October 8, 2024

Ms. Cindi Hodges
Southern States
6606 West Broad Street
Richmond, VA 23230

RE: SITE STATUS AND CASE CLOSURE
Case No. 2016-0566-BA
MacCord Residence
13500 Blenheim Road, Phoenix
Baltimore County, Maryland

Dear Ms. Hodges:

The Maryland Department of the Environment's (MDE) Oil Control Program (OCP) completed a review of the case file for the above-referenced property, including the *Report of Water Supply-Well Installation and Sample Results*, dated May 13, 2024, prepared by SynTerra Corp. This case was opened in April 2016, following two separate incidents that caused the release of an estimated 450 gallons of heating oil in the basement of the home. In February 2016, the initial release occurred due to the over pressurization and overfilling of an aboveground storage tank (AST) system. The second release occurred in March 2016, when a delivery was made to the damaged AST system. The liquid phase hydrocarbons (LPH) migrated along the basement floor, and into a floor drain.

In June 2016, a subsurface investigation including 15 soil borings were completed; ten borings were located outside the home, and five within the basement. A total of 24 soil samples were collected during the subsurface investigation. In July 2016, petroleum impacted soils were excavated from the area near the drainpipe discharge in the yard, and at the former AST remote fill port. Seven post-excavation soil samples were collected. In September 2016, the drainpipe was flushed, and the portion of the drainpipe that extends into the yard was removed along with petroleum impacted soils. Three post-excavation soil samples were collected for laboratory analyses. All soil samples were analyzed for volatile organic compounds (VOCs) using EPA method 8260, and for TPH-DRO using EPA Method 8015, or just TPH-DRO using EPA Method 8015. All soil sampling results were either non-detect or below MDE's non-residential standards with the following exceptions. TPH-DRO were reported in six samples ranging in concentrations of 711.3 parts per million (ppm) to 21,010 ppm, and TPH-GRO were detected in three soil samples ranging in concentrations of 376 ppm to 953 ppm. All exceeding the TPH-DRO and TPH-GRO standards of 230 ppm. Approximately 95 tons of petroleum impacted soils were transported offsite for proper disposal.

In October 2016, a soil vapor extraction system (SVE) was installed. In November 2018 and May 2019, indoor air samples were collected. In March 2020, sub-slab soil gas and indoor air samples were collected. All air samples were analyzed for VOCs, including oxygenates and naphthalene

using EPA Method TO-15 or EPA Method TO-17. All detected concentrations in the sub-slab soil gas samples were below the residential Tier 1, target soil gas screening levels. All detected concentrations in the indoor air samples were below the residential target indoor screening levels with the following exception: 1,4- Dichlorobenzene was detected at concentrations ranging from 2.6 micrograms per cubic meter (µg/m3), to 11 µg/m3, exceeding the residential indoor target screening level of 2.3 ug/m3. Vapors of 1,4-Dichlorobenzene can be present in homes from non-petroleum sources such as air fresheners and mothballs. Based on the sub-slab soil gas sampling results, the petroleum vapor intrusion risk to the residence is not considered to be a concern. The SVE system operating in the basement was shut off on May 16, 2019.

The former on-site potable well was sampled seven times between June 2016 and April 2021. The drinking water samples were analyzed for full-suite VOCs, including fuel oxygenates and naphthalene, using EPA Method 524.2. All analytical results were non-detect with the following exception. The results for the sampling events on March 11, 2020 and April 23, 2020, detected total petroleum hydrocarbons – diesel range organics (TPH-DRO) at concentrations of 77.4 and 56.1 parts per billion (ppb)**,** respectively, which exceed the State screening level of 47 ppb. Within MDE's *Request for Drinking Water Sampling* letter, dated October 7, 2020, an additional drinking water sample was required to be collected to confirm concentration trends for TPH-DRO. In lieu of purging and sampling the existing well, SynTerra Corp, on behalf of Southern States, elected to properly abandon the current well and install a replacement well. The existing well was properly abandoned on April 20, 2021.

A new potable well (BA-20-0211) was installed on April 24, 2021. Drinking water samples were collected from this well four times between April 2021 and June 2022. The samples were analyzed for VOCs, including fuel oxygenates and naphthalene, using EPA Method 524.2 and for TPH-DRO using EPA Method 8015, except for the sampling event conducted on June 17, 2024, when the sample was analyzed for VOCs including fuel oxygenates and naphthalene only. All analytical results were non-detect with the following exception. Toluene was detected at concentrations ranging from 0.63 ppb on April 16, 2021, to 4.7 ppb on March 17, 2022, both detections are below the groundwater standard for toluene of 1,000 ppb. On July 1, 2022, Baltimore County Department of Environmental Protection and Sustainability issued a Certificate of Potability for the new well (BA-20-0211). Due to low yields from this well, an additional potable water well (BA-21-0291) was installed on November 11, 2023.

