



PROJECT BRIEF

Superfund Landfill Builds Leachate Treatment System to Remove Lead and Other Heavy Metals per US EPA Consent Order

PROJECT OVERVIEW

At a major landfill and Superfund site in Pennsylvania, the client installed SAMCO's innovative landfill leachate treatment system to bring contamination down to stringent levels mandated by the US Environmental Protection Agency (US EPA).

OBJECTIVE

Remove lead and other heavy metals from Superfund landfill site groundwater/leachate to meet stringent discharge contamination levels per US EPA consent order.

SCOPE OF SERVICE

The client worked with SAMCO to develop an effective solution that comprised detailed design/engineering, treatability studies, controls integration, system fabrication, field installation, commission, startup, and ongoing operation, maintenance and system support.

CHALLENGES

- Stringent US EPA discharge limits
- Complex wastewater with diverse contaminants
- Varied flow during construction and operation
- Budget constraints/ROI
- Fast-track project, concept to completion
- Minimal operator availability

SOLUTION

In order to meet US EPA wastewater regulations, the client utilized SAMCO's technology to precipitate out heavy metals, implement proper sludge handling and dewatering, and treat contaminated groundwater with superior filtration and ion exchange. To save the client 30% in project costs and deliver a solution in half the time, SAMCO proposed and implemented a temporary skid-mounted system to manage peak flows during the remedial construction phase, followed by a permanent enclosed trailer-mounted system for ongoing operations. A prepackaged design enabled fast-track, turnkey project delivery that included programmable logic controllers (PLC), automating flow, temperature, pressure, and resistivity monitoring from a remote location.

TECHNOLOGY

- Project deliverables and equipment included:
- Equalization tank and chemical feeds
 - Inclined plate clarifier
 - Ion exchange
 - Air compressor
 - Enclosed trailer with modular add-on capabilities
 - Influent pumps
 - Reaction tanks unit
 - Multimedia filters
 - Sludge handling and filter press
 - PLC controls/remote telemetry

OVERVIEW

Industry
Chemical

Location
Pennsylvania, US

Objective
Treat Superfund landfill site groundwater/leachate to meet stringent discharge levels per US EPA regulations

Solution
250 GPM Temporary & 10 GPM Permanent Landfill Leachate System