

 pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION	REPORT COMMENTS C. David Brown 29 Jun 2017	Commonwealth of Pennsylvania Department of Environmental Protection Southeast Regional Office Environmental Cleanup and Brownfields
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Site: Philadelphia Refinery AOI 4 3144 West Passyunk Avenue Philadelphia, PA 19145	eFACTS Facility ID: 770318	Tank Facility ID: 51-19781
	Incident ID: <i>multiple</i>	NIR Date: 14 Dec 2016
Municipality: Philadelphia	County: Philadelphia	Location: 39.9098°N, 75.1965°W

PA DEP comments on AOI 4 “Remedial Investigation Report” dated 24 Mar 2017, prepared by Stantec Consulting 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.

Groundwater

1. Offsite groundwater contamination at the southeast property boundary of AOI 4 has not been delineated. The plume is inferred to extend a significant distance offsite, but no offsite wells were installed. (This was previously noted as a concern in DEP’s 25 Feb 2011 comments on the Aug 2005 SCR and a deficiency in DEP’s 15 Jan 2014 disapproval of the Oct 2013 RIR.)
2. The fate-and-transport modeling indicated a potential benzene plume length of ~900’. Over this distance groundwater flow direction and gradient may vary from the model values. Groundwater flow conditions in the model were limited to data from a single gauging event. Sewer lines at 26th Street and Penrose Avenue may influence groundwater flow.
3. Calibrating the fate-and-transport model with data from a period of active remediation introduces more uncertainty to the results. The concentrations used may not have been conservative relative to the time before remediation, when the plume could have been migrating offsite. For instance, concentrations at RW-703 before the Penrose system came online were ~16,000 µg/L, and concentrations at downgradient RW-708 were 7,400 µg/L. With other parameters the same as in Stantec’s model, the estimated model plume length would be ~1200’.
4. Benzene at S-369 is ~2000 µg/L. This well is in the northeast corner of AOI 4, adjacent to the 26th Street property line. Offsite wells to the northeast of S-369 (ARCO-1 and ARCO-2) show elevated concentrations. DEP recommends that Evergreen install and sample offsite wells to the east and southeast of S-369. This work should be part of the site-wide fate-and-transport study. The property on the east side of 26th Street is developed.

5. As previously mentioned, DEP is willing to assist Evergreen by contacting PennDOT and other property owners to request their cooperation with granting offsite access for monitoring well installations.

Inhalation Pathway

6. Potential vapor intrusion at 3401 South 26th Street (at Hartranft Street) should be evaluated.
7. Please document conditions at the time of air sampling, including indoor and outdoor temperatures, weather conditions (e.g., wind, precipitation, barometric pressure changes), and building characteristics (HVAC operation, ventilation, etc.).
8. As noted in the report, some reporting levels in the indoor air sample analyses exceeded applicable screening values. If Evergreen will be using risk-based screening values rather than occupational criteria (PELs), then those exceedances will need to be addressed.
9. DEP recommends that Stantec and Evergreen obtain the full analytical data packages for indoor air sampling and report the MDLs and the PQLs pursuant to §250.4(c)(2). For example, some nondetect results for 1,2-dibromoethane and naphthalene exceeded screening values. If the PQLs are greater than the screening values, then these exceedances would not be a concern. To attain a standard, concentrations for screening are not required to be less than PQLs (§250.701(c)).
10. The results of the outdoor air testing were not discussed in terms of how they will be evaluated, such as in a risk assessment.
11. For future outdoor air sampling, DEP recommends the collection of a sample at an upwind location for context.

Tables, Figures, and Appendices

12. It would be helpful to show groundwater elevations in the Figures 2-5–2-8 stratigraphic profiles.
13. As noted in past RIR comments, a PaGWIS radius search does not generally include all wells in the database because many wells do not have latitude/longitude coordinates (Appendix N).

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