AQUACHEM INC.

Wastewater Treatment Made Simple®

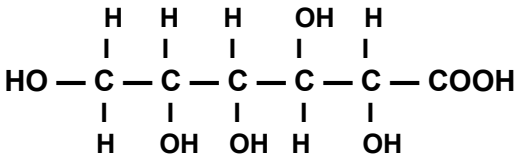
TECH NEWS

PRE-RECORDED AUDIO & VIDEO MEDIA, ALABAMA

THE CHALLENGE

A manufacturer of audio and video prerecorded media in southeastern US generates a waste stream that contains chelated metals. The main metallic components in the waste are nickel and chromium, both present at concentration in the range of 30 to 70 ppm and the chelating agent is gluconic acid, shown below.

Gluconic Acid



The facility was using a 1200-gallon batch treatment involving chromium reduction at pH of 2-3. Then the pH was raised to about 9 with caustic followed by DTC and a flocculent. The batch took 4 -6 hours to process and the treatment did not meeting discharge requirements of 0.5 ppm for nickel.

THE SOLUTION

The batch is currently being treated directly with AQUASIL® and takes about 45 minutes to process. Treated water is very clear and has a pH of about 10. The treatment eliminated the need for caustic, DTC and flocculent. It is saving operator's time and meeting discharge requirements for all metals. Solids are easily dewatered and generated waste passes TCLP test. Metal analysis of treated water is shown in Table below.

Parameter	Discharge Limits (mg/L)	AQUASIL® Treatment (mg/L)
Cadmium	0.02	< 0.01
Chromium Total	0.50	<0.50
Chromium (VI)	0.20	< 0.05
Nickel	0.50	0.135
Silver	0.05	< 0.01

The treatment generates less sludge and enhances filter press operation. The facility has been consistently meeting its municipal discharge standard since the AQUASIL® treatment was implemented.

Great Chemistry At Work ™

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