td>
<td>109%</td>
<td>67-125%</td>
<td></td>
</tr>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>123%</td>
<td>64-131%</td>
<td></td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>91%</td>
<td>73-124%</td>
<td></td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>94%</td>
<td>61-136%</td>
<td></td>
</tr>
</tbody>
</table>

ND = Not detected      MDL - Method Detection Limit     J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range  N = Indicates presumptive evidence of a compound
Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
# Chain of Custody

**Client Information**

- **ExxonMobil - Regional Laboratory Program (MD)**
- **Facility Information**
  - **Address**: 1400 Charnwood Rd, Suite 1, Hanover, MD 21076
  - **City**: Phoenix
  - **State**: MD
- **Project Name**: Exxon/Phoenix
- **Branch**: 14298 Jerriettville Pike
- **Person Contact**: Mark Schaaf, Kristina Braun
  - **ExxonMobil Manager**: James F. Medlin
- **Company Name**: Exxon
  - **Phone**: 410-850-0484
  - **Fax**: 410-850-0490

**Analytical Information**

## Field ID / Point of Collection

<table>
<thead>
<tr>
<th>Field ID / Point of Collection</th>
<th>Date</th>
<th>Time</th>
<th>Sampled By</th>
<th>Matrix</th>
<th>pH</th>
<th>Preservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVE_STOCKPILE001</td>
<td>2/18/2009</td>
<td>10:30</td>
<td>MRN Soil</td>
<td>7.0</td>
<td></td>
<td>X X</td>
</tr>
<tr>
<td>SVE_STOCKPILE002</td>
<td>2/18/2009</td>
<td>10:30</td>
<td>MRN Soil</td>
<td>7.0</td>
<td></td>
<td>X X</td>
</tr>
</tbody>
</table>

**Temperature Information**

- **Room Temp**: 70°F
- **External Temp**: N/A
- **Prepared By**: [Signature]
- **Prepared On**: [Date]
- **Received By**: [Signature]
- **Received On**: [Date]

**Account Log In Information**

- **24 hr TAT**: [Timestamp]
- **CV**: [Value]
- **PK**: [Value]

---

### JA12483: Chain of Custody

**Page 1 of 2**
### Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** JA12483  
**Client:** Immediate Client Services Action Required: No

**Date / Time Received:** 2/19/2009  
**Delivery Method:**  
**No. Coolers:** 1  
**Airbill #'s:**

#### Cooler Security
- 1. Custody Seals Present: N  
- 2. Custody Seals Intact: N

#### Cooler Temperature
- 1. Temp criteria achieved: N  
- 2. Cooler temp verification: Infrared gun  
- 3. Cooler media: Ice (bag)

#### Quality Control Preservation
- 1. Trip Blank present / cooler: N  
- 2. Trip Blank listed on COC: N  
- 3. Samples preserved properly: N  
- 4. VOCs headspace free: N

#### Sample Integrity - Documentation
- 1. Sample labels present on bottles: N  
- 2. Container labeling complete: N  
- 3. Sample container label / COC agree: N

#### Sample Integrity - Condition
- 1. Sample recvd within HT: N  
- 2. All containers accounted for: N  
- 3. Condition of sample: Intact

#### Sample Integrity - Instructions
- 1. Analysis requested is clear: N  
- 2. Bottles received for unspecified tests: N  
- 3. Sufficient volume recvd for analysis: N  
- 4. Compositing instructions clear: N  
- 5. Filtering instructions clear: N

### Comments

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**JA12438: Chain of Custody**  
**Page 2 of 2**
Appendix C – Accutest Laboratory Technical Reports – SVE Test Well Groundwater Data
Technical Report for

ExxonMobil Corporation

GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

PO#4510774144 WBS#08

Accutest Job Number: JA12981

Sampling Date: 02/26/09

Report to:

Kleinfelder

mnewman@kleinfelder.com

ATTN: Matthew Newman

Total number of pages in report: 16

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.
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Sample Summary

ExxonMobil Corporation

GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD
Project No: PO#4510774144 WBS#08

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Collected Date</th>
<th>Time</th>
<th>By</th>
<th>Received Date</th>
<th>Matrix Code</th>
<th>Type</th>
<th>Sample ID</th>
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</thead>
<tbody>
<tr>
<td>JA12981-1</td>
<td>02/26/09</td>
<td>10:00</td>
<td>MRN</td>
<td>02/26/09</td>
<td>DW</td>
<td>Drinking Water</td>
<td>SVE001</td>
</tr>
<tr>
<td>JA12981-2</td>
<td>02/26/09</td>
<td>10:29</td>
<td>MRN</td>
<td>02/26/09</td>
<td>DW</td>
<td>Drinking Water</td>
<td>SVE002</td>
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<td>JA12981-3</td>
<td>02/26/09</td>
<td>10:53</td>
<td>MRN</td>
<td>02/26/09</td>
<td>DW</td>
<td>Drinking Water</td>
<td>SVE003</td>
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</table>
Sample Results

Report of Analysis
## Report of Analysis

### Client Information
- Client Sample ID: SVE001
- Lab Sample ID: JA12981-1
- Date Sampled: 02/26/09
- Matrix: DW - Drinking Water
- Date Received: 02/26/09
- Method: SW846 8260B
- Percent Solids: n/a
- Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

### File ID

<table>
<thead>
<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
<tr>
<td>Run #1</td>
<td>2C55425.D</td>
<td>1</td>
<td>02/28/09</td>
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</table>

### Purge Volume
- Run #1: 5.0 ml
- Run #2: 5.0 ml

### Matrix: VOA Full List + Oxygenates

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>MCL</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
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<td>10</td>
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<td>0.26</td>
<td>ug/l</td>
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<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>10.6</td>
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<td>1.0</td>
<td>0.18</td>
<td>ug/l</td>
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<tr>
<td>108-86-1</td>
<td>Bromobenzene</td>
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<td>0.18</td>
<td>ug/l</td>
<td></td>
<td></td>
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<tr>
<td>74-97-5</td>
<td>Bromochloromethane</td>
<td>ND</td>
<td>5.0</td>
<td>0.24</td>
<td>ug/l</td>
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<td></td>
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<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
<td>ND</td>
<td>1.0</td>
<td>0.14</td>
<td>ug/l</td>
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<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
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<td>0.18</td>
<td>ug/l</td>
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<td></td>
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<td>78-93-3</td>
<td>2-Butanone (MEK)</td>
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<td>10</td>
<td>2.3</td>
<td>ug/l</td>
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<td></td>
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<td>104-51-8</td>
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<td>0.61</td>
<td>ug/l</td>
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<td></td>
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<tr>
<td>135-98-8</td>
<td>sec-Butylbenzene</td>
<td>ND</td>
<td>5.0</td>
<td>0.27</td>
<td>ug/l</td>
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<tr>
<td>98-06-6</td>
<td>tert-Butylbenzene</td>
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<td>0.15</td>
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<td>0.34</td>
<td>ug/l</td>
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<tr>
<td>108-20-3</td>
<td>Di-Isopropyl ether</td>
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<td>0.12</td>
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<td>1,2-Dibromo-3-chloropropane</td>
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<td>10</td>
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<td>75-71-8</td>
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<td>0.24</td>
<td>ug/l</td>
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<td>ug/l</td>
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<td>ug/l</td>
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<tr>
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<td>1.0</td>
<td>0.18</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

**Abbreviations:**
- **ND** = Not detected
- **MCL** = Maximum Contamination Level (40 CFR 141)
- **MDL** = Method Detection Limit
- **RL** = Reporting Limit
- **Q** = Indicates an estimated value
- **J** = Indicates analyte found in associated method blank
- **N** = Indicates presumptive evidence of a compound
- **E** = Indicates value exceeds calibration range
Report of Analysis

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>MCL</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
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<tr>
<td>75-01-4</td>
<td>Vinyl chloride</td>
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<td>0.21</td>
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<tr>
<td>95-47-6</td>
<td>o-Xylene</td>
<td>6.2</td>
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<td>0.39</td>
<td>ug/l</td>
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<tr>
<td>1330-20-7</td>
<td>Xylene (total)</td>
<td>12.6</td>
<td>10000</td>
<td>1.0</td>
<td>0.39</td>
<td>ug/l</td>
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</table>

**CAS No.** | **Surrogate Recoveries** | **Run# 1** | **Run# 2** | **Limits**
---|-----------------------------|-------------|-------------|---------------|
1868-53-7 | Dibromofluoromethane        | 99%         | 96%         | 72-120%       |

