Maryland
Department of
the Environment

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

Horacio Tablada, Secretary
Suzanne E. Dorsey, Deputy Secretary

October 25, 2022

Mr. Christopher E. Williams
Environmental Issues Program Manager
Anne Arundel County Public Schools
9034 Fort Smallwood Road
Pasadena MD 21122

RE: PARTIAL WORK PLAN APPROVAL
Case No. 2018-0559-AA
Wiley H. Bates Middle School
701 Chase Street, Annapolis
Anne Arundel County, Maryland
Facility I.D. No. 3200

Dear Mr. Williams:

The Maryland Department of the Environment's (MDE's) Oil Control Program (OCP) completed a review of the case file for the above-referenced property, including the *LPH System Operation & Recovery Report* dated July 20, 2022, *Quarterly Sampling Report – 3rd Quarter 2022*, dated September 5, 2022, and the associated cover letter dated September 7, 2022, all prepared by Petroleum Management, Inc. This case was opened on May 2, 2018, following the report of light non-aqueous phase liquids (LNAPL) impacting Spa Creek. The current monitoring well network in the vicinity of the school's boiler room consists of 13 monitoring wells, one of which was installed as a replacement tank field monitoring pipe. LNAPL recovery has been ongoing at this location since August 8, 2019. LNAPL recovery efforts have included soil excavation, enhanced fluid recovery (EFR) events, and LNAPL dedicated skimmer systems. On April 30, 2020, the LNAPL skimmer systems were deployed in two monitoring wells, MW-1, and MW-2. As of June 23, 2021, the LNAPL skimmers recovered had 191.25 gallons of LNAPL and 37-gallons of groundwater. The skimmer pumps were removed June 23, 2021, to gauge pre-pumping static conditions.

A step drawdown test was performed on February 2, 2022, in accordance with MDE's *Pump Test Work Plan Approval* letter, dated December 22, 2021. The monitoring wells were gauged on a weekly basis following the drawdown test. During the February 23, 2022, site visit, gauging results revealed that LNAPL thicknesses had rebounded to 1.94 feet in MW-1 and 0.48 feet in MW-2. The LNAPL skimmer systems were redeployed on March 11, 2022. As of July 20, 2022, the LNAPL skimmers recovered have recovered an additional 24.5 gallons of LNAPL and reduced LNAPL thickness in MW-1 and MW-2 were 0.01 feet or less by August 23, 2022.

The cover letter proposes to conduct a regular sampling event of the monitoring well network in Fourth Quarter 2022. If the sampling trends continue as historically presented, the cover letter proposed to abandon monitoring wells MW-4, MW-7, MW-10, MDE-1, MDE-2, and MDE-3. The cover letter proposes to retain MW-1 and MW-2 as part of the active remediation system and retain MW-5, MW-6, and MW-8 for continued monitoring and sampling. Monitoring wells MW-4 and MW-10 are located within the limit of disturbance (LOD) of the proposed HVAC chiller equipment. OCP understands that the final phase of the HVAC upgrade project will include removal of the underground storage tank (UST) systems, however a removal date is not known at this time. Tank field monitoring pipes, TF-1 and TF-2 will be removed with the UST systems. TF-2 was completed as a permitted groundwater monitoring well and will require proper abandoned by a well driller.

Based upon the available information reviewed, the OCP approves part of the requested work, contingent on the following modifications:

1. **By no later than December 1, 2022**, the skimmer systems may be removed from the recovery wells.

    a. **By no later than December 1, 2022,** begin weekly gauging of MW-1 and MW-2 to monitor LNAPL rebound under static water conditions. The gauging frequency may be reduced to monthly after the first month.
    b. The skimmer systems must be retained on-site in the event they will need to be reinstalled.

2. OCP understands the HVAC chiller system project is projected to begin on, or about, April 2023. Retain **all wells** and continue quarterly sampling of all monitoring wells that do not exhibit LPH through First Quarter 2023. Continue to analyze all samples collected for full-suite volatile organic compounds (VOCs), including fuel oxygenates and naphthalene, using EPA Method 8260 and total petroleum hydrocarbons - diesel and gasoline range organics (TPH-DRO and TPH-GRO) using EPA Method 8015B.

3. Once an official start date has been selected, notify the Department. The OCP concurs with the abandonment of MW-4 and MW-10 **no more than 30 days prior** to the start of the chiller system project. The monitoring wells must be properly abandoned by a Maryland-licensed well driller in accordance with applicable requirements of COMAR 26.04.04.34. Provide copies of the required well abandonment reports to the Oil Control Program (Attn: Ms. Lindley Campbell) and the Anne Arundel County Health Department (Attn: Mr. Don Curtian).

4. OCP will reevaluate the additional requests for monitoring well abandonment following receipt of the First Quarter 2022 Sampling Report and/or receipt of an updated UST removal timeline.

When submitting documentation to the OCP, provide three hard copies and one electronic copy on a labeled compact disc (CD) or via email. If you have any questions, please contact the case manager, Ms. Lindley Campbell at 410-537-3387 (*lindley.campbell1@maryland.gov*) or me at 410-537-3499 (*susan.bull@maryland.gov*).

Sincerely,

Susan R. Bull, Eastern Region Supervisor
Remediation Division
Oil Control Program

cc: Mr. Scott Alexander, Petroleum Management, Inc.
Mr. Don Curtian, Director, Environmental Health, Anne Arundel County Health Department
Ms. Ginger D. Klingelhoefer-Ellis, Anne Arundel County Department of Public Works
Mr. Lindley Campbell, Case Manager, Remediation Division, Oil Control Program
Mr. Andrew B. Miller, Chief, Remediation Division, Oil Control Program
Mr. Christopher H. Ralston, Program Manager, Oil Control Program