

# Optimization of Groundwater Treatment System

Turnkey Design, Construction, OM&M

## Highlight

Replaced a 30,000-square-foot treatment system with another that was a fraction of the size, thereby reducing the client's operations and maintenance costs by 75%

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Assisted the client with a successful petition to the regulators to cease all active groundwater recovery operations in favor of periodic passive NAPL recovery, resulting in additional cost savings

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NPDES permit with its costly attendant sampling and analysis requirements was eliminated

## Project History

### Former Manufactured Gas Plant Maryland



#### Regulatory Agency/Program

Maryland Department of the Environment (MDE)/Administrative Consent Order

#### Constituents of Interest

Coal Tars, NAPL

#### Project Description

The project site is a 72-acre former Manufactured Gas Plant (MGP). The presence of coal tar, NAPLs and dissolved phase constituents in groundwater from prior plant operations had necessitated construction of a groundwater recovery and treatment system. Due to high costs associated with operation of this system, the client retained KEY to design and construct a replacement system that would meet the current NPDES permit requirements, at a much reduced operation and maintenance cost.

Based on our groundwater treatment experience at other MGP/coal tar sites, KEY proposed a streamlined treatment approach, relying primarily on carbon as a combined adsorption/filtration media, to completely replace the existing system. KEY provided operations and maintenance for the new system. Subsequently, KEY and our client were able to secure regulatory approval of passive NAPL recovery, in lieu of ac-

tive groundwater treatment. KEY now performs passive recovery operations, maintenance and monitoring.

#### Activities Performed

- Process system design
- Materials and equipment procurement
- System construction
- Operations, maintenance and monitoring
- NAPL mobility assessment and passive recovery petition report