ND = Not detected  
MDL - Method Detection Limit  
MCL = Maximum Contamination Level (40 CFR 141)  
J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
E = Indicates value exceeds calibration range  
N = Indicates presumptive evidence of a compound
**Client Sample ID:** SVE001  
**Lab Sample ID:** JA12981-1  
**Date Sampled:** 02/26/09  
**Matrix:** DW - Drinking Water  
**Date Received:** 02/26/09  
**Method:** SW846 8260B  
**Percent Solids:** n/a  
**Project:** GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

### MD VOA Full List + Oxygenates

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>107%</td>
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<tr>
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<td>Toluene-D8</td>
<td>105%</td>
<td>103%</td>
<td>73-116%</td>
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<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>102%</td>
<td>103%</td>
<td>69-126%</td>
</tr>
</tbody>
</table>

(a) Result is from Run# 2

---

**ND** = Not detected  
**MDL** - Method Detection Limit  
**MCL** = Maximum Contamination Level (40 CFR 141)  
**E** = Indicates value exceeds calibration range  
**J** = Indicates an estimated value  
**B** = Indicates analyte found in associated method blank  
**N** = Indicates presumptive evidence of a compound
## Report of Analysis

**Client Sample ID:** SVE002  
**Lab Sample ID:** JA12981-2  
**Date Sampled:** 02/26/09  
**Matrix:** DW - Drinking Water  
**Method:** SW846 8260B  
**Percent Solids:** n/a  
**Date Received:** 02/26/09  
**Project:** GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

### Purge Volume

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<th>Volume</th>
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<td>1</td>
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<tr>
<td>2</td>
<td>5.0 ml</td>
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**MD VOA Full List + Oxygenates**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>MCL</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
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<td>ug/l</td>
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<tr>
<td>108-86-1</td>
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<td>0.18</td>
<td>ug/l</td>
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<tr>
<td>74-97-5</td>
<td>Bromochloromethane</td>
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<tr>
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<tr>
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<td>0.34</td>
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<td>0.12</td>
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<td>J</td>
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<td>1.3</td>
<td>ug/l</td>
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<td>ug/l</td>
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<tr>
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<td>1.0</td>
<td>0.18</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

**ND** = Not detected  
**MCL** = Maximum Contamination Level (40 CFR 141)  
**MDL** = Method Detection Limit  
**J** = Indicates an estimated value  
**RL** = Reporting Level  
**B** = Indicates analyte found in associated method blank  
**E** = Indicates value exceeds calibration range  
**N** = Indicates presumptive evidence of a compound
**Report of Analysis**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>MCL</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
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<tr>
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<td>75-01-4</td>
<td>Vinyl chloride</td>
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<td>0.21</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>95-47-6</td>
<td>o-Xylene</td>
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<td>1.0</td>
<td>0.39</td>
<td>ug/l</td>
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<td>1330-20-7</td>
<td>Xylene (total)</td>
<td>6.0</td>
<td>10000</td>
<td>1.0</td>
<td>0.39</td>
<td>ug/l</td>
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**Surrogate Recoveries**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
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<tbody>
<tr>
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<td>Dibromofluoromethane</td>
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<td>98%</td>
<td>72-120%</td>
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**Legend:**

- **ND** = Not detected
- **MDL** - Method Detection Limit
- **MCL** = Maximum Contamination Level (40 CFR 141)
- **J** = Indicates an estimated value
- **B** = Indicates analyte found in associated method blank
- **E** = Indicates value exceeds calibration range
- **N** = Indicates presumptive evidence of a compound
Report of Analysis

Client Sample ID: SVE002
Lab Sample ID: JA12981-2
Matrix: DW - Drinking Water
Method: SW846 8260B
Percent Solids: n/a
Date Sampled: 02/26/09
Date Received: 02/26/09
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

MD VOA Full List + Oxygenates

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
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<td>102%</td>
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<td>59-137%</td>
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<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>105%</td>
<td>103%</td>
<td>73-116%</td>
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<tr>
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<td>4-Bromofluorobenzene</td>
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<td>103%</td>
<td>69-126%</td>
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(a) Result is from Run# 2

ND = Not detected  MDL - Method Detection Limit  J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 141)  B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range  N = Indicates presumptive evidence of a compound
Client Sample ID: SVE003
Lab Sample ID: JA12981-3
Matrix: DW - Drinking Water
Method: SW846 8260B
Percent Solids: n/a
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
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<tr>
<th>Run #</th>
<th>File ID</th>
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<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<td>NMC</td>
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Purge Volume
- Run #1: 5.0 ml
- Run #2: 5.0 ml

MD VOA Full List + Oxygenates

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>MCL</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
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<td>ND</td>
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<td>1.0</td>
<td>0.18</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

ND = Not detected     MDL - Method Detection Limit 
MCL = Maximum Contamination Level (40 CFR 141)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound
## Report of Analysis

Client Sample ID: SVE003  
Lab Sample ID: JA12981-3  
Date Sampled: 02/26/09  
Matrix: DW - Drinking Water  
Method: SW846 8260B  
Percent Solids: n/a  
Date Received: 02/26/09  
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

### MD VOA Full List + Oxygenates

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>MCL</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
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<tbody>
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<td>J</td>
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<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
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<td>97%</td>
<td>72-120%</td>
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ND = Not detected  
MDL = Method Detection Limit  
MCL = Maximum Contamination Level (40 CFR 141)  
J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
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### Report of Analysis

Client Sample ID: SVE003  
Lab Sample ID: JA12981-3  
Date Sampled: 02/26/09  
Matrix: DW - Drinking Water  
Date Received: 02/26/09  
Method: SW846 8260B  
Percent Solids: n/a  
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

#### MD VOA Full List + Oxygenates

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>103%</td>
<td>99%</td>
<td>59-137%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>104%</td>
<td>104%</td>
<td>73-116%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>105%</td>
<td>103%</td>
<td>69-126%</td>
</tr>
</tbody>
</table>

(a) Result is from Run# 2

---

ND = Not detected  
MDL - Method Detection Limit  
MCL = Maximum Contamination Level (40 CFR 141)  
E = Indicates value exceeds calibration range  
J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound
Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Date</th>
<th>Time</th>
<th>Volume</th>
<th>Metric</th>
<th>Matrix</th>
<th># of bottles</th>
<th>HC</th>
<th>HC ID</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVE801</td>
<td>2/26/2009</td>
<td>1000mL</td>
<td>DW</td>
<td>3</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SVE802</td>
<td>2/26/2009</td>
<td>1050mL</td>
<td>DW</td>
<td>3</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SVE803</td>
<td>2/26/2009</td>
<td>1050mL</td>
<td>DW</td>
<td>3</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

JA12981: Chain of Custody

Page 1 of 2
Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA12981
Client: Immediate Client Services Action Required: No
Date / Time Received: 2/26/2009
Delivery Method: No. Coolers: 1
Client Service Action Required at Login: No
Airbill #'s:

<table>
<thead>
<tr>
<th>Cooler Security</th>
<th>Y or N</th>
<th>Y or N</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Custody Seals Present:</td>
<td>☐ ☐</td>
<td>3. COC Present:</td>
<td>☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooler Temperature</th>
<th>Y or N</th>
<th>Y or N</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Temp criteria achieved:</td>
<td>☐ ☐</td>
<td>3. COC Present:</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>2. Cooler temp verification:</td>
<td>Infrared gun</td>
<td>4. Sample Dates/Time OK</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>3. Cooler media:</td>
<td>Ice (bag)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quality Control Preservation</th>
<th>Y or N</th>
<th>Y or N</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trip Blank present / cooler:</td>
<td>☐ ☐</td>
<td>3. COC Present:</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>2. Trip Blank listed on COC:</td>
<td>☐ ☐</td>
<td>4. Sample Dates/Time OK</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>3. Samples preserved properly:</td>
<td>☐ ☐</td>
<td>5. Sample container label / COC agree:</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>4. VOCs headspace free:</td>
<td>☐ ☐</td>
<td>6. Sample container label / COC agree:</td>
<td>☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Integrity - Documentation</th>
<th>Y or N</th>
<th>Y or N</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sample labels present on bottles:</td>
<td>☐ ☐</td>
<td>3. Sample container label / COC agree:</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>2. Container labeling complete:</td>
<td>☐ ☐</td>
<td>4. Sample container label / COC agree:</td>
<td>☐ ☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Integrity - Condition</th>
<th>Y or N</th>
<th>Y or N</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sample received within HT:</td>
<td>☐ ☐</td>
<td>3. Condition of sample:</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>2. All containers accounted for:</td>
<td>☐ ☐</td>
<td>Intact</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Integrity - Instructions</th>
<th>Y or N</th>
<th>Y or N</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analysis requested is clear:</td>
<td>☐ ☐</td>
<td>3. Sufficient volume received for analysis:</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>2. Bottles received for unspecified tests</td>
<td>☐ ☐</td>
<td>4. Compositing instructions clear:</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>3. Sufficient volume received for analysis:</td>
<td>☐ ☐</td>
<td>5. Filtering instructions clear:</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>4. Compositing instructions clear:</td>
<td>☐ ☐</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

