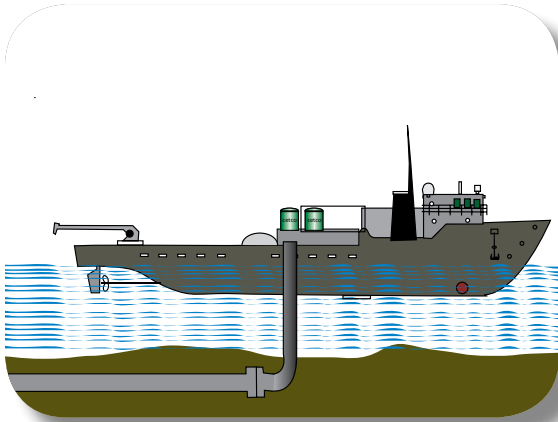




Case History: Muddled Waters

Treating Fluids During a Pipeline Abandonment Process



An oil company had three subsea pipelines in the Gulf of Mexico that were severed by mudslides caused by a hurricane. CETCO Oilfield Services, working in conjunction with two other companies, used coiled tubing to clean and abandon the three damaged sections of the subsea pipelines.

The sections of broken pipelines were buried in mud at a water depth of 200 feet. Because the pipelines could not be removed, they had to be cleaned and abandoned in place. To do this, coiled tubing was inserted through a riser with one end connected to a dynamically positioned vessel. The riser's subsea end was flanged to a connector installed on the end of the severed pipelines.

The pipeline operator did not have a permit to discharge even polished water overboard; therefore, CETCO cleaned the fluid and recirculated it to the broken pipelines. Water that would ultimately remain in the pipelines had to be as clean as possible, containing no more than 29 ppm oil and grease.

Fluid was pumped through the coiled tubing that was inserted about 2,000 feet into the pipeline sections. Return fluid flowed from the pipeline to the riser, where it was conveyed to CETCO's equipment. CETCO used its patented CrudeSorb® media to remove the oil from the circulated water. CETCO's equipment included a 200 bbl Storage Tank, a 120 bbl Sparging Separation Tank and three filtration vessel skids.

Results

Typical oil and grease influent concentrations ranged from 200 to 1,000 ppm. This fluid was initially treated in the sparging separation tank, while recovered oil was transferred to the 200 bbl storage tank. Water containing approximately 100 ppm oil and grease was pumped from the separation tank on a continuous basis and was polished using CETCO's patented media. Polished water typically contained oil and grease concentrations below 10 ppm. A total of 1,315 barrels of water were recirculated through the system and 126 barrels of oil were recovered. The fluid was cleaned until the water that remained in the pipeline sections contained less than 29 ppm oil and grease.

Volume of fluid injected	1,315 BBL
Volume sent for disposal	365 BBL
Volume of oil recovered	126 BBL



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