



## Case History: Atchafalya Run



Equipment Layout (above) Water Polishing Vessels (below)



### CETCO Oilfield Services Process for Treating Pipeline Hydrostatic Test Water during Pigging Operations

A major pipeline company recently conducted hydrostatic testing and pigging operations on 56 miles of pipeline in south central Louisiana. The original plan for the project was to flood the pipeline with water from the Atchafalaya River and perform multiple pig runs while discharging the water from the pipeline back into the river. The company assumed the fluids returning from the pipeline would be in compliance with the state's NPDES permit. However, after obtaining fluid samples from the pipeline during the project, it was discovered that they were not in compliance with the discharge permit. This prevented the scheduled discharge of the hydrotest water into the river.

Since pigging operations were scheduled to continue, operations were delayed until a resolution for treatment and discharge of the contaminated pipeline fluids could be found. CETCO Oilfield Services was selected as the solution! As operations for the hydrotest and pigging project were being delayed, timely mobilization and setup of CETCO Oilfield Services equipment were a necessity. CETCO Oilfield Services was onsite and setup immediately, successfully completing the project within the pipeline company's schedule. The table below left illustrates CETCO Oilfield Services effective treatment of the hydrotest fluids.

Parameter	Hydrotest Fluid Maximum Contaminant Levels (ppm)	Permit Discharge Criteria (ppm)	CETCO Oilfield Services Effluent (ppm)
Total Organic Carbon (TOC)	266	50	ND (< 3)
Total Suspended Solids (TSS)	70	90	ND (< 5)
pH	6 – 8	6 – 9	7 – 8
Lead	0.095	0.010	ND (< 0.010)
Oil & Grease	< 5	15	ND (< 5)
Benzene	0.439	0.050	ND (< 0.005)
Toluene	0.081	*	ND (< 0.005)
Ethylbenzene	31.9	*	ND (< 0.005)
Xylenes (Total)	183	*	ND (< 0.010)
Total BTEX	215	0.250	ND (< 0.010)

\* Only Benzene and Total BTEX criteria specified

The company expected approximately 67,000 barrels of fluid to return from the pipeline. In order for proper pig runs to occur, it was necessary to run the pigs at a rate that would produce approximately 1,000 gallons of water per minute, or between 20 and 25 barrels of water per minute. Furthermore, since smart pigs were incorporated into the pigging operations, there could be no operational downtime during pigging in order to achieve the maximum performance from the pigs. CETCO Oilfield Services hydrotest water treatment capabilities were the key in making this project a success, as the pipeline fluids had to be continuously treated and discharged during the pigging operations.

CETCO Oilfield Services supplied the personnel and equipment capable of handling such a large-scale project. CETCO Oilfield Services achieved water treatment rates of over 20 barrels per minute. The entire project was completed successfully, with CETCO Oilfield Services treating and discharging 68,200 barrels of water into the river.

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