Accutest Laboratories
V: 732.329.0200
2235 US Highway 130
F: 732.329.3489
Dayton, New Jersey
www/accutest.com

JA12981: Chain of Custody
Page 2 of 2
Technical Report for

ExxonMobil Corporation

GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

PO#4510774144 WBS#08

Accutest Job Number: JA10879

Sampling Date: 01/28/09

Report to:

Kleinfelder

mnewman@kleinfelder.com

ATTN: Matthew Newman

Total number of pages in report: 16

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Note: This report is password protected to disallow document modification or assembly.
A password to unlock this report is available from your client service representative.
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## Sample Summary

### ExxonMobil Corporation

GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD
Project No: PO#4510774144 WBS#08

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Collected Date</th>
<th>Time</th>
<th>By</th>
<th>Received Date</th>
<th>Code</th>
<th>Type</th>
<th>Sample ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>JA10879-1</td>
<td>01/28/09</td>
<td>13:00</td>
<td>FK</td>
<td>01/29/09</td>
<td>AQ</td>
<td>Ground Water</td>
<td>SVE001</td>
</tr>
<tr>
<td>JA10879-2</td>
<td>01/28/09</td>
<td>13:30</td>
<td>FK</td>
<td>01/29/09</td>
<td>AQ</td>
<td>Ground Water</td>
<td>SVE002</td>
</tr>
<tr>
<td>JA10879-3</td>
<td>01/28/09</td>
<td>14:00</td>
<td>FK</td>
<td>01/29/09</td>
<td>AQ</td>
<td>Ground Water</td>
<td>SVE003</td>
</tr>
</tbody>
</table>
Sample Results

Report of Analysis
Report of Analysis

Client Sample ID: SVE001
Lab Sample ID: JA10879-1
Date Sampled: 01/28/09
Matrix: AQ - Ground Water
Date Received: 01/29/09
Method: SW846 8260B
Percent Solids: n/a
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
<thead>
<tr>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X88211.D</td>
<td>20</td>
<td>02/02/09</td>
<td>YXC</td>
<td>n/a</td>
<td>n/a</td>
<td>VX3679</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X88212.D</td>
<td>100</td>
<td>02/02/09</td>
<td>YXC</td>
<td>n/a</td>
<td>n/a</td>
<td>VX3679</td>
</tr>
</tbody>
</table>

Purge Volume
Run #1 5.0 ml
Run #2 5.0 ml

MD VOA Full List + Oxygenates

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>ND</td>
<td>200</td>
<td>43</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>8.7</td>
<td>20</td>
<td>5.2</td>
<td>ug/l</td>
<td>J</td>
</tr>
<tr>
<td>108-86-1</td>
<td>Bromobenzene</td>
<td>ND</td>
<td>100</td>
<td>3.6</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>74-97-5</td>
<td>Bromochloromethane</td>
<td>ND</td>
<td>100</td>
<td>4.8</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
<td>ND</td>
<td>20</td>
<td>2.8</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
<td>80</td>
<td>3.7</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>74-83-9</td>
<td>Bromomethane</td>
<td>ND</td>
<td>40</td>
<td>6.3</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>78-93-3</td>
<td>2-Butanone (MEK)</td>
<td>ND</td>
<td>200</td>
<td>46</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>104-51-8</td>
<td>n-Butylbenzene</td>
<td>ND</td>
<td>100</td>
<td>12</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>135-98-8</td>
<td>sec-Butylbenzene</td>
<td>ND</td>
<td>100</td>
<td>5.4</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>98-06-6</td>
<td>tert-Butylbenzene</td>
<td>ND</td>
<td>100</td>
<td>2.9</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>56-23-5</td>
<td>Carbon tetrachloride</td>
<td>ND</td>
<td>20</td>
<td>3.5</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>108-90-7</td>
<td>Chlorobenzene</td>
<td>ND</td>
<td>20</td>
<td>3.8</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-00-3</td>
<td>Chloroethane</td>
<td>ND</td>
<td>20</td>
<td>4.4</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>67-66-3</td>
<td>Chloroform</td>
<td>ND</td>
<td>20</td>
<td>3.2</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>74-87-3</td>
<td>Chloromethane</td>
<td>ND</td>
<td>20</td>
<td>5.8</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>95-49-8</td>
<td>o-Chlorotoluene</td>
<td>ND</td>
<td>100</td>
<td>11</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>106-43-4</td>
<td>p-Chlorotoluene</td>
<td>ND</td>
<td>100</td>
<td>6.7</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>108-20-3</td>
<td>Di-Isopropyl ether</td>
<td>20.7</td>
<td>100</td>
<td>2.4</td>
<td>ug/l</td>
<td>J</td>
</tr>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>200</td>
<td>26</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>124-48-1</td>
<td>Dibromochloromethane</td>
<td>ND</td>
<td>20</td>
<td>3.2</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>106-93-4</td>
<td>1,2-Dibromoethane</td>
<td>ND</td>
<td>40</td>
<td>3.5</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>95-50-1</td>
<td>1,2-Dichlorobenzene</td>
<td>ND</td>
<td>20</td>
<td>3.6</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>541-73-1</td>
<td>1,3-Dichlorobenzene</td>
<td>ND</td>
<td>20</td>
<td>5.2</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>106-46-7</td>
<td>1,4-Dichlorobenzene</td>
<td>ND</td>
<td>20</td>
<td>4.4</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-71-8</td>
<td>Dichlorodifluoromethane</td>
<td>ND</td>
<td>100</td>
<td>18</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-34-3</td>
<td>1,1-Dichloroethane</td>
<td>ND</td>
<td>20</td>
<td>4.8</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>107-06-2</td>
<td>1,2-Dichloroethane</td>
<td>ND</td>
<td>20</td>
<td>7.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-35-4</td>
<td>1,1-Dichloroethene</td>
<td>ND</td>
<td>20</td>
<td>5.8</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>156-59-2</td>
<td>cis-1,2-Dichloroethene</td>
<td>ND</td>
<td>20</td>
<td>4.9</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>156-60-5</td>
<td>trans-1,2-Dichloroethene</td>
<td>ND</td>
<td>20</td>
<td>3.2</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>78-87-5</td>
<td>1,2-Dichloropropane</td>
<td>ND</td>
<td>20</td>
<td>3.5</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

ND = Not detected     MDL - Method Detection Limit
RL = Reporting Limit   J = Indicates an estimated value
E = Indicates value exceeds calibration range
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound
## Report of Analysis

**Client Sample ID:** SVE001  
**Lab Sample ID:** JA10879-1  
**Date Sampled:** 01/28/09  
**Matrix:** AQ - Ground Water  
**Date Received:** 01/29/09  
**Method:** SW846 8260B  
**Percent Solids:** n/a  
**Project:** GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

