

# Electropolisher's Wastewater System Shines Again

## The Challenge

When the new owner of an electropolishing company discovered their wastewater system was not functioning within its design parameters, it jeopardized their plans for expansion. The addition of larger process tanks and new customer processes required a reliable and compliant wastewater treatment system. The facility's wastewater pretreatment discharge permit also required renewal. Seeking a solution, the facility managers turned to their Hubbard-Hall representative for assistance.

## The Approach

### Site Assessment and Treatment Plan Development

Hubbard-Hall's **AquaPure** team identified the need for significant system upgrades during their initial site visit. Their goal was to establish a treatment process that could function effectively within the existing 1,000-gallon batch system while meeting city discharge requirements.

#### Key actions included:

- Contacting the city to verify the applicability of the existing pretreatment discharge permit limits.
- Conducting a treatability study to determine the optimal coagulants, flocculants, and pH range for wastewater treatment.
- Testing multiple treatment methods to identify the most effective approach.

## Executive Summary

**A newly acquired electropolishing company worked with Hubbard-Hall to upgrade its wastewater system for compliance and expansion.**

- The existing system was underperforming, risking expansion plans.
- Hubbard-Hall conducted treatability studies and tested solutions.
- Upgrades included dosing pumps and an indexing filter.
- The optimized system met compliance and enabled growth.

## Treatment Options and System Recommendations

Two treatment plans were developed based on bench testing:

- Plan A: pH adjustment with sodium hydroxide and a combination of two clay blends—**AquaPure Quick Drop 631 and 651**.
- Plan B: pH adjustment with sodium hydroxide, **AquaPure Cal 40** (liquid coagulant), and **AquaPure AN Clear** (anionic polymer).

System upgrades were recommended to support these plans, including:

- A pump and pH meter for accurate chemical dosing.
- An indexing filter for efficient dewatering, leveraging gravity to separate solids and water.
- Trials of both treatment plans were conducted, with the **AquaPure Cal 40** and **AquaPure AN Clear** combination proving most effective.

## The Outcome

The **AquaPure** team's approach resulted in a wastewater treatment system that:

- Met all city compliance requirements for discharge.
- Operated efficiently with the recommended upgrades.
- Allowed the company to proceed with expansion plans, enhancing its service offerings and production capabilities.

This success underscores Hubbard-Hall's expertise in delivering tailored wastewater treatment solutions that support business growth and regulatory compliance.

“Hubbard-Hall was extremely knowledgeable and professional. With the treatment plan they created now in place all of our issues have been solved.”

WWT Operator

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