



**Maryland**  
Department of  
the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

June 21, 2018

Mr. Gregory O. Carpenter, PG  
Chief, Environmental Compliance  
U.S. Coast Guard  
Civil Engineering Unit Cleveland  
1240 East Ninth Street, Room 2179  
Cleveland OH 44199-2060

**RE: SITE STATUS LETTER**  
**Case No. 2018-0677-CA**  
**Cove Point Lighthouse**  
**3500 Lighthouse Boulevard, Lusby**  
**Calvert County, Maryland**

Dear Mr. Carpenter:

The Maryland Department of the Environment's (the Department) Oil Control Program recently completed a review of the case file for the above-referenced property, including the *U.S. Coast Guard Final Draft Initial Site Investigation Report Underground Storage Tank/Aboveground Storage Tank Investigation*, dated June 2018. The investigation was performed to assess the soil and groundwater for petroleum impacts from former and current underground storage tanks (USTs) and aboveground storage tanks (ASTs) at the site for divestment purposes. The site has historically been used as the location of a lighthouse since the 1820s, as a United States Coast Guard (USCG) barracks since at least the 1950s, and is currently still in use as an active lighthouse and as a historical site open to the public.

The investigation performed by Amec Foster Wheeler included: a historical records review and site reconnaissance in June and July 2017; a ground penetrating radar (GPR) survey in October 2017; the installation of 21 soil borings (CPSB-01 through CPSB-21) and 11 temporary well points (CPGW01 through CPGW11) by hand auger and direct-push drilling methods in March, April, and May 2018; and water supply well sampling in April and May 2018.

The historical records review, site reconnaissance, and GPR survey indicated seven removed ASTs, one existing but inactive AST, five removed USTs, and one inactive UST that potentially exists or formerly existed at the site. The soil borings were advanced at or near the potential AST and UST locations to depths ranging from approximately 2 to 10 feet below the ground surface (bgs). The observed depth to groundwater ranged from approximately 1.5 to 3 feet bgs. One soil sample was collected from each boring at depths near to top of the shallow water table and submitted for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) by EPA Method 8260B and total petroleum hydrocarbons - diesel and gasoline range organics (TPH-DRO and TPH-GRO) by EPA Method 8015. All soil sample analytical results were either non-detect or below the Department's residential soil clean-up standards.

Temporary wells for groundwater sampling were installed at 11 of the 21 soil boring locations for the collection of groundwater samples. One groundwater sample was collected from each of the temporary well locations and submitted for laboratory analysis of BTEX and MTBE by EPA Method 8260B and TPH-DRO and TPH-GRO by EPA Method 8015. All groundwater sample analytical results were either non-detect or below the Department's groundwater standards for Type I and Type II aquifers with the exception of TPH-DRO, which was detected in all 11 samples at concentration ranging from 49(J) to 170 parts per billion (ppb), which exceed the 47 ppb standard.

The site is served by a private potable water supply well (CA-94-5588), which was installed in May 2005 to a depth of approximately 287 feet bgs and casing extending to 260 feet bgs. The supply was initially sampled on April 19, 2018 from a spigot at the Keeper's Quarters. The sample was submitted for laboratory analysis of BTEX and MTBE by EPA Method 8260B and TPH-DRO and TPH-GRO by EPA Method 8015. The results for the initial sample were either non-detect or below the Department's groundwater standards with the exception of TPH-DRO, which was detected at a concentration of 380 ppb and exceeds the Department's 47 ppb screening standard. Based on the exceedance of the TPH-DRO screening standard in the initial drinking water sample, additional samples were collected from three spigots on May 10, 2018 (one sample duplicated the April 19, 2018 sample and two additional locations). The three samples were submitted for laboratory analysis of BTEX and MTBE by EPA Method 8260B, TPH-DRO and TPH-GRO by EPA Method 8015, and semi-volatile organic compounds (SVOCs) by EPA Method 8270D. The sample results for the three additional samples were all either non-detect or below the Department's groundwater standards with the exception of TPH-DRO, which was detected in all three samples at concentration ranging from 100(J) to 170 ppb.

The Department issued e-mail correspondence to Gregory Carpenter of the USGS on May 25, 2018 advising that, based on the initial concentrations reported, while the detection exceeds the 47 ppb screen level, the detections of TPH-DRO are below the Department's lifetime residential risk-based exposure level for all populations. Out of an abundance of caution, while additional information is being collected and results verified, bottled water was recommended for consumption but washing, showering, and incidental use of the water was not an exposure concern. The Department understands that a granular activated carbon (GAC) filtration system has since been proactively installed by Calvert County and is currently in use as part of the water supply well system.

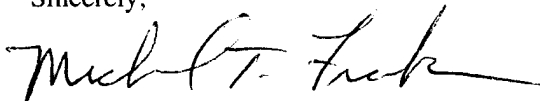
Based on the absence of soil impacts above regulatory standards and the document presence of TPH-DRO impacts to the water supply well, the Department requires the following additional work be performed:

- 1) If not previously completed by others, collect water samples from the private water supply wells of the four nearest adjacent properties. The samples must be analyzed for full-suite volatile organic compounds (VOCs), including fuel oxygenates and naphthalene, using EPA Method 524.2 and TPH-DRO by EPA Method 8015B. Additionally, a survey of each property should be performed to document the current or historic use of heating oil and the status of any active or inactive above or below ground heating oil tanks. The addresses of the four properties are:
  - 3329 Lighthouse Boulevard
  - 1020 Hemlock Drive
  - 11026 Hemlock Drive
  - 11030 Hemlock Drive
- 2) Submit to the Oil Control Program a *Report of Results* with all supply well sample results, documentation of methods used to collect the water samples, and heating oil survey results from the sampled private properties.

- 3) Sample the on-site water supply well on a monthly basis for a minimum of three months. The samples should be collected prior to any water treatment and analyzed for full suite VOCs, including fuel oxygenates and naphthalene, by EPA Method 524.2 and TPH-DRO by EPA Method 8015. Submit results, along with written documentation of the sampling activities, to the Department no later than 20 days following each sampling event. Continue monthly sampling until written authorization is provided to either cease sampling or modify the sampling frequency.
- 4) If the remaining AST at the Keepers Quarters is inactive and no longer in use, it must be pumped out, cleaned, and removed in order to comply with Section 4-420 of the Annotated Code of Maryland.
- 5) Perform further investigation in the area the GPR identified potential USTs to either confirm or deny the absence/presence of tanks. If an UST is encountered, it must comply with removal requirements in accordance with Code of Maryland Regulations (COMAR) 26.10.10.02-.03

Notify the Oil Control Program at least five (5) working days prior to conducting any work at this site so staff may have an opportunity to observe field activities. If you have any questions, please contact the case manager, Mr. Patrick Connelly, at 410-537-3427 (email: [patrick.connelly@maryland.gov](mailto:patrick.connelly@maryland.gov)) or me at 410-537-3487 ([mike.frank@maryland.gov](mailto:mike.frank@maryland.gov)).

Sincerely,



Michael T. Frank, Southern Region Supervisor  
Remediation and State-Lead Division  
Oil Control Program

PCC/nln

cc: Ms. Sherrod Sturrock (Calvert Marine Museum)  
Ms. Terry Shannon (Calvert County Administrator)  
Ms. Linda Vassalla (Calvert County Department of Communications and Media Relations)  
Mr. V. Wilson Freeland (Calvert County Department of General Services)  
Mr. Paul McFaden (Calvert County Health Dept)  
Mr. Andrew B. Miller  
Mr. Christopher H. Ralston  
Ms. Hilary Miller