### CAS No. | Compound | Result | RL | MDL | Units | Q
---|---|---|---|---|---|---
142-28-9 | 1,3-Dichloropropane | ND | 100 | 3.9 | ug/l |
594-20-7 | 2,2-Dichloropropane | ND | 100 | 3.8 | ug/l |
563-58-6 | 1,1-Dichloropropene | ND | 100 | 4.5 | ug/l |
10061-01-5 | cis-1,3-Dichloropropene | ND | 20 | 3.6 | ug/l |
10061-02-6 | trans-1,3-Dichloropropene | ND | 20 | 3.0 | ug/l |
100-41-4 | Ethylbenzene | ND | 20 | 5.3 | ug/l |
87-68-3 | Hexachlorobutadiene | ND | 100 | 4.6 | ug/l |
98-82-8 | Isopropylbenzene | ND | 40 | 3.7 | ug/l |
99-87-6 | p-Isopropyltoluene | ND | 100 | 5.0 | ug/l |
1634-04-4 | Methyl Tert Butyl Ether | ND | 100 | 3.3 | ug/l |
108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | 100 | 27 | ug/l |
74-95-3 | Methylene bromide | ND | 100 | 3.5 | ug/l |
75-09-2 | Methylene chloride | ND | 40 | 3.2 | ug/l |
91-20-3 | Naphthalene | ND | 100 | 23 | ug/l |
103-65-1 | n-Propylbenzene | ND | 100 | 3.6 | ug/l |
100-42-5 | Styrene | ND | 100 | 3.4 | ug/l |
75-65-0 | Tert Butyl Alcohol | ND | 500 | 34 | ug/l |
994-05-8 | tert-Amyl Methyl Ether | ND | 791 | 15 | ug/l |
637-92-3 | tert-Butyl Ethyl Ether | ND | 100 | 5.1 | ug/l |
630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 100 | 2.4 | ug/l |
79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 20 | 2.7 | ug/l |
127-18-4 | Tetrachloroethene | ND | 20 | 5.9 | ug/l |
108-88-3 | Toluene | ND | 20 | 3.1 | ug/l |
87-61-6 | 1,2,3-Trichlorobenzene | ND | 100 | 24 | ug/l |
120-82-1 | 1,2,4-Trichlorobenzene | ND | 100 | 25 | ug/l |
71-55-6 | 1,1,1-Trichloroethane | ND | 20 | 4.8 | ug/l |
79-00-5 | 1,1,2-Trichloroethane | ND | 20 | 3.3 | ug/l |
79-01-6 | Trichloroethene | ND | 20 | 3.7 | ug/l |
75-69-4 | Trichlorofluoromethane | ND | 100 | 4.9 | ug/l |
96-18-4 | 1,2,3-Trichloropropane | ND | 100 | 26 | ug/l |
95-63-6 | 1,2,4-Trimethylbenzene | ND | 100 | 4.4 | ug/l |
108-67-8 | 1,3,5-Trimethylbenzene | ND | 100 | 12 | ug/l |
75-01-4 | Vinyl chloride | ND | 20 | 4.1 | ug/l |
95-47-6 | o-Xylene | ND | 20 | 7.7 | ug/l |
1330-20-7 | Xylene (total) | ND | 20 | 7.7 | ug/l |

### CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits
---|---|---|---|---
1868-53-7 | Dibromofluoromethane | 101% | 100% | 72-120% |

ND = Not detected  
MDL - Method Detection Limit  
RL = Reporting Limit  
J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
E = Indicates value exceeds calibration range  
N = Indicates presumptive evidence of a compound
**Report of Analysis**

<table>
<thead>
<tr>
<th>Client Sample ID:</th>
<th>SVE001</th>
</tr>
</thead>
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<td>Lab Sample ID:</td>
<td>JA10879-1</td>
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<tr>
<td>Date Sampled:</td>
<td>01/28/09</td>
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<tr>
<td>Matrix:</td>
<td>AQ - Ground Water</td>
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<tr>
<td>Date Received:</td>
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<tr>
<td>Method:</td>
<td>SW846 8260B</td>
</tr>
<tr>
<td>Percent Solids:</td>
<td>n/a</td>
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<tr>
<td>Project:</td>
<td>GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD</td>
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</table>

**MD VOA Full List + Oxygenates**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>96%</td>
<td>95%</td>
<td>59-137%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>113%</td>
<td>109%</td>
<td>73-116%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>96%</td>
<td>95%</td>
<td>69-126%</td>
</tr>
</tbody>
</table>

(a) Result is from Run# 2

**Legend**
- ND = Not detected
- MDL - Method Detection Limit
- J = Indicates an estimated value
- RL = Reporting Limit
- B = Indicates analyte found in associated method blank
- E = Indicates value exceeds calibration range
- N = Indicates presumptive evidence of a compound
# Report of Analysis

**Client Sample ID:** SVE002  
**Lab Sample ID:** JA10879-2  
**Date Sampled:** 01/28/09  
**Matrix:** AQ - Ground Water  
**Date Received:** 01/29/09  
**Method:** SW846 8260B  
**Percent Solids:** n/a  
**Project:** GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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**Purge Volume**  
Run #1 5.0 ml  
Run #2

### MD VOA Full List + Oxygenates

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<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
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<tbody>
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<td>67-64-1</td>
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<tr>
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<td>191</td>
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<tr>
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<td>Bromobenzene</td>
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<tr>
<td>74-97-5</td>
<td>Bromochloromethane</td>
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<td>ug/l</td>
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<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
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<tr>
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<td>Bromoform</td>
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<tr>
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<tr>
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<td>98-06-6</td>
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<tr>
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<td>ug/l</td>
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<tr>
<td>75-00-3</td>
<td>Chloroethane</td>
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<tr>
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<tr>
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<tr>
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<tr>
<td>108-20-3</td>
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<tr>
<td>96-12-8</td>
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<tr>
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<td>78-87-5</td>
<td>1,2-Dichloropropane</td>
<td>ND</td>
<td>20</td>
<td>3.5</td>
<td>ug/l</td>
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</tr>
</tbody>
</table>

ND = Not detected  
MDL - Method Detection Limit  
RL = Reporting Limit  
J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
E = Indicates value exceeds calibration range  
N = Indicates presumptive evidence of a compound
Report of Analysis

Client Sample ID: SVE002
Lab Sample ID: JA10879-2
Date Sampled: 01/28/09
Matrix: AQ - Ground Water
Date Received: 01/29/09
Method: SW846 8260B
Percent Solids: n/a
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

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<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
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<th>MDL</th>
<th>Units</th>
<th>Q</th>
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<tr>
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<td>Run# 2</td>
<td>Limits</td>
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</tbody>
</table>

ND = Not detected       MDL - Method Detection Limit       J = Indicates an estimated value
RL = Reporting Limit     B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range  N = Indicates presumptive evidence of a compound
Client Sample ID: SVE002  
Lab Sample ID: JA10879-2  
Matrix: AQ - Ground Water  
Method: SW846 8260B  
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>94%</td>
<td></td>
<td>59-137%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>109%</td>
<td></td>
<td>73-116%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>96%</td>
<td></td>
<td>69-126%</td>
</tr>
</tbody>
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ND = Not detected    MDL = Method Detection Limit
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound
Report of Analysis

<table>
<thead>
<tr>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<td>YXC</td>
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Purge Volume

Run #1 5.0 ml
Run #2 5.0 ml

MD VOA Full List + Oxygenates

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
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</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>ND</td>
<td>10</td>
<td>2.1</td>
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<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>4.0</td>
<td>1</td>
<td>0.26</td>
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<tr>
<td>108-86-1</td>
<td>Bromobenzene</td>
<td>ND</td>
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<tr>
<td>74-97-5</td>
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<td>0.24</td>
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<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
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<tr>
<td>75-25-2</td>
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<td>78-93-3</td>
<td>2-Butanone (MEK)</td>
<td>ND</td>
<td>10</td>
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<td>104-51-8</td>
<td>n-Butylbenzene</td>
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<td>95-49-8</td>
<td>o-Chlorotoluene</td>
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<td>0.55</td>
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<td>106-43-4</td>
<td>p-Chlorotoluene</td>
<td>ND</td>
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<td>0.34</td>
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<td>108-20-3</td>
<td>Di-Isopropyl ether</td>
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<td>0.12</td>
<td>ug/l</td>
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<td>96-12-8</td>
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<td>ND</td>
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<td>1.3</td>
<td>ug/l</td>
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<td>124-48-1</td>
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<td>ND</td>
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<td>0.16</td>
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<td>1,2-Dibromoethane</td>
<td>ND</td>
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<td>0.18</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>95-50-1</td>
<td>1,2-Dichlorobenzene</td>
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<td>0.18</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>541-73-1</td>
<td>1,3-Dichlorobenzene</td>
<td>ND</td>
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<td>0.26</td>
<td>ug/l</td>
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<tr>
<td>106-46-7</td>
<td>1,4-Dichlorobenzene</td>
<td>ND</td>
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<td>0.22</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>75-71-8</td>
<td>Dichlorodifluoromethane</td>
<td>ND</td>
<td>5.0</td>
<td>0.88</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>75-34-3</td>
<td>1,1-Dichloroethane</td>
<td>ND</td>
<td>1.0</td>
<td>0.24</td>
<td>ug/l</td>
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<tr>
<td>107-06-2</td>
<td>1,2-Dichloroethane</td>
<td>ND</td>
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<tr>
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<td>0.29</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>156-59-2</td>
<td>cis-1,2-Dichloroethene</td>
<td>ND</td>
<td>1.0</td>
<td>0.25</td>
<td>ug/l</td>
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<tr>
<td>156-60-5</td>
<td>trans-1,2-Dichloroethene</td>
<td>ND</td>
<td>1.0</td>
<td>0.16</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>78-87-5</td>
<td>1,2-Dichloropropane</td>
<td>ND</td>
<td>1.0</td>
<td>0.18</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

