

Passyunk Plant and Porter Station, Philadelphia, PA Site Characterization, Off-Site Investigation and Remedial Design

Client: Philadelphia Gas Works

SSi has been providing Philadelphia Gas Works (PGW) with strategic environmental consulting services since 2004. Services include liability risk analysis and prioritization, remedial action evaluation and planning, cost estimating, site investigation planning and implementation, remedial design/construction, and the evaluation of current operations.

After reviewing conditions in 2009 SSi made the recommendation to study soil gas conditions at the PGW Passyunk Facility and adjoining Porter Station in order to further evaluate the groundwater to soil vapor intrusion migration pathway for volatile organics that were identified in groundwater at both on- and off-Site locations. SSi conducted soil gas sampling and analysis at locations along the property boundary in order to evaluate current conditions and update the Soil Gas to Indoor Air Pathway model for the site. As a result of the evaluation, SSi *determined* that further study of the residential area located adjacent to and hydraulically downgradient from the PGW property was necessary. SSi *installed* twenty-two soil gas sampling points throughout the residential neighborhood and conducted soil gas sampling and analysis in the fall of 2012 and the spring 2013. SSi also installed and sampled two soil gas monitoring points located inside the Porter Station Building used by PGW. Evaluation of the data indicated that no compounds associated with the Site were detected in soil gas samples at or above their respective regulatory limits. SSi then evaluated appropriate technologies to mitigate the off-site migration of groundwater impacted with volatile organics. After pilot testing was conducted in 2014, SSi designed an air sparge and soil vapor extraction AS/SVE system to remove volatiles from the groundwater prior to migrating off-Site. The system design consists of 38 air sparge wells and nine soil vapor extraction wells installed along the eastern border of both PGW properties. SSi currently provides engineering oversight for system operation and maintenance.



Project Highlights

Assisted with Community Outreach efforts to local residents prior to conducting soil gas investigation in neighborhood.

- Vapor intrusion evaluation performed in the active support building to evaluate potential impacts to workers.
- Evaluations of remedial alternatives.
- Design of the selected remedial alternative
- Turn-key services provided including remedial investigation, remedial alternative evaluation, remedial design, permitting support and remedial construction engineering oversight.

