

An Overview of the Former Harrison Gas Works Site Remediation Project

Project Background

Prior to the widespread availability of natural gas, gas was “manufactured” through a process of heating coal in specialized ovens. These facilities, called Manufactured Gas Plants (MGP), were common in many urban areas of the United States during the late nineteenth and early twentieth centuries. Manufactured gas was used for residential and street lighting and cooking. The manufactured gas process produced byproducts, such as coal tar and other chemicals that were used in the chemical, dye and pharmaceutical industries. An unintended consequence of the MGP industry was the effects from coal tar and various byproducts to the environment.

The Town of Harrison in Hudson County has a former MGP Site, approximately 32 acres in size, located at 2000 Frank E. Rodgers Boulevard. Public Service Electric and Gas Company (PSE&G) and its predecessor companies acquired portions of the Site between 1884 through 1924, when construction of the MGP began. It operated as a base load facility from 1926 until approximately 1963, when it was converted to peak shaving status. The facility was retired from service after the winter of 1986 – 1987, and decommissioned in 1992. Buildings and structures were removed to grade surface, but former MGP foundations, pipes and other remnants remain in the subsurface.

In 1998, PSE&G began remedial work to define and begin addressing the extent of impacts to both soil and groundwater in accordance with the regulations of the New Jersey Department of Environmental Protection (NJDEP). PSE&G subsequently retained a Licensed Site Remediation Professional (LSRP) for the Harrison Site to provide oversight of the Site’s remediation.

Since 1999, PSE&G has installed and sampled regularly more than 60 onsite and off-site monitoring wells to determine the MGP impacts to groundwater. At PSE&G’s request, NJDEP first authorized in 2001 and then updated in 2002 a Classification Exception Area (CEA) and Well Restriction Area (WRA) for the entire Site. The CEA identifies where groundwater does not comply with NJDEP standards. A WRA restricts the use of groundwater in a CEA for potable use.

PSE&G performed Interim Remediation Actions (IRMs) in 2004, 2008, 2009, 2010 and 2012. These IRMs



Area of remediation completed in 2018.

included: removal of some of the underground structures from the former MGP that may act as conduits for mobilization of coal tar materials; removal of some areas of coal tar and contaminated groundwater; establishment of deed notices to record and identify the location of contaminated soils protected by engineering controls; installation of 55-65 foot sealed sheeting; and soil removal activities along the Site’s shared border with the Passaic River.

During 2016, additional Site investigation was performed to characterize geology and groundwater flow as part of pre-design planning.

The Site is in use by the following PSE&G units and operations, which are continuing during remedial work:

- PSE&G Harrison Gas Distribution headquarters;
- PSE&G Harrison Appliance Service headquarters;
- PSE&G Fleet Maintenance Center;
- PSE&G natural gas Metering and Regulating station; and
- An electric substation for the nearby Red Bull Arena.

Remediation Work Completed in 2018

In 2018, PSE&G and its contractor successfully completed the objectives of a pilot remediation study.

The focus of the study, which took place on 1.8 acres of the Site, was to mechanically and chemically stabilize impacted soils at depth to render the contaminants immobile. This process is called In Situ Stabilization-Solidification (ISS), and involved mixing

of soil in place, below ground, with stabilizing agents such as Portland cement and slag.

An estimated 24,300 tons of impacted soil, primarily historical fill, was removed to a depth of approximately 7-13 feet below ground surface. Excavated soil was transported to facilities to be treated and beneficially reused. Below ground remnants of MGP structures, including timber piles, also were removed. When ISS was completed, the area were backfilled with clean fill and stone.

The ISS remedy complies with all NJDEP goals and objectives for addressing contamination and was selected because it is protective of human health and the environment, and is the least disruptive to the area.

Information from the pilot study will be used to finalize the Site's remedial action work plan for the proposed approach for remediating the remainder of the property.

Work Planned for 2019

Remediation of the entire Harrison former MGP site is required by the New Jersey Department of Environmental Protection (NJDEP). Planning for the next phase of remediation has already begun.

Pre-design field work, such as additional data collection through soil borings, is scheduled to begin in January 2019 and continue through March. The next full phase of remediation work is expected to begin in the fall of 2019.

About the MGP Constituents

The source of the MGP materials is the former MGP operations. Some by-products, including coal tar and oils, were found in the soil and groundwater at and near the site. Compounds of concern include benzene, toluene, ethylbenzene and xylene(s) (or BTEX) and polycyclic aromatic hydrocarbons (or PAHs).

Potential concerns from MGP contaminants are associated with ingestion (eating) of the affected soil or drinking of the affected groundwater. The parking lot has served as an effective barrier to the materials in the soil. Groundwater in the area is not used as a potable water source and therefore is not a concern.

For More Information

PSE&G is committed to open communications. Information about the project is being shared with Town of Harrison officials, Site neighbors and PSE&G personnel.

Questions?

Visit the Project website: www.HarrisonMGP.com
Call the Project Information Line at (855) 356-2383
Email us at comments@HarrisonMGP.com