MDL = Method Detection Limit
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ND = Not detected
Report of Analysis

Client Sample ID: SVE003
Lab Sample ID: JA10879-3
Date Sampled: 01/28/09
Matrix: AQ - Ground Water
Date Received: 01/29/09
Method: SW846 8260B
Percent Solids: n/a
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

Cas No.  Compounds  Result  RL  MDL  Units  Q
---  -------------------  ------  --  ----  -----  ----
142-28-9  1,3-Dichloropropane  ND  5.0  0.20  ug/l  
594-20-7  2,2-Dichloropropane  ND  5.0  0.19  ug/l  
563-58-6  1,1-Dichloropropene  ND  5.0  0.23  ug/l  
10061-01-5  cis-1,3-Dichloropropene  ND  1.0  0.18  ug/l  
10061-02-6  trans-1,3-Dichloropropene  ND  1.0  0.15  ug/l  
100-41-4  Ethylbenzene  2.4  1.0  0.27  ug/l  
87-68-3  Hexachlorobutadiene  ND  5.0  0.23  ug/l  
98-82-8  Isopropylbenzene  0.20  2.0  0.19  ug/l  J  
99-87-6  p-Isopropyltoluene  ND  5.0  0.25  ug/l  
108-10-1  4-Methyl-2-pentanone(MIBK)  ND  5.0  1.3  ug/l  
74-95-3  Methylene bromide  ND  5.0  0.18  ug/l  
75-09-2  Methylene chloride  ND  2.0  0.16  ug/l  
91-20-3  Naphthalene  ND  5.0  1.2  ug/l  
103-65-1  n-Propylbenzene  ND  5.0  0.18  ug/l  
100-42-5  Styrene  ND  5.0  0.17  ug/l  
75-65-0  Tert Butyl Alcohol  ND  25  1.7  ug/l  
994-05-8  tert-Butyl Methyl Ether  11.4  5.0  0.77  ug/l  
637-92-3  tert-Butyl Ethyl Ether  1.7  5.0  0.26  ug/l  J  
630-20-6  1,1,1,2-Tetrachloroethane  ND  5.0  0.12  ug/l  
79-34-5  1,1,2,2-Tetrachloroethane  ND  1.0  0.13  ug/l  
127-18-4  Tetrachloroethene  ND  1.0  0.29  ug/l  
108-88-3  Toluene  27.5  1.0  0.15  ug/l  
87-61-6  1,2,3-Trichlorobenzene  ND  5.0  1.2  ug/l  
120-82-1  1,2,4-Trichlorobenzene  ND  5.0  1.3  ug/l  
71-55-6  1,1,1-Trichloroethane  ND  1.0  0.24  ug/l  
79-00-5  1,1,2-Trichloroethane  ND  1.0  0.17  ug/l  
79-01-6  Trichloroethene  ND  1.0  0.18  ug/l  
75-69-4  Trichlorofluoromethane  ND  5.0  0.25  ug/l  
96-18-4  1,2,3-Trichloropropane  ND  5.0  1.3  ug/l  
95-63-6  1,2,4-Trimethylbenzene  1.0  5.0  0.22  ug/l  J  
108-67-8  1,3,5-Trimethylbenzene  0.66  5.0  0.58  ug/l  J  
75-01-4  Vinyl chloride  ND  1.0  0.21  ug/l  
m,p-Xylene  6.2  1.0  0.39  ug/l  
95-47-6  o-Xylene  4.7  1.0  0.39  ug/l  
1330-20-7  Xylene (total)  10.8  1.0  0.39  ug/l  
1634-04-4  Methyl Tert Butyl Ether  182 a  2.5  0.41  ug/l  

CAS No. Surrogate Recoveries Run# 1  Run# 2  Limits
---  -------------------  ------  ------  -----  ----
1868-53-7  Dibromofluoromethane  98%  99%  72-120%  

ND = Not detected  MDL - Method Detection Limit  J = Indicates an estimated value
RL = Reporting Limit  B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range  N = Indicates presumptive evidence of a compound
### Report of Analysis

**Client Sample ID:** SVE003  
**Lab Sample ID:** JA10879-3  
**Date Sampled:** 01/28/09  
**Matrix:** AQ - Ground Water  
**Date Received:** 01/29/09  
**Method:** SW846 8260B  
**Percent Solids:** n/a  
**Project:** GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

**MD VOA Full List + Oxygenates**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>92%</td>
<td>92%</td>
<td>59-137%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>111%</td>
<td>108%</td>
<td>73-116%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>96%</td>
<td>94%</td>
<td>69-126%</td>
</tr>
</tbody>
</table>

(a) Result is from Run# 2

---

**ND = Not detected**  
**MDL - Method Detection Limit**  
**J = Indicates an estimated value**  
**RL = Reporting Limit**  
**B = Indicates analyte found in associated method blank**  
**E = Indicates value exceeds calibration range**  
**N = Indicates presumptive evidence of a compound**
Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
# Chain of Custody

## Client Information
### Facility Information
- **Consultant's Company Name:** Kleinfelder
- **Project Name:** Exxon Phoenix
- **Address:**
  - **Street:** 19258 Jarrettsville Pike
  - **City:** MD 21076
- **Phone:** 410-850-0464
- **Location ID:** 28077

## Analytical Information

### Specifications
- **Sample #:** SVC001
- **Date:** 05/07/15
- **Time:** 1300
- **Sampled by:** FK
- **KID:** 6W
- **2:** X

### Comments / Remarks
- **Sample Custody must be documented before each time samples change possession, including courier delivery.**

---

**JA10879: Chain of Custody**

**Page 1 of 2**
**Accutest Laboratories Sample Receipt Summary**

**Accutest Job Number:** JA10879  
**Date / Time Received:** 1/29/2009

### Cooler Security

<table>
<thead>
<tr>
<th>1. Custody Seals Present</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Custody Seals Intact</td>
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### Cooler Temperature

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<th>Y or N</th>
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</thead>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cooler temp verification</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Infrared gun</td>
</tr>
<tr>
<td>3. Cooler media</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ice (bag)</td>
</tr>
</tbody>
</table>

### Quality Control Preservation

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<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Trip Blank listed on COC</td>
<td></td>
</tr>
<tr>
<td>3. Samples preserved properly</td>
<td></td>
</tr>
<tr>
<td>4. VOCs headspace free</td>
<td></td>
</tr>
</tbody>
</table>

**Airbill #'s:**

**No. Coolers:** 1

### Sample Integrity - Documentation

<table>
<thead>
<tr>
<th>1. Sample labels present on bottles</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Container labeling complete</td>
<td></td>
</tr>
<tr>
<td>3. Sample container label / COC agree</td>
<td></td>
</tr>
</tbody>
</table>

### Sample Integrity - Condition

<table>
<thead>
<tr>
<th>1. Sample recvd within HT</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. All containers accounted for</td>
<td></td>
</tr>
<tr>
<td>3. Condition of sample</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intact</td>
</tr>
</tbody>
</table>

### Sample Integrity - Instructions

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<tr>
<th>1. Analysis requested is clear</th>
<th>Y or N</th>
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</thead>
<tbody>
<tr>
<td>2. Bottles received for unspecified tests</td>
<td></td>
</tr>
<tr>
<td>3. Sufficient volume recvd for analysis</td>
<td></td>
</tr>
<tr>
<td>4. Compositing instructions clear</td>
<td></td>
</tr>
<tr>
<td>5. Filtering instructions clear</td>
<td></td>
</tr>
</tbody>
</table>

**Comments**

---

**Accutest Laboratories**  
V: 732.329.0200  
2235 US Highway 130  
F: 732.329.3499  
Dayton, New Jersey  
www/accutest.com

