



# MARYLAND DEPARTMENT OF THE ENVIRONMENT

Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719

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Martin O'Malley  
Governor

Robert M. Summers, Ph.D.  
Acting Secretary

Anthony G. Brown  
Lieutenant Governor

October 29, 2013

Mr. Steve Stookey  
Southern Maryland Oil, Inc  
P.O. Box 2810  
La Plata MD 20646

**RE: WORK PLAN APPROVAL**  
**Case No. 2013-0321-AA**  
**Ft. Meade Shell Station**  
**2631 Annapolis Road, Hanover**  
**Anne Arundel County, Maryland**  
**Facility I.D. No. 4591**

Dear Mr. Stookey:

The Oil Control program recently completed a review of the case file for the above-referenced property, including the *Preliminary Subsurface Environmental Site Assessment - July 3, 2013* and the *Work Plan for Free Product Abatement - October 2, 2013*. In November 2012, a discrepancy was noted in the inventory for the site's 10,000-gallon fiberglass premium gasohol underground storage tank (UST) system. The premium UST system was investigated and both the Phase II vapor return line and premium UST failed tightness testing. A review of the tank's inventory records indicates a possible release of up to 100 gallons of gasoline. The tank was emptied and removed from service the next day and repairs were made to the Stage II vapor recovery line and the premium UST. Several pre-existing groundwater monitoring wells were located on-site and petroleum impacts to groundwater were identified in the area of the tank field. The site is served by a private drinking water supply well and the surrounding mixed use commercial-residential area is served by private wells and public water systems.

In December 2012, the on-site drinking water supply well was sampled and the results were non-detect for petroleum constituents. In January 2013, the Oil Control Program sent notification letters to all property owners within a half-mile of the site and to the Anne Arundel County Department of Health due to dissolved phase impacts detected on the groundwater in site monitoring wells. In April 2013, seven additional monitoring wells were installed on-site: five 4-inch diameter wells and two 1-inch diameter temporary wells. Liquid phase hydrocarbons (LPH) were identified in soil borings in the area of the tank field and dispensers and in monitoring wells MW-9 and MW-14 (a 1-inch temporary well). In June 2013, the drinking water supply well at 8050 Rothenbach Road (KinderCare) was sampled; the results were non-detect for petroleum constituents.

The *Preliminary Subsurface Environmental Site Assessment* report, received in July 2013, was due in March 2013, as required in the Department's January 2013 approval letter (copy enclosed). An extension request was not submitted to the Oil Control Program. In review of the report, Envirotech failed to include mention of the premium UST tightness testing failure and the potential for a release of product from the tank.

The subsurface investigation detected LPH impacts to soils in multiple borings around the tank field and in MW-9 adjacent to the tank field. Product thickness data in MW-19 or MW-14 was not included in the gauging data tables or the report. In addition, Southern Maryland Oil (SMO) failed to provide a draft off-site sampling access letter for the drinking water supply wells at Ridgeview Plaza (located adjacent to Car Doc, Inc.), construction information with regard to the pre-existing monitoring wells, soil and groundwater disposal receipts for the drilling work conducted, and separate identification of tank field monitoring pipes. Future reports that do not comply with Oil Control Program requirements will not be accepted.

The *Preliminary Subsurface Environmental Site Assessment* included recommendations to conduct enhanced fluid recovery (EFR) or multi-phase extraction (MPE) to recover LPH from site wells, over drill and install a 4-inch monitoring well in the location of MW-14 for potential LPH recovery, and install an additional monitoring well in a location between MW-14 and MW-9. The *Work Plan for Free Product Abatement* proposed replacement of MW-10 with a deeper well and provided methods, goals, and frequency for conducting the EFR events. The Oil Control Program gauged site monitoring wells and tank field monitoring pipes in September and October 2013. LPH thicknesses in MW-7 and MW-14 were greater than 1 foot and LPH was detected in MW-9 at 0.8 feet. The Department approves the *Preliminary Subsurface Environmental Site Assessment* recommendations and *Work Plan for Free Product Abatement* proposals for implementation contingent upon the following modifications:

- 1) The Oil Control Program recommends monitoring vacuum influence in nearby monitoring wells while conducting EFR events. At the end of the six month EFR trial period (within 45 days), submit a *Report of Results* that addresses EFR goals, results, and provides recommendations. If LPH prove to be a continuing issue, a *Corrective Action Plan* will be required.
- 2) Install an additional monitoring well to delineate the extent of LPH in the area to the northwest corner of the dispenser canopy where the Stage II vapor line break occurred.
- 3) Prior to conducting the drilling work, contact the case manager to mark boring locations for the proposed monitoring well between MW-14 and MW-9 and the required monitoring well off the northwest dispenser canopy. Borings must be advanced through first groundwater encountered and well screening must span groundwater as per MDE requirements.
- 4) Soil and groundwater samples must be collected from the new monitoring well borings and analyzed for full-suite volatile organic compounds (VOCs) including fuel oxygenates, naphthalene, and ethanol by EPA Method 8260 and for total petroleum hydrocarbons - diesel and gasoline range organics (TPH-DRO and TPH-GRO) by EPA Method 8015. All soil samples collected for volatile analysis must be collected and field preserved in accordance with EPA Method 5035. Soil samples shall be collected from the interval exhibiting the highest photo-ionization detector (PID) readings in each boring. Groundwater sampling may be conducted no sooner than one week after well development.
- 5) All waste (soil and groundwater) generated for this site must be containerized and properly disposed off-site. Soil and water disposal receipts must be provided in the *Report of Results*.
- 6) Wells MW-8 and MW-10 were observed to be dry when gauged by the Oil Control Program in September and October 2013. These wells must be re-drilled (i.e., deepened) to reach the first groundwater encountered and screened as per MDE requirements.

- 7) The Oil Control Program understands the historic pre-existing wells are being used for groundwater contour mapping. The construction of these wells remains unknown and reporting does not discuss re-development. SMO must redevelop the wells and provide well construction information for the pre-existing monitoring wells. Note well tag numbers are present in some of the old 2-inch wells. Notify the Department if well construction information is unavailable.
  
- 8) As a precautionary measure, SMO must sample the off-site drinking water supply wells (Tag #s AA-81-4854 and AA-81-8514) located at 2633 Annapolis Road (Ridgeview Plaza Shopping Center). Prior to the collection of any off-site drinking water samples, submit a draft copy of a notification letter to properly notify Renaud Consulting (Mr. David Shegogue, Ridgeview Plaza Property Manager) and to request access. The sampling requirement was discussed in October 2013 with Mr. Shegogue of Renaud Consulting, who preliminarily agreed to allow SMO access to Ridgeview Plaza. This draft letter must be submitted to the Oil Control Program **no later than November 15, 2013** for comment and approval prior to distribution. The purpose of this letter is to inform the property or business owners that a groundwater investigation is being conducted and that a water sample will be collected from the property/business tap (prior to any filtrations that may exist) and analyzed for VOCs, including fuel oxygenates and naphthalene, using EPA Method 524.2. At a minimum, this notification letter must include the following information:
  - **Introduction of potentially responsible party and consultant:** Explain why the sampling is necessary. The introduction must include a statement that the sampling is a precautionary measure. The introduction must include a statement that the sampling will cost nothing to the property owner.
  - **A very brief site history:** A complete history can be made available at a later date.
  - **Sampling:** Briefly state who will be performing the sampling event.
  - **Contacts:** Provide names and telephone numbers for representatives of the potentially responsible party and their consultant to coordinate sampling schedules and to answer any questions.
  - **Closing:** Ensure the property/business owners that your consultant will help in answering any questions. The MDE-OCP case manager contact number should also be provided.
  - **cc:** MDE-OCP case manager, Mr. Michael Edillon, and Ms. Kerry Topovski (Anne Arundel County Health Department).
  
- 9) The Oil Control Program understands there is a second on-site supply well used for the site car wash. Begin quarterly sampling of the two on-site supply wells and analyzed for full-suite VOCs, including fuel oxygenates and naphthalene, by EPA Method 524.2.
  
