



## MC MX 8-3455 MultiSweet® Sulfide Scavenger

### MultiSweet® Scavenger Treatment for H<sub>2</sub>S in Sales Oil Keeps Rail Cars Moving.

Location: Alberta

#### Overview

A large midstream energy company in Northeast Canada region was having problems with high H<sub>2</sub>S levels at its oil terminals, where some 240 rail cars are loaded daily with sales crude that has levels of H<sub>2</sub>S varying from 5 to 80 ppm in the liquid phase. In order to meet the refinery’s strict requirement, H<sub>2</sub>S must be reduced to 0 – 20 ppm in liquid phase. In this case, an MEA-Triazine scavenger cannot be used because the bi-product from the scavenging process has potential to cause deposition and under-deposit corrosion issues in the refinery distillation towers. The customer contacted Multi-Chem for an alternative solution to the problem.



Multi-Chem carefully evaluated the systems and the crude oil, then recommended MultiSweet® MX 8-3455 scavenger to treat the H<sub>2</sub>S problem. Formulated as an alternative to treating crude oils with MEA-Triazine, MX 8-3455 is an MMA-Triazine scavenger that remains in solution throughout the refinery process, and yields a much more volatile bi-product that eliminates related deposition and under-deposit corrosion issues.

To determine its efficiency in removing H<sub>2</sub>S, MX 8-3455 was tested extensively in the laboratory by measuring the H<sub>2</sub>S in the liquid phase with an auto-titration method. Commercial application then proved that using 600 ppm of MX 8-3455 in sour crude successfully reduced H<sub>2</sub>S content in liquid from 45 ppm to 10 ppm in just two hours.

By reducing the concentration of H<sub>2</sub>S to an acceptable limit, Multi-Chem’s solution satisfied both the regulatory requirement for sulphur emissions and the customer’s requirement for safe operation, allowing the rail loading process to continue and expanding market options for sale of the crude oil.

CHALLENGE	SOLUTION	RESULT
<p><b>Strict environmental requirements</b> required that high levels of H<sub>2</sub>S in rail cars loaded with sales crude be reduced to 0 – 20 ppm in liquid phase without use of MEA-Triazine scavenger.</p>	<p><b>Treatment with MultiSweet®</b> scavenger MX 8-3455 provided an MMA-Triazine scavenger that is faster, more volatile, and remains in solution longer, with no deposition or under-deposit corrosion issues.</p>	<p><b>Successful reduction of H<sub>2</sub>S</b> concentration with MultiSweet scavenger allows rail car loading to continue and expands marketing options for the sale of the crude oil.</p>

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