UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

January 27, 2017

Ms. Sharon Fisher
Harley-Davidson Motor Company
1425 Eden Road
York, PA 17402

Re: EPA review of Supplemental Remedial Investigation Groundwater Report (Part 2) for the former York Naval Ordnance Plant

Dear Ms. Fisher:

This letter is in response to the Supplemental Remedial Investigation Groundwater Report (Part 2) for the former York Naval Ordnance Plant, prepared by Groundwater Sciences Corporation and dated August 2016. The report was prepared and submitted in accordance with the One Cleanup Program established by EPA Region 3 and the Pennsylvania Department of Environmental Protection (PADEP).

EPA has reviewed the Supplemental Remedial Investigation Groundwater Report (Part 2) but is delaying its decision to approve or disapprove this report until potential paths forward can be discussed among all parties at a meeting presently scheduled for January 31, 2017. EPA provides the following comments to be addressed:

1. Section 1.2.2, P. 9, top of page – for on-site soils, non-residential MSCs were used for direct contact. Does soil delineation extend to off-site (or property boundary) and indicate that delineation to residential screening level achieved at property boundary or beyond? Need institutional control which prevents future residential use of property. Screening should also include EPA RSLs, not just PADEP MSCs.
2. Section 1.2.3, Soils Risk Assessment (page 9)– text states that there were no unacceptable soil exposures at the site under current or future land use assumptions, and that the risk assessment demonstrated attainment of the site-specific standard for soils. This statement implies that exposure controls (pathway elimination) were needed (i.e., there were levels exceeding statewide health standards). Every engineering control relied upon for pathway elimination needs to be identified, mapped, and evaluated for effectiveness (as part of the CMS). These controls, if selected for a final remedy, will need to be covered by an enforceable institutional control. Media cleanup objectives for these remedies need to be stated. For example, are all soils which exceed a non-residential cleanup level mapped, covered or capped and subject to OM&M?
3. Section 3.6.1, New Pumping Configuration (page 149) – The second bullet indicates the potential for Bldg58 groundwater to migrate southward under the new configuration (CW-8 off). Is this possibility being monitored?

4. Section 4 Conceptual Site Model – The description of Figure 4.0-4 indicates that Figure 4.02 shows the curved trace of this cross-section. Figure 4.02 is Section A-A' – the correct reference is Figure 4.0-1.
5. Figure 3.1-19, Northern Property Boundary Area Monitored Shutdown Chemistry Data – The shading/contouring of TCE is not shown correctly for well MW-103S, which had detections above 50 in the 2015 result, yet is shaded as light blue instead of pink. The figure should indicate which well data is being considered in the contouring, for example MW-102D exceeds 100 ppb TCE, but the contouring/shading does not indicate that. The color is consistent with the detections at MW-102S, which implies that the contouring/shading represents shallow wells.
6. Figure 3.1-23, X-Section G-G' (also Appendix N, Figure 3, cross section B – B') – Well MW-110 should include a table of detections. The cross-section should color contour VOC data (as was done for Sections A-A' through D-D') to indicate concentrations in the limestone aquifer. Well MW-161 is shown as screened across the residuum/limestone interface, but the boring log for that well does not indicate that limestone was encountered.
7. Figure 3.1-23, X-Section F-F' (also Appendix N, Figure 3, cross-section A-A') – the sandstone on the western side is shown as ending with depth and underlain by limestone. This contradicts the geologic map which indicates the sandstone is older than the limestone. The geologic map indicates the area near MW-164 & 165 is the axis of a tight anticline, and the area further east centered on MW-161 is centered on a tight syncline. To be consistent with the geologic map, the sandstone on the western end of A-A' should be drawn as continuing with depth and connecting with the sandstone on the eastern end of the cross-section. This begs the question as to why MW-165 encountered limestone below the sandstone, which could be explained either as an overturned anticline, or as an unmapped reverse fault. Also, the cross-section should color contour VOC data (as was done for Sections A-A' through D-D') to indicate concentrations in the limestone aquifer.
8. Figure 3.1-26 (and Plate 2) – The gray shaded area (PCE between 5 and 50 ppb) should be extended around wells MW-165 and MW-167.
9. Figures 3.1-37 through 3.1-45 should be expanded to cover the entire property, so that the SPBA area plumes are shown as well (although additional elevations above 310' will be needed).
10. Figures 4.02, 4.03, and 4.04 – These sections show Dissolved Chlorinated Hydrocarbons in orange, and Dissolved Chlorinated Hydrocarbons Migrating with Groundwater in gray. What is the difference between the two (since both are dissolved phase) – is it just a concentration difference, or is something else implied?
11. Figure 4.0-4, Conceptual Site Model Cross Section B-B' – The north end of this section extends approximately to the MW-92 location. The surface elevation there is shown on the cross-section as around 575', but the actual surface elevations there are more on the order of 475' (based on USGS topo contours shown in Figure 1.0-1). The surface elevation shown at the fYNOP property line is about 480 feet on the section, but is about 410 feet based on Figure 1.0-1.
12. Figure 4.0-4, Conceptual Site Model Cross Section B-B' – This section does not show a residual soil VOC source above the water table, but MIPs data indicates a soil source may be present. The gray shading representing dissolved chlorinated hydrocarbons is disconnected between numbers 3 and 5.
13. Figure 4.01, Traces of Conceptual Site Model Cross Sections, and Figure 4.0-4, Conceptual Site Model Cross Section B-B' – The map and cross-section B-B' imply that the VOCs at former Cole Steel are sourced from the north and not from the SPBA, yet

