

MOLEAER 200 XTB LOWERS COST OF TREATING OILY WASTEWATER

Nanobubble generator cleans up 2-million gallon oil barge

TerraHydroChem, a Texas-based company specialized in cleaning and treating hazardous wastewater, was faced with a very difficult remediation project that involved a large two-million gallon oil barge flooded with heavy oil and septic water. The project required TerraHydroChem to remove all the contaminated fluids from inside the barge, then process the wastewater into separate constituents so that all the oil could be recovered and the water reused for the remainder of the cleaning operation.

TerraHydroChem's solution combines a unique set of chemistry and techniques, with an adequate supply of oxygen and a large interfacial surface area generated by fine bubbles, to effectively separate oils from water. The smaller the bubbles, the more effective the process. TerraHydroChem needed a system that could saturate the waste streams with very small oxygen bubbles to provide the most oxidization potential for the company's unique chemistry. However, the heavy oil content and solvents in the wastewater, combined with the shallowness of the tanks, limited the effectiveness of typical aeration equipment. Additionally, the TerraHydroChem team needed a reliable system that would run non-stop and require no maintenance or repair once submerged in the oily wastewater.

Client: TerraHydroChem
New Braunfels, TX (USA)

Type: Oil & Water Separation
Wastewater Treatment

Barge Size: 2 million gallons

Unit Type: 200 XTB

Installed: October 15, 2016



2-million gallon oil barge flooded with heavy oil and septic water

TerraHydroChem selected the Moleaer 200 XTB Nanobubble Generator™ to provide their aeration. The generator was integrated into a closed loop system, inline between the frac tanks and the recovery tank (see Figure 1). Not only was the installation completed in 15 minutes, but the dissolved oxygen (DO) level rose to an impressive 5 ppm - unprecedented for this type of oily wastewater. TerraHydroChem was also able to use their own existing pump without having to add any additional horsepower (HP) to the system, an improvement from traditional methods that typically required the addition of at least a 25 HP blower. This energy-free solution helped lower TerraHydroChem's operational costs and, as a result, the company has decided to incorporate Moleaer's innovative technology into their packaged systems.

Figure 1: Schematic of TerraHydroChem Oil Barge Project

