ENVIROGEN TECHNOLOGIES

A Lifecycle Performance Company

Case Study

Fluidized Bed Reactor System for Manufactured Gas Plant Groundwater

Challenge

PSEG required a complete groundwater treatment system utilizing a Fluidized Bed Reactor (FBR) to treat the groundwater at a manufactured gas plant (MGP) remediation project in New Jersey.

This full-scale project followed six months of treatability and pilot testing in which groundwater from the site was treated by both DAF and FBR. Testing showed degradation of target compounds in excess of 95%.

Solution

The work was conducted in two phases. First, a design phase was conducted in which our team worked with PSEG's staff and consultants to produce 80 design drawings and associated detailed specifications for the treatment facility. The second phase involved completing the detailed design and providing all equipment which included a 14-ft diameter FBR with oxygen supply, instrumentation and controls for the entire new facility, groundwater extraction, influent equalization, free product removal, DAF unit, 25-foot diameter clarifier, sand filter and optional carbon-polishing before discharge to surface waters. Additional responsibilities included erection of the groundwater treatment building and equalization tankage.

Results

The project also followed an extensive economic and technical evaluation of alternative technologies by PSEG and its consultants. This study showed savings of over $10 million versus the next best alternative over the life of the project.

The System has been operating for many years now, consistently achieving its performance goals for biological destruction of BTEX and PAH contaminants. With its performance record and demonstration of cost savings over conventional technologies, it is an excellent example of Envirogen's ability to execute projects utilizing innovative technologies.

2627 Chestnut Ridge Rd., Suite 260
Kingwood, TX 77339

877-312-8950
www.envirogen.com
info@envirogen.com