



# Maryland

## Department of the Environment

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

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

April 1, 2022

Mr. Kenneth D. Kozel  
President and CEO  
Shore Regional Health  
219 South Washington Street  
Easton, MD 21601

**RE: PILOT PUMPING SYSTEM SHUTDOWN APPROVAL**  
**Case No. 1987-2534-KE**  
**Chester River Hospital Center**  
**100 Brown Street, Chestertown**  
**Kent County, Maryland**  
**Facility I.D. No. 3168**

Dear Mr. Kozel:

The Maryland Department of the Environment's (MDE) Oil Control Program (OCP) has completed a review of the case file for the above-referenced property, including the *Work Plan – Pilot Pumping System Shutdown*, dated February 4, 2022 (the *Work Plan*), and the *Fourth Quarter 2021 Monitoring Report*, dated December 2021, both prepared by Gannett Fleming on behalf of the University of Maryland Shore Regional Health (SRH). The MDE also reviewed the Town of Chestertown's comments on the *Work Plan*, dated March 7, 2022.

On May 17, 2016, SRH and MDE entered into a *Settlement Agreement and Consent Agreement (SACO)* that specified work to be performed and the site conditions at which SRH may request post-remedial monitoring. Additionally, on June 22, 2016, the Town of Chestertown and SRH entered into an Agreement to further protect the Town's water supply.

The current monitoring well network consists of a total of 55 wells, which include 46 monitoring wells, 6 recovery wells, and 3 sentinel wells. Surfactant injections were conducted on select monitoring wells in the network between August 2015 and March 2016. A supplemental subsurface investigation was completed in June 2016 to assess soil conditions in the areas of the original fuel release and the long-term recovery zone.

Since 2016, the monitoring well network has been gauged monthly and sampled quarterly. The presence of residual surfactants has not been detected in the monitoring well network since January 2018. Measurable (i.e., equal to or greater than 0.01 foot) light non-aqueous phase liquids (LNAPL) were not detected in the monitoring well network from April 2014 through October 2021. Periodic sheen (i.e., less than 0.01 foot of LNAPL) and petroleum odors have been reported in the recovery

wells (MW-22, RW-2D, RW-3B, RW-4, RW-5, and RW-6). Two recovery wells have exhibited occurrences of measurable LNAPL since January 2020: RW-2D had two occurrences where LNAPL thicknesses were measured at 0.04 and 0.08 feet; and RW-3 had one occurrence where LNAPL was measured at a thickness of 0.01 feet. In November 2021, the six recovery wells were mechanically redeveloped for the purpose of increasing lost pumping and recovery capacity due to iron scaling and bacteria fouling within the wells.

The *SACO* established a site specific goal that once total petroleum hydrocarbon-diesel range organics (TPH-DRO) concentrations are at or below 1 part per million (ppm), SRH may submit a request to turn off the groundwater pumping system and begin post-remedial monitoring. Since the surfactants were last detected in wells at the site, each of the 55 wells has had at least one TPH-DRO concentration at or below 1 ppm without use of the silica gel cleanup step with three exceptions (MW-13 had a low concentration of 2.2 ppm, MW-43 had a low concentration of 1.4 ppm, and MW-45 had a low concentration of 1.3 ppm). If concentrations of TPH-DRO using the silica gel cleanup step are considered, all site wells have met the site specific goal during at least one sampling event. Based on the current site conditions, SRH submitted the *Work Plan*.

The *Work Plan* proposes an initial monitoring period in which the groundwater pumping system will be shut off but left in place in the event it becomes necessary to reactivate the system based on monitoring results or MDE directives. The *Work Plan* proposes that following the pilot system shutdown, all 55 wells in the network will be gauged daily for five consecutive days. A six-month pilot phase will then be initiated in which all monitoring, recovery, and sentinel wells will be gauged on a monthly basis. A select subset of 20 monitoring wells will be sampled on a monthly basis. The selected wells include MW-9, MW-10R, MW-11, MW-13, MW-14, MW-15, MW-16, MW-19, MW-20, MW-24, MW-33, MW-34, MW-35, MW-37, MW-48, MW-49, MW-50, MW-51, MW-54, and MW-56. The entire network of 55 wells will be sampled quarterly. Sample analysis will include: full-suite volatile organic compounds (VOCs), including fuel oxygenates and naphthalene, using EPA Method 8260; TPH-DRO using both EPA Method 8015 and EPA Method 8015 with the silica gel cleanup preparation method by EPA Method 3630; and geochemical parameters. Monthly progress reports, including gauging summary tables and sampling results, will be submitted to the Town and MDE by email. Quarterly monitoring reports will be submitted as previously directed.

The *Work Plan* includes a matrix of events that, any of which, can trigger either targeted supplemental investigation or reactivation of the groundwater pumping system (Table 2 of the *Work Plan*). The triggers include:

1. MDE directs SRH to restart the groundwater pumping system;
2. Groundwater concentrations exceeding 0.47 mg/L TPH-DRO or 0.0017 mg/L naphthalene in any of the seven sentinel wells: S-1, S-2, S-3, MW-18, MW-23, MW-28, and MW-29;
3. Detection of any contaminants of concern above trigger levels (i.e., groundwater concentrations exceeding 0.47 mg/L TPH-DRO or 0.0017 mg/L naphthalene, or the detection of any surfactants) in an active Town production well;

4. The detection of LNAPL at greater than 0.01 foot in any well south of Brown Street;
5. The detection of LNAPL at greater than 0.05 foot in any well north of Brown Street for three consecutive gauging events; and
6. Groundwater concentrations exceeding 1 mg/L TPH-DRO or 0.017 mg/L naphthalene in all of the following 6 wells for 3 consecutive quarterly sampling events: MW-24, MW-16, MW-50, MW-49, MW-15, and MW-17.