- 10) Begin quarterly reporting in third quarter 2013 (report due November 15, 2013). Tank field monitoring pipes and monitoring wells must be gauged on a monthly basis and sampled on a quarterly basis until written approval to change or cease the monitoring schedule is provided by the Department. The quarterly reports must include:
  - Site maps showing the locations of all on-site and off-site potable wells, all monitoring wells, and tank field monitoring pipes. Reports must distinguish monitoring wells from tank field monitoring pipes (i.e., MW-3, MW-5, MW-6, and MW-13). This may include re-numbering of the monitoring wells.

- Survey all monitoring wells after new well installations.
  - A map displaying dissolved concentrations including benzene, toluene, ethylbenzene, xylene, naphthalene, and MTBE along with groundwater elevation.
  - All site maps must be to scale and include a legend.
  - A gauging data table including depth to product, depth to water, and product thickness.
  - A groundwater sampling data table.
  - Historical and new monitoring well construction data, i.e. depth of well, screen interval, well diameter (include in groundwater sampling data tables beneath the MW column).
  - A product recovery data table showing quarterly LPH recovery and cumulative recovery from each well.
  - Soil and groundwater disposal receipts (as applicable).
- 11) Quarterly status reports must be submitted according to the following schedule: first quarter report due by May 15; second quarter report due by August 15; third quarter report due by November 15; and fourth quarter report due by May 15.

When submitting documentation to the Oil Control Program, provide three hard copies and a digital copy on a labeled compact disc (CD) to the attention of the case manager at the above letterhead address. Failure to comply with the Oil Control Program requirements may result in additional enforcement proceedings that could include the issuance of civil penalties and other legal sanctions. If you have any questions, please contact the case manager, Mr. Michael Edillon, at 410-537-4151 (email: [michael.edillon@maryland.gov](mailto:michael.edillon@maryland.gov)) or me at 410-537-3482 (email: [ellen.jackson@maryland.gov](mailto:ellen.jackson@maryland.gov)).

Sincerely,



Ellen Jackson, Central Region Section Head  
Remediation and State Lead Division  
Oil Control Program

ME/nln

Enclosure

cc: Mr. Douglas O. Hamilton (Envirotech Consultants, LLC)  
Mr. David Shegogue (Renaud Consulting)  
Ms. Kerry Topovski (Anne Arundel County Health Dept.)  
Ms. Ginger D. Klingelhofer-Ellis (Anne Arundel County DPW)  
Mr. Andrew B. Miller  
Mr. Christopher H. Ralston  
Mr. Horacio Tablada



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Martin O'Malley  
Governor

Robert M. Summers, Ph.D.  
Secretary

Anthony G. Brown  
Lieutenant Governor

January 23, 2013

Mr. Steve Stookey  
Southern Maryland Oil, Inc  
P.O. Box 2810  
La Plata MD 20646

**RE: SUBSURFACE INVESTIGATION APPROVAL AND  
REQUEST FOR OFF-SITE DRINKING WATER WELL SAMPLING**

**Case No. 2013-0321-AA  
Ft. Meade Shell Station No. 550  
2631 Annapolis Road, Hanover  
Anne Arundel County, Maryland  
Facility I.D. No. 4591**

Dear Mr. Stookey:

The Oil Control Program (OCP) recently completed a review of the case file for the above-referenced property, including the *Report of Findings - January 8, 2013*. In November 2012, a discrepancy was noted in the inventory for the site's 10,000-gallon fiberglass premium gasohol underground storage tank (UST) system. The premium UST system was investigated and both the Phase II vapor return line and premium UST failed tightness testing on November 27, 2012. A review of the UST system's inventory records indicates a possible release of up to 100 gallons of premium grade gasoline. The UST was emptied and removed from service on November 28, 2012 and the Stage II vapor recovery line was repaired. The site is served by a private drinking water supply well. The surrounding mixed use commercial/residential area is served by private drinking water supply wells and public water systems.

