



Case Study: AquaPure®

Removing chrome, cutting costs in wastewater treatment nets a hole-in-one

The Challenge

Chromium has many industrial and decorative uses, but in wastewater, it can be a big problem. Failing to meet wastewater requirements can lead to steep fines and facility shutdowns. For Southern Metal Processing (SMP), a recent permit change meant that they were working 24/7 and paying for daily off-site testing in a desperate effort to meet new discharge limits.

“It was the equivalent of asking Tiger Woods to take his game from the 60s to shooting an 18 on 18 holes in just 90 days,” says SMP’s VP of Operations. “We were not a problem operator; we were solid, but the game was changing.”

That’s when they sought help from Hubbard-Hall with its issues.



Before and after: SMP wastewater as seen prior to and after treatment with Hubbard-Hall’s AquaPure. Hubbard-Hall was able to help SMP reduce chrome to below 1ppm and make copper levels undetectable.



Treating
the Hard to Treat

Executive Summary

Hubbard-Hall was called in to help a company adjust to a new, stricter wastewater permit standard.

- On site analysis revealed several unseen opportunities
- Recommended chemical regimen reduced chrome to below 1ppm
- Manufacturer now meets all regulations.
- Led to \$500,000 annual savings in operating costs

The Approach

Hubbard-Hall dispatched an Industrial Wastewater Treatment Specialist to visit SMP. Over several days, we performed numerous bench tests on the system and were able to identify a number of critical factors impacting their water treatment system's ability to generate the desired results. SMP appreciated that issues critical to their effluent - which no other group had identified - were now being brought to the company's attention.

Hubbard-Hall's initial recommendation included AquaPure HQ, a reducing agent, followed by AquaPure T-500 precipitant and Aquapure I-300, an iron coagulant. Together, these pulled the chrome from the wastewater, along with other heavy metals such as copper.

Along with some system design changes, SMP soon found they "could shoot that 18" and quickly had positioned themselves to meet the initial and immediate requirement goal to keep operating.

The Outcome

With chrome at under 1 ppm and copper undetectable, SMP was able to dial back on the amount of testing it was doing. Additionally, Hubbard-Hall's new regimen more than tripled maximum throughput, letting the company scale back operating hours and costs by \$500,000 annually.

"Not only did we meet those hurdles, but we began performing at a level that let me sleep a lot better at night," the SMP VP says. "Now, together, we continue to work on the next important hurdle, honing changes in upstream processes and wastewater treatment to improve overall cost/gal."

In addition to meeting goals, SMP finds itself with a new, trusted partner. "If they were to tell me to paint the wastewater building purple because it would help with water treatment - I would," joked a very happy VP.

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Vice President,
Southern Metal
Processing

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