

CASE STUDY: PADEP ACT 2 Environmental Cleanup
Special Industrial Area (Benzene)

Project Description: Brownfield Redevelopment
Three Contiguous Industrial Properties Scheduled for Demolition

Scope of Services: AET was contracted by a Redevelopment Authority to provide professional engineering and environmental consulting services during the environmental remediation and demolition of three industrial properties. AET served as the remediation manager and provided investigative services, development of technical specifications and work plans, and project oversight during the remediation/demolition process. AET also coordinated the contractor selection, bid review and the payment approval process. Phase I/II Environmental Site Assessment findings confirmed the sites to contain the recognized environmental conditions (RECs) listed below.

AET's Investigative Approach/Sampling/Tools:

- 1. Asbestos:** ACM was identified by AET's licensed asbestos building inspector and an asbestos work plan for removal designed by AET's State Licensed Asbestos Project Designer. Removal was completed by a licensed asbestos contractor and AET provided asbestos project monitoring/final air clearance.
- 2. Underground Storage Tanks (USTs):** Two USTs were identified on historical fire insurance maps. An additional 5 USTs were identified by GPR and field excavation. All USTs were removed/closed. Contaminated soil was removed to the extent feasible. Benzene levels exceeded the soil-to-groundwater pathway standard of 0.5 mg/kg.
- 3. Hazardous Materials:** Drummed oils, open containers and universal wastes were assessed, characterized, packaged, and removed for disposal or recycling. PCB florescent light fixtures/ballasts were also sent for recycling.
- 4. Floor Drains:** The sites had machine shops, warehouses and other operational/maintenance high risk spill areas. VOC and SVOC levels in migration pathways as well as the soil/sediments below the concrete floor slab and within catch basins were evaluated.

PADEP Act 2 Requirements:

- A Notice of Intent to Remediate (NIR) was submitted to the DEP.
- A Baseline Remedial Investigative Report was prepared to establish a reference point for remaining contamination and submitted to the DEP.
- A Soil and Groundwater Assessment Plan was implemented for VOCs and SVOCs at the site.
- Four monitoring wells were installed to obtain groundwater quality data for the site.
- The client entered into a Consent Order and Agreement (CO&A) with the DEP.

CONCLUSION: The site received Act 2 Liability Protection under the Specific Industrial Standard Provisions. Vapor intrusion modeling was conducted to evaluate potential impact of the concealed VOC sources in the soil and groundwater on future site use. The majority of the site was paved and used as a parking lot for a soon to be constructed library building adjacent to the site. The library was planned as on-grade construction including the use of a passive vapor barrier and venting system during construction to further minimize VOC impact.

When you need professional industrial hygiene advice email Alan Sutherland, CIH, CHMM at a.sutherland@aetinc.biz or call 610-891-0114. We provide nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services on our website www.aetinc.biz.

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