

CASE STUDY - REMEDIATION SYSTEM MONITORING

Client: State Contract, Virginia

Workscope: Operation and maintenance of a on-site groundwater extraction and treatment system. Sampling and analysis of on-site groundwater contaminant plume.

Project Team:

Matt Richardson –Project Manager/ Project Geologist
Jimmy Mackey- Lead O&M

Goal: Operate groundwater extraction system to increase system performance and achieve maximum removal efficiency of arsenic, chromium, and pentachlorophenol (PCP). Maintain hydraulic control of the on-site contaminant plume to prevent migration of contaminants towards Godwin's Mill Pond (City of Suffolk drinking water source).

Regulation: EPA Superfund Site

Problem:

The facility ceased wood treating operations in 1991. The ROD was signed by EPA in September 1991. A 1996 amendment to the ROD included the operation of a groundwater extraction and treatment system. The previous wood preserving facility was required to complete remediation practices in order to treat contamination of PCP, chromium, and arsenic impacting the groundwater.



Project Value:
\$54,000/year

Setting:

The site encompasses 7.3 acres and consists of the Saunders Supply Company and Kelly Nursery properties. The site was a former wood treatment facility and is currently utilized as a wholesale lumber yard.

Solution:

Site-wide groundwater monitoring is conducted on a semi-annual basis. The monitoring includes 11 groundwater monitoring wells and four active recovery wells. Analytical data is used to calculate concentration trends and mass removal. The groundwater extraction system consists of four recovery wells, each with individual recovery pumps and controls. Treatment requires groundwater to move through a series of reaction tanks, filters, and activated carbon vessels, removing COCs to an acceptable level before discharge. Routine system O&M and necessary system adjustments are performed weekly. Approximately 8,500 gallons of groundwater are treated per month.