

New Heavy Oil Production Facing Difficult Water in California

As heavy-oil production continues to move into new areas, operators in California face more challenging levels in produced water. However, despite the high hardness and total dissolved solids (TDS) being found there, Eco-Tec's RecoFlo® ion-exchange technology is demonstrating how it can treat this difficult water, in economical ways.

Currently, Eco-Tec systems are successfully treating produced water in the region, yet new water samples from Central California containing up to 2,600 ppm and 14,000 TDS have recently been collected and tested at automated pilot plants. Levels such as these are known to be quite high; nevertheless, hardness of less than 1ppm has been achieved through Eco-Tec technology – a major boost for operators in this California area.

“We’ve been very pleased by the positive feedback by clients and other interested parties in California,” said Mehdi Surury, Eco-Tec’s sales manager for the region. “The capacity of our systems to efficiently handle such unusually high-hardness waters, without much waste and need for acid to regenerate softeners, is promising.”

What’s also welcome news for oil producers dealing with this difficult type of water, is the ability of Eco-Tec’s softeners to achieve <1ppm without the need for hydrochloric acid (HCl) and sodium hydroxide (NaOH), also known as caustic soda, which is commonly used to regenerate the resins in weak-acid-exchange (WAC) softeners. Instead, the Eco-Tec system regenerates with only salt, eliminating many safety concerns and costs associated with handling acid and caustic. As well, the technology provides a 40%–80% reduction in salt and waste from regeneration compared with conventional softeners.

Regarding the ongoing progress being made, a manager representing a plant in the area said that the difficult produced water being found in Central California can serve as a benchmark for the region. Consequently, success in purifying it through recently installed Eco-Tec systems and pilot studies represents a major step forward for produced-water treatment everywhere.



Eco-Tec staff putting final touches on equipment.

Contributed by Eco-Tec

(As seen on WaterWise - Produced Water Edition, Fall 2011)