A drinking water sample was collected from the additional well on October 9, 2023. The sample was analyzed for VOCs, including fuel oxygenates and naphthalene, using EPA Method 524.2 and TPH-DRO using EPA Method 8015. All analytical results were non-detect with the following exception. TPH-DRO was detected at a concentration of 63.2 ppb. A confirmation drinking water sample was collected on November 20, 2023. Since the home was unoccupied at the time of the sample collection, approximately 31,000 gallons of water were purged from the well prior to the sample collection. The sample was analyzed for the aforementioned methods, and all analytical results were non-detect with the following exception. TPH-DRO was detected at a concentration of 53.6 ppb. On March 21, 2024, a drinking water sample was collected and analyzed for total petroleum hydrocarbons gasoline range organics (TPH-GRO) using EPA Method 8015, and another sample was collected on April 3, 2024, and was analyzed for TPH-DRO using EPA Method 8015.

All analytical results were non-detect. On May 3, 2024, Baltimore County Department of Environmental Protection and Sustainability issued a Certificate of Potability for the new well (BA-21-0291).

Based on the current land use and the available information reviewed, OCP is closing its case in reference to this site. Future excavation in the area of investigation may create exposure pathways to the existing petroleum related contamination that may impact human health or the environment. If impacted soil or groundwater is encountered during future excavation, it must be handled in a manner that complies with applicable federal, state, and local law and regulations. Please contact MDE if there is any proposed change to the land use or installation of any wells on the property. If a change in land use occurs or is proposed, a risk assessment may need to be performed.

Homeowners and property owners are responsible for maintaining their individual well and ensuring its safety. It is recommended that all owners of private drinking water supply wells sample their well periodically to ensure the water meets drinking water standards. In addition, you should have your well sampled any time you detect a change in the odor, taste, or appearance of your water. See the enclosed fact sheet for sampling recommendations and other relevant well information.

This *Site Status and Case Closure* 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. 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.

If you have any questions, please contact the Oil Control Program at 410-537-3442.

Sincerely,

Ellen Jackson, Eastern Region Supervisor
Remediation Division
Oil Control Program

Enclosure: *Sampling Your Drinking Water for Petroleum-Related Compounds* Fact Sheet

cc: Mr. Andrew MacCord, 13500 Blenheim Road
Ms. Jo Anna Schmidt, Esquire, Schmidt, Dailey & O'Neill, L.L.C
Mr. Thomas Dunahm, Senior Geologist, SynTerra Corp.
Mr. Kevin Koepenick, Manager, Groundwater Management Section, Baltimore County DEPS
Mr. Evan Carrozza, Groundwater Management Section, Baltimore County DEPS
Mrs. Susan Bull, Chief, Remediation Division, Oil Control Program
Mr. Christopher H. Ralston, Program Manager, Oil Control Program

Maryland
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Sampling Your Drinking Water for Petroleum-Related Compounds

What You Need to Know

The Maryland Department of the Environment's (MDE) Oil Control Program (OCP) recommends that all owners of private drinking water supply wells sample their well periodically for chemical constituents known as volatile organic compounds, or VOCs. These VOCs can be the result of petroleum or other chemical storage and use on the property or in the area. Following are the OCP's recommendations and resources.

Dos and Don'ts

- Do sample your well water at least once, particularly if there was history of petroleum storage and use on the property or on an adjacent property (e.g., heating oil use).
- Do conduct additional water sampling if there is a change in the taste, odor, or appearance of your well water, particularly if it involves a petroleum like odor or a "sweet" odor.
- Do have the laboratory sample for VOCs using EPA Method 524.2.
- Do also have the laboratory sample for total petroleum hydrocarbons – diesel range organics (TPH-DRO) using EPA Method 8015 if heating oil is, or has been, used at the property.
- Do ensure that the water sample results meet applicable regulatory standards for potable use.
- Do contact the Oil Control Program at 410-537-3442 if your sample results indicate any detections.

Additional Resources

The following is a list of additional resources for facts and information about sampling your drinking water supply well:

- MDE-OCP List of Laboratories: https://mde.maryland.gov/programs/land/OilControl/Documents/OCP_List_of_Laboratories_FINAL_7-24-24_2pgs.pdf
- MDE Residential Wells Website: https://mde.maryland.gov/programs/Water/water_supply/Pages/Residential_Wells.aspx
- MDE Individual Well Recommendations: https://mde.maryland.gov/programs/Water/water_supply/Pages/well_recommendations.aspx

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Sampling Your Drinking Water for Petroleum-Related Compounds

What You Need to Know

- University of Maryland Extension Protect Your Water Supply: https://extension.umd.edu/programs/environment-natural-resources/program-areas/wells-septic-systems-and-water-quality
- Environmental Protection Agency Private Drinking Water Wells: https://www.epa.gov/privatewells
- Your county Health Department may also be able to provide information on sampling your supply well for petroleum-related compounds.

Questions

If you have additional questions or to report a detection of petroleum compounds in your drinking water, please contact the Oil Control Program at 410-537-3442.