NYSP2I Evaluates Wastewater and Hazardous Waste Reduction Opportunities

Located in Huntington Station on Long Island, E. C. Sumereau & Son (Sumereau) specializes in providing specialty platings and anodizing for military, aerospace, and electronics industries. The company caters to a wide range of precision-based applications, which include plating for prototype development.

Challenge
Sumereau generates wastewater, which is primarily comprised of rinse water from the various metal finishing operations. Approximately 20,000 gallons/year of wastewater is shipped off site annually as hazardous waste (F006). The high costs associated with the disposal of wastewater prevents expansion of production and company growth. The quantity of waste defines Sumereau as a Large Quantity Generator. Sumereau would like to explore opportunities to reduce the amount of hazardous waste generated along with the costs associated with managing and disposal of the waste.

Solution
Sumereau requested that the New York State Pollution Prevention Institute (NYSP2I) explore cost effective opportunities to reduce hazardous waste from the plating and anodizing operations. NYSP2I conducted a two-day on-site assessment where the plant layout, production process, plating tanks, and tank volumes were all documented to better understand the current, baseline situation. NYSP2I then identified opportunities for hazardous waste reduction, including separation of non-hazardous and hazardous waste streams, reducing the amount of rinse water utilized in the cleaning operation, and evaluating distillation, membrane, and ion exchange technologies for water recovery. After the opportunities were evaluated, NYSP2I calculated the expected impacts on hazardous waste amounts and economics.

Results
NYSP2I identified several options for Sumereau to consider. The simplest and most cost effective option was the purchase of fine mist spray nozzles that utilize less water, but rinse the parts as effectively as the current spray rinse process. The improvement option with the highest projected savings was the implementation of separate ion exchange systems on four lines in the aluminum processing area which would potentially reduce hazardous waste by 50%. The estimated payback to install ion exchange is 1 year.

Testimonial
"Thank you to NYSP2I for the outstanding support providing expert advice to reduce the amount of hazardous wastewater generated along with cost-reduction initiatives associated with the managing and disposal of the waste. NYSP2I provided valuable insight into the implementation of cost-effective wastewater solutions to protect the environment. We are grateful for the outstanding support and the opportunity to partner with NYSP2I."  - John LaRocca, President; E.C. Sumereau & Son

Ion Exchange to Recycle Rinsewater

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