

Microelectronics



SAMCO

Separation from the ordinary

PROJECT BRIEF

Fortune 500 Fiber Optics Manufacturing Facility Utilizes SAMCO's Wastewater Treatment Plant Design to Meet Stringent Discharge Limits

PROJECT OVERVIEW

When a Fortune 500 fiber optics manufacturing facility in New York was challenged to meet rigorous discharge quality regulations, they consulted SAMCO for an innovative solution.

OBJECTIVE

Provide the customer with a detailed design that reduces wastewater pollution and enables wastewater recycle/reuse including:

- Superior removal of total suspended solids (TSS)
- Total dissolved solids (TDS) to 500 ppm
- Fluorides to 3 ppm
- Chlorides to 250 ppm

SCOPE OF SERVICE

The client worked with SAMCO to develop an effective solution that comprised a detailed plant survey; treatability, P2, and waste minimization studies; concept development; project estimation; and process design/project engineering.

CHALLENGES

- Complex contaminants and varied flow
- Stringent discharge limitations
- Plant expansion with added wastewater volume
- Critical application requiring high uptime
- Reduce O&M costs
- Fast-track project, concept to completion

SOLUTION

Achieving up to 70% recycle/reuse, and up to 95% waste reduction, SAMCO's design provided the client with plans for a high-recovery wastewater treatment plant that utilized fluoride precipitation, suspended solids coagulation, high-recovery reverse osmosis (RO), and sludge handling/dewatering to treat waste gas scrubber blowdown water for quality-compliant discharge. RO evaporation maximized client's ROI with a one-year payback via energy savings and waste reuse, while a modular design enabled quick and easy installation with guaranteed performance and future add-on capabilities. Clean-in-place technology simplified membrane maintenance, saving the client both time and cost, and to compensate for minimal operator availability, SAMCO included programmable logic controllers (PLC) with remote telemetry that automated monitoring of flow, temperature, pressure, and resistivity.

TECHNOLOGY

Project concept and design included:

- Equalization tanks
- Influent pumps
- Chemical feeds
- High-recovery RO filtration
- Evaporation system
- Sludge handling/filter press
- Recycle pumps
- PLC Controls with remote telemetry

OVERVIEW

Industry

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Location

New York, US

Objective

Reduce pollution (P2) and waste in highly contaminated wastewater to meet rigorous discharge quality regulations

Solution

30 GPM Wastewater Treatment Plant Design

Need help bringing your wastewater quality into compliance? Is contamination an issue? Contact us today at SamcoTech.com • askengineers@samcotech.com • (716) 743 9000