

 pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION	REPORT COMMENTS C. David Brown 1 Mar 2018	Commonwealth of Pennsylvania Department of Environmental Protection Southeast Regional Office Environmental Cleanup and Brownfields
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Site: Philadelphia Refinery AOI 6 3144 West Passyunk Avenue Philadelphia, PA 19145	eFACTS Facility ID: 769099	Tank Facility ID: 51-19781
	Incident ID: <i>multiple</i>	NIR Date: 14 Dec 2016
Municipality: Philadelphia	County: Philadelphia	Location: 39.9026°N, 75.2074°W

PA DEP and U.S. EPA comments on AOI 6 “Remedial Investigation Report” dated 21 Nov 2017, prepared by GHD Services, Inc. on behalf of Evergreen Resources Group, LLC, for the former Sunoco Philadelphia Refinery, currently the Philadelphia Energy Solutions Refining and Marketing, LLC facility.

Soil

1. Benzene direct contact exceedances were present in samples collected from borings BH-16-025 and BH-16-037, in the area north and northeast of Tank 797. These exceedances do not appear to be delineated immediately west of these borings. We recognize that this area is part of an active process unit. Further delineation may be needed to implement a remedy.
2. The lead direct contact standard exceedance at BH-17-004 does not appear to be delineated between the bulkhead and the boring location. Further delineation may be needed to implement a remedy.
3. An exceedance of the benzo(a)pyrene direct contact MSC was identified in shallow soil (BH-29-06). EPA issued a new IRIS toxicological review of benzo(a)pyrene in Jan 2017. Evergreen might consider calculating a site-specific numerical value for benzo(a)pyrene or performing a risk assessment using the updated toxicological information.

Groundwater & LNAPL

4. LNAPL is not delineated between B-39 and the river. Potential migration of LNAPL to the river should be considered as part of the fate-and-transport and surface water attainment analyses.
5. LNAPL distribution and mobility discussions (Sections 6.2 and 9.4) do not include well B-39 as indicated on Figure 16.

Exposure Pathways

6. We note that there were vapor intrusion screening value exceedances for benzene and naphthalene in some buildings. An inhalation risk assessment should be performed for those receptors in future reporting.
7. Some reporting levels in the indoor air sample analyses exceeded applicable screening values (Table 13). Please refer to DEP's [FAQs](#) on the VI guidance for the application of PQLs to screening.
8. Evergreen could consider collecting additional outdoor air samples in the area of benzene soil direct contact MSC exceedances (vicinity of Tank 797). The direct contact MSC for benzene is based on an inhalation exposure pathway.
9. In the PNDI review, the Pennsylvania Fish and Boat Commission indicated that four threatened/endangered species may be present at AOI 6 (Appendix I). Please identify these species. There is a potentially complete exposure pathway for the species of concern, and the report notes that a habitat assessment will be performed.

Tables, Figures, and Appendices

10. Figure 20 does not show all of the deep wells. The figure should be revised; we recommend that it depict only the deep wells rather than all AOI 6 sample locations.
11. The AOI 6 deep wells are not listed in Table 6. Provide a corrected version with the deep well information.
12. According to Appendix F.1, there is a substantial LNAPL thickness in B-129. However, Figures 16, 17, and Figure 16 of Appendix F do not show LNAPL at this well. Provide corrections to these figures.
13. Please provide a hardcopy of Appendix F to include in our file. (It can exclude Table 3 and the appendices, and reference the CD-ROM to access them.)

C. David Brown P.G. Pennsylvania Registered Professional Geologist No. PG005002	Date
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