figure 3.1-27 (Detections of D&C Red #28 October 2014) clearly indicates the connection of the SPBA and the Cole wells. Figures 2.3-14 and 2.3-17 show the SPBA VOC plume more clearly connected to well MW-110. Plate 2 (Site-Wide PCE Plume Shallow Groundwater Chemistry) shows MW-110 disconnected from the SPBA PCE plume, yet they are actually connected via the carbonate aquifer.

14. Figure 4.1-02 Epikarst Surface (Top of Bedrock) should be expanded to also cover the SPBA.
15. Appendix H Well Logs – The logs for wells 126 through 156 include PID readings, but the logs for wells 161 through 175 do not. Was a PID used for screening for these wells but not recorded on the logs? If so, please add.

In addition, the following comments related to the Supplemental Remedial Investigations Soil Report are provided as they may impact the remedy selection process for some areas of the Facility moving forward:

16. The Supplemental Remedial Investigations Soil Report, December 1, 2009, includes MIPs data from the SPBA (Table 3.4-2), and indicate TCE and PCE in some of the borings to a depth of 15 feet (still above the water table) with the highest detections at the deepest samples. There was apparently no follow up soil analytical work done, so there is no way to assess soil to groundwater or direct contact pathways. It appears there is at least an on-going source to groundwater based on groundwater data, so the lack of soil data represents a data gap. Further characterization should be conducted to quantify risks and to determine whether a soil remedy is needed either for direct contact or to address an ongoing source to groundwater.
17. Supplemental Remedial Investigations Soil Report, December 1, 2009 - Figures 5-1 and 5-2 indicate samples collected west of west parking lot with surface soils exceeding direct contact and soil to groundwater screening levels – not included in risk assessments?

Thank you for your cooperation in working with EPA and PADEP in the remediation of this site. We look forward to an initial discussion of these comments during our January 31, 2017 meeting, where EPA will discuss the options of approval or disapproval of the Supplemental Remedial Investigation Groundwater (Part 2), and for moving forward to the remedy selection process. If you have any questions, please don't hesitate to call me at (215) 814-3407.

Sincerely,

Griff Miller
LCDR, U.S. Public Health Service
Office of Pennsylvania Remediation
EPA Region 3

cc: Pamela Trowbridge, PADEP (via email)
Steve Snyder, GSC (via email)