### **Work Plan Approval and Modifications**

Based on the current commercial and residential land use and the available information reviewed for the case, MDE hereby approves the proposed actions in the *Work Plan* with the following modifications:

1. In addition to the proposed actions in Section 2 of the *Work Plan*, SRH must also complete the following as part of the groundwater pumping system shutdown process:
  - a. All 55 wells in the network (monitoring, recovery, and sentinel) must be gauged no more than 2 days prior to system shutdown; and
  - b. All system piping must be purged / drained.
2. As proposed, the groundwater pumping system must remain on site in the event conditions exist that would trigger reactivation of the system or MDE requires the system be restarted. In accordance with Paragraph 43 of the *SACO*, if MDE instructs SRH to restart the groundwater pumping system, SRH will do so within 10 days.
3. After the first week of post shutdown daily gauging of all 55 wells, all wells must be gauged once per week for the next three weeks. After this, the frequency may revert to monthly as proposed.
4. In addition to the 20 target wells proposed, samples must also be collected monthly from the following wells: MW-17, MW-47, MW-52, S-1, S-2, S-3, MW-18, MW-23, MW-28, MW-29, MW-43, MW-46, MW-45, and MW-25.
5. Additionally, any well that exceeds a concentration-based or LNAPL detection-based threshold trigger that is not already sampled monthly, must be added to the list of wells to be sampled monthly.
6. Within 20 days of sample collection, submit the monthly reports by email to the stakeholders (i.e., the Town and MDE) and one hard copy to MDE. The monthly reports must include an

updated groundwater gauging map, tabulated gauging data, and summarized well sampling results.

7. MDE approves of the proposed monthly and quarterly gauging and sampling schedule with the additions noted above and the following:
  - a. All data collected must be submitted in quarterly reports detailing the results of the gauging and sampling events, including the monthly results that are emailed to the stakeholders;
  - b. Each quarterly report must include an updated Mann-Kendall trend analysis based on 2 years of data;
  - c. Trend analyses for TPH-DRO must be completed for results based only on US EPA Method 8015 and separately for TPH-DRO based on the silica gel cleanup step and US EPA Method 8015. The trend analyses and any conclusions from them must be clearly identified; and
  - d. The first quarterly report submitted after receipt of this letter must include LNAPL thicknesses starting from April 2019 to the present in the groundwater gauging tables.
8. Only TPH-DRO data without the use of the silica gel cleanup step will be used for compliance with the concentration-based threshold triggers in the proposed *Work Plan*.
9. Generally, MDE approves of the proposed actions as stated in the *Work Plan* if LNAPL are detected in any well at a thickness greater than 0.01 foot, with the following exceptions:
  - a. Report the findings to the stakeholders by email notification within 24 hours of discovery. This email should, at a minimum, include the well location(s) and thickness of LNAPL measured; the immediate corrective action taken, if warranted; post-corrective action gauging thickness; and proposed additional corrective actions, if warranted. MDE will review any notice to determine if additional measures, including system restart, will be required.
  - b. Absorbent wicks may not to be left in monitoring points.
  - c. MDE reserves the right to require additional recovery efforts based on either the amount of LNAPL rebound following corrective action or the initial amount of LNAPL detected.
10. MDE concurs with the general shutdown schedule as proposed in the Table 2 presented on page 7 of the *Work Plan* with necessary adjustments for a start date after receipt of this approval letter. To keep this project on track, both dates for the *90-day meeting* and the *6-month review meeting* must be established by no later than April 29, 2022.

11. As part of the *6-month review meeting* with MDE, SRH, and the Town, at least the following will be discussed: the outcomes of the pilot test, the appropriateness of formally initiating the 2-year minimum post-remedial monitoring period in accordance with the *SACO*, and the future monitoring program for the site. Until written approval is given by MDE, monitoring of the site will continue according to the approved *Work Plan* quarterly sampling and monthly gauging schedule.

This *Pilot Pumping System Shutdown Approval* letter is not a waiver or limitation of MDE's right to take enforcement or other action in the future based upon contamination at and around the site. The MDE and the State of Maryland retain all authority and rights to seek all available relief, including equitable relief and damages of any nature, such as compensatory and natural resource damages, for contamination at and around the site.

Notify the Oil Control Program at least five (5) working days prior to conducting any work at this site so we have an opportunity to observe field activities. Unless otherwise stated in this letter, when submitting documentation, provide three hard copies and an electronic copy on a labeled compact disc (CD). If you have any questions, please contact Ms. Lindley Campbell at 410-537-3387 ([lindley.campbell1@maryland.gov](mailto:lindley.campbell1@maryland.gov)) or Ms. Susan Bull at 410-537-3499 ([susan.bull@maryland.gov](mailto:susan.bull@maryland.gov)).

Sincerely,



Christopher H. Ralston, Program Manager  
Oil Control Program

cc: Mayor David Foster, Town of Chestertown  
Mr. Bill Ingersoll, Manager, Town of Chestertown  
Mr. Ken Guttman, Principal Engineer, Gannett Fleming  
Mr. Steve Slatnick, Senior Project Manager, Gannett Fleming  
Michael Powell, Esq., Gordon Feinblatt, LLC  
Mr. John Beskid, Director, Environmental Health Programs, Kent County Health Dept.  
Ms. Julie Kuspa, Esq., Office of the Attorney General  
Mr. Robert Peoples, Source Protection and Appropriation Division, Water Supply Program  
Ms. Lindley Campbell, Case Manager, Remediation Division, Oil Control Program  
Ms. Susan Bull, Supervisor, Remediation Division, Oil Control Program  
Mr. Andrew B. Miller, Chief, Remediation Division, Oil Control Program