**JA10879: Chain of Custody**  
Page 2 of 2
Appendix D – Accutest Laboratory Technical Reports – SVE Pilot Test Airbag Data
Technical Report for

ExxonMobil Corporation
GSCMD: S/S 2-8077, 14258 Jarretsville Pike, Phoenix, MD
PO#4510774144 WBS#08
Accutest Job Number: JA12276

Sampling Date: 02/16/09

Report to:
Kleinfelder
mnewman@kleinfelder.com
ATTN: Matthew Newman

Total number of pages in report: 10

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Matt Cordova 732-329-0200
Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.
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  - 2.2: JA12276-2: SVE002 ................................................................. 6
  - 2.3: JA12276-3: SVE003 ................................................................. 7
- Section 3: Misc. Forms ................................................................. 8
  - 3.1: Chain of Custody ................................................................. 9
# Sample Summary

**ExxonMobil Corporation**

GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD  
Project No:  PO#4510774144 WBS#08

<table>
<thead>
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<th>Collected Date</th>
<th>Time By</th>
<th>Received Date</th>
<th>Matrix Type</th>
<th>Sample ID</th>
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<tbody>
<tr>
<td>JA12276-1</td>
<td>02/16/09</td>
<td>12:26</td>
<td>02/17/09</td>
<td>AIR Air</td>
<td>SVE001</td>
</tr>
<tr>
<td>JA12276-2</td>
<td>02/16/09</td>
<td>14:48</td>
<td>02/17/09</td>
<td>AIR Air</td>
<td>SVE002</td>
</tr>
<tr>
<td>JA12276-3</td>
<td>02/16/09</td>
<td>13:41</td>
<td>02/17/09</td>
<td>AIR Air</td>
<td>SVE003</td>
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Sample Results

Report of Analysis
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<th>SVE001</th>
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<tbody>
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<td>JA12276-1</td>
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<tr>
<td>Date Sampled:</td>
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<tr>
<td>Matrix:</td>
<td>AIR - Air</td>
</tr>
<tr>
<td>Date Received:</td>
<td>02/17/09</td>
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<tr>
<td>Method:</td>
<td>EPA TO-3</td>
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<tr>
<td>Percent Solids:</td>
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<td>GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD</td>
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<th>Prep Batch</th>
<th>Analytical Batch</th>
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<td>QR75595.D</td>
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### Purgeable Aromatics

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<th>Result</th>
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<th>MDL</th>
<th>Units</th>
<th>Q</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>71-43-2</td>
<td>78.11</td>
<td>Benzene</td>
<td>0.13</td>
<td>0.050</td>
<td>0.0099</td>
<td>ppmv</td>
<td>0.42</td>
<td>0.16</td>
<td>mg/m3</td>
<td></td>
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<tr>
<td>108-88-3</td>
<td>92.14</td>
<td>Toluene</td>
<td>0.41</td>
<td>0.050</td>
<td>0.0093</td>
<td>ppmv</td>
<td>1.5</td>
<td>0.19</td>
<td>mg/m3</td>
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<tr>
<td>100-41-4</td>
<td>106.2</td>
<td>Ethylbenzene</td>
<td>0.10</td>
<td>0.050</td>
<td>0.011</td>
<td>ppmv</td>
<td>0.43</td>
<td>0.22</td>
<td>mg/m3</td>
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</tr>
<tr>
<td>1330-20-7</td>
<td>106.2</td>
<td>Xylenes (total)</td>
<td>0.71</td>
<td>0.10</td>
<td>0.0059</td>
<td>ppmv</td>
<td>3.1</td>
<td>0.43</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td></td>
<td>TPH as Equiv Hexane</td>
<td>38.7</td>
<td>5.0</td>
<td>0.095</td>
<td>ppmv</td>
<td>136</td>
<td>18</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>TPH (C1-C4) as Methane</td>
<td>30.0</td>
<td>5.0</td>
<td>0.25</td>
<td>ppmv</td>
<td>19.6</td>
<td>3.3</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td></td>
<td>TPH (C5-C10) as Hexane</td>
<td>32.6</td>
<td>5.0</td>
<td>0.098</td>
<td>ppmv</td>
<td>115</td>
<td>18</td>
<td>mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

### Surrogate Recoveries

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>96%</td>
<td>71-129%</td>
<td></td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>97%</td>
<td>71-129%</td>
<td></td>
</tr>
</tbody>
</table>

**ND** = Not detected
**MDL** - Method Detection Limit
**RL** = Reporting Limit
**J** = Indicates an estimated value
**B** = Indicates analyte found in associated method blank
**E** = Indicates value exceeds calibration range
**N** = Indicates presumptive evidence of a compound
**Report of Analysis**

Client Sample ID: SVE002  
Lab Sample ID: JA12276-2  
Date Sampled: 02/16/09

Matrix: AIR - Air  
Date Received: 02/17/09  
Method: EPA TO-3  
Percent Solids: n/a

Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
<thead>
<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>QR75597.D</td>
<td>1</td>
<td>02/18/09</td>
<td>TCH</td>
<td>n/a</td>
<td>n/a</td>
<td>GQR3439</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
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</table>

**Initial Volume**

Run #1: 0.50 ml  
Run #2:  

**Purgeable Aromatics**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>MW</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-43-2</td>
<td>78.11</td>
<td>Benzene</td>
<td>ND</td>
<td>0.050</td>
<td>0.0099</td>
<td>ppmv</td>
<td>ND</td>
<td>0.16</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>92.14</td>
<td>Toluene</td>
<td>0.12</td>
<td>0.050</td>
<td>0.0093</td>
<td>ppmv</td>
<td>0.45</td>
<td>0.19</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td>100-41-4</td>
<td>106.2</td>
<td>Ethylbenzene</td>
<td>ND</td>
<td>0.050</td>
<td>0.011</td>
<td>ppmv</td>
<td>ND</td>
<td>0.22</td>
<td>mg/m3</td>
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</tr>
<tr>
<td>1330-20-7</td>
<td>106.2</td>
<td>Xylenes (total)</td>
<td>0.10</td>
<td>0.10</td>
<td>0.0059</td>
<td>ppmv</td>
<td>0.43</td>
<td>0.43</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>86</td>
<td>TPH as Equiv Hexane</td>
<td>5.1</td>
<td>5.0</td>
<td>0.095</td>
<td>ppmv</td>
<td>18</td>
<td>18</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>TPH (C1-C4) as Methane</td>
<td>15.8</td>
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<td>0.25</td>
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<td>10.3</td>
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<tr>
<td></td>
<td>86</td>
<td>TPH (C5-C10) as Hexane</td>
<td>ND</td>
<td>5.0</td>
<td>0.098</td>
<td>ppmv</td>
<td>ND</td>
<td>18</td>
<td>mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

**Surrogate Recoveries**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>96%</td>
<td>71-129%</td>
<td></td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluoro benzene</td>
<td>99%</td>
<td>71-129%</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**

- ND = Not detected  
- MDL - Method Detection Limit  
- J = Indicates an estimated value  
- RL = Reporting Limit  
- B = Indicates analyte found in associated method blank  
- E = Indicates value exceeds calibration range  
- N = Indicates presumptive evidence of a compound
**Report of Analysis**

<table>
<thead>
<tr>
<th>Client Sample ID:</th>
<th>SVE003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>JA12276-3</td>
</tr>
<tr>
<td>Date Sampled:</td>
<td>02/16/09</td>
</tr>
<tr>
<td>Matrix:</td>
<td>AIR - Air</td>
</tr>
<tr>
<td>Date Received:</td>
<td>02/17/09</td>
</tr>
<tr>
<td>Method:</td>
<td>EPA TO-3</td>
</tr>
<tr>
<td>Percent Solids:</td>
<td>n/a</td>
</tr>
<tr>
<td>Project:</td>
<td>GSCMD: S/S 2-8077, 14258 Jarretsville Pike, Phoenix, MD</td>
</tr>
</tbody>
</table>