The on-site drinking water supply well was sampled on December 6, 2012. The analytical results were non-detect for petroleum constituents. Three historical monitoring wells and three tank field monitoring pipes are currently located on-site. Contrary to the *Report of Findings*, the Oil Control Program observed well tag numbers in the monitoring well vaults. Southern Maryland Oil, Inc. (SMO) sampled two of the monitoring wells (only MW-1 and MW-4 contained a sufficient amount of water for sampling). The sampling results indicated maximum concentrations of benzene at 2,900 parts per billion (ppb); methyl tertiary-butyl ether (MTBE) at 61 ppb; total petroleum hydrocarbon-gasoline range organics (TPH-GRO) at 9.9 parts per million (ppm); and TPH-diesel range organics (DRO) at 0.35 ppm. No liquid phase hydrocarbons were detected in site monitoring wells or the tank field monitoring pipes.

The *Report of Findings* included a proposal to assess the extent of petroleum impacts in the subsurface by installing five direct push borings to assess soils, followed by the installation of five additional monitoring wells to assess groundwater. The monitoring wells will be installed using hollow stem auger technology and both the historical and newly installed wells will be developed. The Department hereby approves the *Subsurface Investigation Work Plan* contingent upon the following modifications:

- 1) Contact the OCP case manager to participate in boring location identification after utility mark-outs have been completed and at least three (3) days prior to conducting the work.
- 2) An additional boring is required in the area of the Phase II vapor line break. Direct push borings and monitoring wells must be installed through first groundwater encountered. Continuous direct push cores must be screened for contaminant assessment and logged. At a minimum, a soil sample must be collected from each boring at depths that correspond to the highest photo-ionization detector (PID) readings.
- 3) Monitoring well screens must span the groundwater interface and account for seasonal fluctuations in groundwater levels.
- 4) Soil and groundwater samples must be collected from each boring and analyzed for full-suite volatile organic compounds (VOCs), including fuel oxygenates, ethanol, and naphthalene, using EPA Method 8260 and for TPH-DRO and TPH-GRO using EPA Method 8015.
- 5) All waste (soil and groundwater) generated for this site must be properly containerized for proper off-site disposal. On-site treatment of well development water is not acceptable unless a discharge permit is obtained.
- 6) Investigate the installation and construction (depth and screening) of the pre-existing on-site monitoring wells (MW-1, MW-2, and MW-4). Based on the depths between 10 to 12 feet below grade it appears that MW-3, MW-5, and MW-6 were installed as tank field monitoring pipes. These monitoring pipes must also be investigated.
- 7) A draft letter from SMO, Inc. requesting access to sample the two drinking water supply wells at 2633 Annapolis Road (Car Doc, Inc.) must be provided for our review. The tag numbers for these wells are AA-81-4854 and AA-81-8514. These drinking water supply wells must be sampled for full-suite VOCs, including fuel oxygenates, using EPA Method 524.2.
- 8) **No later than March 29, 2013**, submit the subsurface investigation *Report of Results*. In addition to what was proposed, the report must include: site maps showing the location of on-site and off-site drinking water supply wells all monitoring wells, and all tank field monitoring pipes (distinguish between monitoring wells and monitoring pipes), summary table(s) of all soil and groundwater concentrations; historical and new monitoring well construction data, and soil and groundwater disposal receipts.

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- 9) Work activities shall be performed in accordance with all applicable laws and regulations. Operating without a permit or in violation of a permit or law may result in the assessment of civil or administrative penalties.

When submitting documentation to the Oil Control Program, provide three (3) hard copies and a digital copy on a labeled compact disc (CD) to the attention of the case manager at the above letterhead address. If you have any questions, please contact the case manager, Mr. Michael Edillon, at 410-537-4151 (email: [medillon@mde.state.md.us](mailto:medillon@mde.state.md.us)) or me at 410-537-3482 (email: [ejackson@mde.state.md.us](mailto:ejackson@mde.state.md.us)).

Sincerely,



Ellen Jackson, Central Region Section Head  
Remediation and State Lead Division  
Oil Control Program

ME/nln

cc: Mr. Douglas O. Hamilton (Envirotech Consultants, LLC)  
Ms. Kerry Topovski (Anne Arundel County Health Dept.)  
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