PROJECT BRIEF

Flexible Packaging Manufacturer Cuts Pollutant Concentration by 50% with Innovative SAMCO Wastewater Treatment System Upgrade

PROJECT OVERVIEW

When a major flexible packaging manufacturer needed to bring its wastewater treatment system (WWTS) into compliance, SAMCO engineered an efficient treatment solution upgrade that optimized recycling and reuse rates despite a complex and variable combined discharge stream.

OBJECTIVE

Upgrade WWTS per compliance guidelines and improve pollution prevention (P2) efficiency in treating for complex contaminants, including:

- Oil and grease
- Heavy metals
- Suspended solids
- Starch paste

SCOPE OF SERVICE

SAMCO provided design and engineering services, including a detailed plant survey, treatability and waste minimization studies, project estimation, concept development, and delivery of custom process plans for WWTS upgrade.

CHALLENGES

- Complex wastewater streams with physical, biological, and chemical contaminants
- Stringent testing limits for biochemical oxygen demand (BOD) and chemical oxygen demand (COD)

SOLUTION

In line with the client's goals and plant survey data, SAMCO delivered a WWTS upgrade concept designed to minimize waste, reduce contaminant loads, and scale to accommodate future needs. The innovative design optimized the company's return on investment by incorporating source segregation, allowing the plant to recapture materials for reuse and recycling and reducing wastewater discharge by 30%. To treat the firm's complex contaminant streams, the concept proposed a range of treatment processes including heavy metals precipitation, suspended solids flocculation, clarification, dewatering, and biological treatment. By efficiently targeting treatment to isolated streams, the upgrade plan reduced pollutant concentration by 50%. Additionally, the modular concept included programmable logic controllers (PLC) and remote telemetry to minimize operational and maintenance demands.

TECHNOLOGY

Plant design concept included:

- Equalization and reaction tanks
- Chemical feeds
- Clarifier system
- Biological system
- Sludge handling/filter press
- Influent and recycle pumps
- PLC controls

OVERVIEW

Industry
Paper

Location
South Carolina, US

Objective
Upgrade WWTS per stringent BOD & COD testing limits; improve P2 efficiency

Solution
8,000 GPD WWTS Upgrade Design Concept

Need help bringing your water to industry compliance standards? Is contamination an issue?
Contact us today at SamcoTech.com • askengineers@samcotech.com • (716) 743 9000