### Purgeable Aromatics

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>MW</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-43-2</td>
<td>78.11</td>
<td>Benzene</td>
<td>ND</td>
<td>0.050</td>
<td>0.0099 ppmv</td>
<td>ND</td>
<td>0.16</td>
<td>mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>92.14</td>
<td>Toluene</td>
<td>ND</td>
<td>0.050</td>
<td>0.0093 ppmv</td>
<td>ND</td>
<td>0.19</td>
<td>mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-41-4</td>
<td>106.2</td>
<td>Ethylbenzene</td>
<td>ND</td>
<td>0.050</td>
<td>0.011 ppmv</td>
<td>ND</td>
<td>0.22</td>
<td>mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1330-20-7</td>
<td>106.2</td>
<td>Xylenes (total)</td>
<td>ND</td>
<td>0.10</td>
<td>0.0059 ppmv</td>
<td>ND</td>
<td>0.43</td>
<td>mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>86</td>
<td>111</td>
<td>TPH (C1-C4) as Methane</td>
<td>5.0</td>
<td>0.25</td>
<td>ppmv</td>
<td>ND</td>
<td>18</td>
<td>mg/m3</td>
<td></td>
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</tr>
<tr>
<td>86</td>
<td>5.0</td>
<td>TPH (C5-C10) as Hexane</td>
<td>5.0</td>
<td>0.098 ppmv</td>
<td>ND</td>
<td>18</td>
<td>mg/m3</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**CAS No.**

<table>
<thead>
<tr>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>460-00-4 4-Bromofluorobenzene</td>
<td>97%</td>
<td>71-129%</td>
<td></td>
</tr>
<tr>
<td>460-00-4 4-Bromofluorobenzene</td>
<td>99%</td>
<td>71-129%</td>
<td></td>
</tr>
</tbody>
</table>

**File ID**

- Run #1: QR75598.D
- Run #2: DF

**Prep Batch**

- GQR3439

**Initial Volume**

- Run #1: 0.50 ml
- Run #2: 0.50 ml

---

**ND** = Not detected

**MDL** - Method Detection Limit

**RL** = Reporting Limit

**J** = Indicates an estimated value

**B** = Indicates analyte found in associated method blank

**E** = Indicates value exceeds calibration range

**N** = Indicates presumptive evidence of a compound
Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
### Chain of Custody

**ExxonMobil - Regional Laboratory Program (MD)**

<table>
<thead>
<tr>
<th>Field ID / Point of Collection</th>
<th>Date</th>
<th>Time</th>
<th>Sampled By</th>
<th>Matrix</th>
<th>n of Labs</th>
<th>Ind</th>
<th>Blank</th>
<th>Foreign</th>
<th>Date</th>
<th>Time</th>
<th>Received By</th>
<th>Sampled By</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>SVE001</td>
<td>2/16/2009</td>
<td>1226</td>
<td>MN</td>
<td>Vapor</td>
<td>1</td>
<td>X</td>
<td>XXX</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SVE002</td>
<td>2/16/2009</td>
<td>1448</td>
<td>MN</td>
<td>Vapor</td>
<td>1</td>
<td>X</td>
<td>XXX</td>
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<td>SVE003</td>
<td>2/16/2009</td>
<td>1341</td>
<td>MN</td>
<td>Vapor</td>
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<td>XXX</td>
<td>X</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**JA12276: Chain of Custody**

Page 1 of 2
Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA12276
Client: Immediate Client Services Action Required: No
Date / Time Received: 2/17/2009
Delivery Method: Client Service Action Required at Login: No
No. Coolers: Airbill #'s:

Cooler Security
1. Custody Seals Present: Y or N
2. Custody Seals Intact: Y or N

3. COC Present: Y or N
4. Sample Dates/Time OK: Y or N

Cooler Temperature
1. Temp criteria achieved: Y or N
2. Cooler temp verification: Y or N
3. Cooler media: Y or N

Quality Control Preservation
1. Trip Blank present / cooler: Y or N
2. Trip Blank listed on COC: Y or N
3. Samples preserved properly: Y or N
4. VOCs headspace free: Y or N

Sample Integrity - Documentation
1. Sample labels present on bottles: Y or N
2. Container labeling complete: Y or N
3. Sample container label / COC agree: Y or N

Sample Integrity - Condition
1. Sample received within HT: Y or N
2. All containers accounted for: Y or N
3. Condition of sample: Y or N

Sample Integrity - Instructions
1. Analysis requested is clear: Y or N
2. Bottles received for unspecified tests: Y or N
3. Sufficient volume received for analysis: Y or N
4. Compositing instructions clear: Y or N
5. Filtering instructions clear: Y or N

Comments:

Accutest Laboratories
V: 732.329.0200
2235 US Highway 130
Dayton, New Jersey
F: 732.329.3499
www.accutest.com

JA12276: Chain of Custody
Page 2 of 2
Technical Report for

ExxonMobil Corporation
GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD
PO#4510774144 WBS#08
Accutest Job Number: JA11472

Sampling Date: 02/05/09

Report to:
Kleinfelder
mnewman@kleinfelder.com
ATTN: Matthew Newman

Total number of pages in report: 10

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Matt Cordova  732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.
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-1-

**Section 1: Sample Summary** ................................................................. 3

**Section 2: Sample Results** ................................................................. 4
  2.1: JA11472-1: SVE001 ............................................................... 5
  2.2: JA11472-2: SVE002 ............................................................... 6
  2.3: JA11472-3: SVE003 ............................................................... 7

**Section 3: Misc. Forms** ................................................................. 8
  3.1: Chain of Custody ............................................................... 9
# Sample Summary

ExxonMobil Corporation  
Job No: JA11472

GSCMD: S/S 2-8077, 14258 Jarretsville Pike, Phoenix, MD  
Project No: PO#4510774144 WBS#08

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Collected Date</th>
<th>Time</th>
<th>By</th>
<th>Received Date</th>
<th>Matrix Code</th>
<th>Type</th>
<th>Sample ID</th>
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<tr>
<td>JA11472-1</td>
<td>02/05/09</td>
<td>11:10</td>
<td>MN</td>
<td>02/05/09</td>
<td>AIR</td>
<td>Air</td>
<td>SVE001</td>
</tr>
<tr>
<td>JA11472-2</td>
<td>02/05/09</td>
<td>11:05</td>
<td>MN</td>
<td>02/05/09</td>
<td>AIR</td>
<td>Air</td>
<td>SVE002</td>
</tr>
<tr>
<td>JA11472-3</td>
<td>02/05/09</td>
<td>11:15</td>
<td>MN</td>
<td>02/05/09</td>
<td>AIR</td>
<td>Air</td>
<td>SVE003</td>
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</tbody>
</table>
Sample Results

Report of Analysis
# Report of Analysis

**Client Sample ID:** SVE001  
**Lab Sample ID:** JA11472-1  
**Date Sampled:** 02/05/09  
**Matrix:** AIR - Air  
**Percent Solids:** n/a  
**Date Received:** 02/05/09  
**Method:** EPA TO-3  
**Project:** GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>QR75359.D</td>
<td>1</td>
<td>02/06/09</td>
<td>TCH</td>
<td>n/a</td>
<td>n/a</td>
<td>GQR3429</td>
</tr>
</tbody>
</table>

**Initial Volume**  
Run #1: 0.50 ml  
Run #2: 0.50 ml

## Purgeable Aromatics

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>MW</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-43-2</td>
<td>78.11</td>
<td>Benzene</td>
<td>0.070</td>
<td>0.050</td>
<td>0.0099</td>
<td>ppmv</td>
<td>0.22</td>
<td>0.16</td>
<td>0.16</td>
<td>mg/m3</td>
</tr>
<tr>
<td>108-88-3</td>
<td>92.14</td>
<td>Toluene</td>
<td>0.32</td>
<td>0.050</td>
<td>0.0093</td>
<td>ppmv</td>
<td>1.2</td>
<td>0.19</td>
<td></td>
<td>mg/m3</td>
</tr>
<tr>
<td>100-41-4</td>
<td>106.2</td>
<td>Ethylbenzene</td>
<td>0.076</td>
<td>0.050</td>
<td>0.011</td>
<td>ppmv</td>
<td>0.33</td>
<td>0.22</td>
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<td>mg/m3</td>
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<tr>
<td>1330-20-7</td>
<td>106.2</td>
<td>Xylenes (total)</td>
<td>0.48</td>
<td>0.10</td>
<td>0.0059</td>
<td>ppmv</td>
<td>2.1</td>
<td>0.43</td>
<td></td>
<td>mg/m3</td>
</tr>
<tr>
<td>86</td>
<td>36.3</td>
<td>TPH as Equiv Hexane</td>
<td>5.0</td>
<td>0.095</td>
<td>ppmv</td>
<td>128</td>
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<td>18</td>
<td></td>
<td>mg/m3</td>
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<tr>
<td>16</td>
<td>37.3</td>
<td>TPH (C1-C4) as Methane</td>
<td>5.0</td>
<td>0.25</td>
<td>ppmv</td>
<td>24.4</td>
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<td>3.3</td>
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<td>mg/m3</td>
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<tr>
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<td>32.9</td>
<td>TPH (C5-C10) as Hexane</td>
<td>5.0</td>
<td>0.098</td>
<td>ppmv</td>
<td>116</td>
<td>18</td>
<td>18</td>
<td></td>
<td>mg/m3</td>
</tr>
</tbody>
</table>

