



Case History:

Success Through Ingenuity and Innovation: Treating 1.25 million BBL at 55 BPM



Fluid Treatment Following Testing and Inline Inspection of 103 miles of a 20" pipeline

As part of a project designed to re-commission a pipeline in the southern United States, CETCO Oilfield Services Company has successfully treated approximately 1.25 million BBL of contaminated fluid at a rate of 55 BPM.

Pipeline testing and inline inspection of the pipeline resulted in a large volume of effluent water requiring treatment. The 20" pipeline transports oil from a Gulf of Mexico coastal terminal in Empire, LA to a refinery more than 100 miles away in Pascagoula, MS.

The line had been idle since 2003 and there were concerns the pipeline may have endured damage as a result of hurricanes during the period of abandonment or that the line had physically moved during a series of mudslides. To what extent the line had been damaged was relatively unknown.

To assess the pipeline's integrity and potentially re-commission the line, the pipeline owner instructed an inspection with pumped water and inline inspection tools. CETCO Oilfield Services was then contracted to provide environmental services to process the resulting contaminated water.

Due to stringent environmental regulations, CETCO faced a number of challenges, one of which included determining how to deliver the treated water from the pipeline to the only discharge point: a bayou situated 6,800 feet from the refinery.

CETCO successfully completed the project by constructing a 12" diameter, 6,800 ft. pipeline that stretched from the treatment system to the discharge point, crossing several roads, levees and a swamp.

To assess the integrity of the line, a "stand up test" was first performed at 375 psi. Hydraulic analysis then determined the pressure levels required for tool runs. Each tool run involved pumping 210,000 BBL of water (one line fill volume). However, given the number of tool runs, flushing and testing, by the end of the project CETCO had treated approximately 1.3 million BBL of water.

In order to carry this out successfully, smart tools were required to maintain a constant speed of 1.5 mph, resulting in a fluid treatment rate of 3,300 BPH (55 BPM). The project scope accounted for a minimum of five pig runs including a final pig run to re-inject inhibited water back into the line.

Commenting on the project, Mitch Brandon, project engineer for CETCO Oilfield Services said: "This project presented us with a number of challenges but ingenuity and initiative allowed us to successfully process all of the resulting contaminated fluid from the pipeline without an environmental incident. On completion of the project, we had treated and discharged 1,277,567 BBL of water, all within the Mississippi Department of Environmental Quality water discharge permit criteria, effluent limitations and monitoring requirements."



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