

A Minerals Technologies Company

CLEAR SQUITONS for complex fluids

Treating Hydrostatic Test Water - Minnesota



CHALLENGE

- Dewater pipeline from refinery to render operational before refinery shut down production due to out of service pipeline
- NPDES permit discharge criteria testing required hourly, around the clock, throughout the duration of the project due to recent local environmental incident



SOLUTION

- Mobilize large equipment package, technicians, and engineers to Minnesota from Louisiana
- Provide onsite laboratory for testing discharge parameters around the clock

RESULTS

- Safely treated and discharged all water from pipeline resulting in pipeline becoming operational in time without shutting down the refinery
- Laboratory testing proved all water discharged to environment was in compliance with permit

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CHALLENGE

A pipeline company in Minnesota conducted a hydrostatic test of its pipeline, producing approximately 320,000 BBLS of fluid for treatment. The hydrostatic test water to be discharged into a nearby field had to meet the following criteria:

| Parameter | Discharge Criteria |
|----------------|-----------------------|
| Benzene | 10 ppm |
| Ethyle Benzene | 700 ppm |
| Toulene | 1,000 ppm |
| Xylenes | 1,000 ppm |
| Oil & Grease | * |

CETCO SOLUTION

Fluid was pumped from the pipeline into three storage tanks located at the pipeline's tank farm. Fluid was then pumped from the storage tanks directly to CETCO Energy Services (CETCO), onsite equipment. On average, CETCO treated the fluid at a rate of 10 to 15 BBLS per minute. Rates as high as 20 BBLS per minute were achieved. CETCO's process discharged about 15,000 BBLS of clean water per day.

RESULTS

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| Parameter | Influent | Effluent |
|----------------|-----------|----------|
| Benzene | 3,630 ppm | < 5 ppm |
| Ethyle Benzene | 210 ppm | < 5 ppm |
| Toulene | 3,180 ppm | < 5 ppm |
| Xylenes | 940 ppm | < 5 ppm |
| Oil & Grease | 17.79 ppm | < 5 ppm |