**CAS No.**  
**Surrogate Recoveries**  
**Run #1**  
**Run #2**  
**Limits**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run #1</th>
<th>Run #2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>99%</td>
<td></td>
<td>71-129%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>99%</td>
<td>71-129%</td>
<td></td>
</tr>
</tbody>
</table>

**ND** = Not detected  
**MDL** - Method Detection Limit  
**RL** = Reporting Limit  
**J** = Indicates an estimated value  
**B** = Indicates analyte found in associated method blank  
**E** = Indicates value exceeds calibration range  
**N** = Indicates presumptive evidence of a compound
## Report of Analysis

**Client Sample ID:** SVE002  
**Lab Sample ID:** JA11472-2  
**Date Sampled:** 02/05/09  
**Matrix:** AIR - Air  
**Method:** EPA TO-3  
**Percent Solids:** n/a  
**Date Received:** 02/05/09  
**Project:** GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
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<tbody>
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<td>Run #2</td>
<td>QR75350.D</td>
<td>1</td>
<td>02/06/09</td>
<td>TCH</td>
<td>n/a</td>
<td>n/a</td>
<td>GQR3429</td>
</tr>
</tbody>
</table>

**Initial Volume**  
Run #1: 0.50 ml  
Run #2

### Purgeable Aromatics

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>MW</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>MDL</th>
<th>Units</th>
<th>Q</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-43-2</td>
<td>78.11</td>
<td>Benzene</td>
<td>0.099</td>
<td>0.050</td>
<td>0.0099</td>
<td>ppmv</td>
<td>0.32</td>
<td>0.16</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>92.14</td>
<td>Toluene</td>
<td>0.53</td>
<td>0.050</td>
<td>0.0093</td>
<td>ppmv</td>
<td>2.0</td>
<td>0.19</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td>100-41-4</td>
<td>106.2</td>
<td>Ethylbenzene</td>
<td>0.15</td>
<td>0.050</td>
<td>0.011</td>
<td>ppmv</td>
<td>0.65</td>
<td>0.22</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td>1330-20-7</td>
<td>106.2</td>
<td>Xylenes (total)</td>
<td>0.70</td>
<td>0.10</td>
<td>0.0059</td>
<td>ppmv</td>
<td>3.0</td>
<td>0.43</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td></td>
<td>TPH as Equiv Hexane</td>
<td>28.7</td>
<td>5.0</td>
<td>0.095</td>
<td>ppmv</td>
<td>101</td>
<td>18</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>TPH (C1-C4) as Methane</td>
<td>17.1</td>
<td>5.0</td>
<td>0.25</td>
<td>ppmv</td>
<td>11.2</td>
<td>3.3</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td></td>
<td>TPH (C5-C10) as Hexane</td>
<td>25.7</td>
<td>5.0</td>
<td>0.098</td>
<td>ppmv</td>
<td>90.4</td>
<td>18</td>
<td>mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>99%</td>
<td></td>
<td>71-129%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>97%</td>
<td></td>
<td>71-129%</td>
</tr>
</tbody>
</table>

**CAS No.**  
**MW**  
**Compound**  
**Result**  
**RL**  
**MDL**  
**Units**  
**Q**  
**Result**  
**RL**  
**Units**

**ND** = Not detected  
**MDL** - Method Detection Limit  
**J** = Indicates an estimated value  
**RL** = Reporting Limit  
**B** = Indicates analyte found in associated method blank  
**E** = Indicates value exceeds calibration range  
**N** = Indicates presumptive evidence of a compound
Report of Analysis

Client Sample ID: SVE003
Lab Sample ID: JA11472-3
Date Sampled: 02/05/09
Matrix: AIR - Air
Date Received: 02/05/09
Method: EPA TO-3
Percent Solids: n/a
Project: GSCMD: S/S 2-8077, 14258 Jarrettsville Pike, Phoenix, MD

<table>
<thead>
<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>QR75361.D</td>
<td>1</td>
<td>02/06/09</td>
<td>TCH</td>
<td>n/a</td>
<td>n/a</td>
<td>GQR3429</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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Initial Volume
Run #1 0.50 ml
Run #2

Purgeable Aromatics

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<td>ppmv</td>
<td>ND</td>
<td>0.16</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
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<td>92.14</td>
<td>Toluene</td>
<td>0.14</td>
<td>0.050</td>
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<td>0.011</td>
<td>ppmv</td>
<td>ND</td>
<td>0.22</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td>1330-20-7</td>
<td>106.2</td>
<td>Xylenes (total)</td>
<td>0.16</td>
<td>0.10</td>
<td>0.0059</td>
<td>ppmv</td>
<td>0.69</td>
<td>0.43</td>
<td>mg/m3</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td></td>
<td>TPH as Equiv Hexane</td>
<td>12.1</td>
<td>5.0</td>
<td>0.095</td>
<td>ppmv</td>
<td>42.6</td>
<td>18</td>
<td>mg/m3</td>
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<tr>
<td>16</td>
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<td>TPH (C1-C4) as Methane</td>
<td>7.6</td>
<td>5.0</td>
<td>0.25</td>
<td>ppmv</td>
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<td>3.3</td>
<td>mg/m3</td>
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<td>TPH (C5-C10) as Hexane</td>
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<td>5.0</td>
<td>0.098</td>
<td>ppmv</td>
<td>41.9</td>
<td>18</td>
<td>mg/m3</td>
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</tr>
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<td>98%</td>
<td></td>
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ND = Not detected    MDL - Method Detection Limit
RL = Reporting Limit  J = Indicates an estimated value
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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
### ExxonMobil - Regional Laboratory Program (MD)

<table>
<thead>
<tr>
<th>Field ID / Point of Collection</th>
<th>Collection</th>
<th>Preservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVE001</td>
<td>1</td>
<td>X XXX</td>
</tr>
<tr>
<td>SVE002</td>
<td>2</td>
<td>X XXX</td>
</tr>
<tr>
<td>SVE003</td>
<td>3</td>
<td>X XXX</td>
</tr>
</tbody>
</table>

### Chain of Custody

**ExxonMobil Manager:**
Frank Medlin

**Direc:**
John Cebula

**Phone #:**
443-552-9274

**Location ID:**
#20077

**Date:**
2/5/2009

**Description:**
Sample Custody must be documented below each time samples change possession including time of delivery.

**Received By:**

**Received:**
2/5/2009

**Temperature:**

**Comments:**

**JA11472: Chain of Custody**

Page 1 of 2
Accutest Job Number: JA11472
Client:

Immediate Client Services Action Required: No
Client Service Action Required at Login: No

Date / Time Received: 2/5/2009
Delivery Method:
No. Coolers: 0
Airbill #'s:

Cooler Security
1. Custody Seals Present: Y or N
2. Custody Seals Intact: Y or N

COC Present: Y or N
4. Smpl Dates/Time OK

Cooler Temperature
1. Temp criteria achieved: Y or N
2. Cooler temp verification: Y or N
3. Cooler media: Y or N

Infared gun

Ice (bag)

Quality Control Preservation
1. Trip Blank present / cooler: Y or N
2. Trip Blank listed on COC: Y or N
3. Samples preserved properly: Y or N
4. VOCs headspace free: Y or N

Sample Integrity - Documentation
1. Sample labels present on bottles: Y or N
2. Container labeling complete: Y or N
3. Sample container label / COC agree: Y or N

Sample Integrity - Condition
1. Sample recvd within HT: Y or N
2. All containers accounted for: Y or N
3. Condition of sample: Y or N

Sample Integrity - Instructions
1. Analysis requested is clear: Y or N
2. Bottles received for unspecified tests: Y or N
3. Sufficient volume recvd for analysis: Y or N
4. Compositing instructions clear: Y or N
5. Filtering instructions clear: Y or N

Comments