



Case History: Efficient Pit Remediation



Produced Water Pit



Equipment Layout

CETCO Oilfield Services Process for Treating Pit Water

A consulting firm was involved in remediating a large earthen pit, which previously contained oil and produced waters near Venice, Louisiana. The site contained approximately 17,000 barrels of produced water and accumulated rainwater. While the entire project involved many aspects, excavating the contaminated soil could not commence until the 17,000 barrels of oily surface water was removed. CETCO Oilfield Services was selected to remove and treat the water onsite for subsequent disposal into a nearby injection well.

This particular earthen pit was used for storing oil and produced water for approximately 30 years. In 1992, the State of Louisiana passed a law banning the use of in-ground pits for the storage of oilfield produced water, requiring all existing pits to be remediated within 5 years. This site in Venice had obtained several extensions in order to complete the remediation process.

CETCO Oilfield Services personnel visited the site and conducted a preliminary review of the project. CETCO Oilfield Services designed a process that would meet the produced water treatment needs, mobilizing equipment and personnel in the following month. The goal of CETCO Oilfield Services treatment process was to remove all solids, oil, and grease contamination from the water prior to injection into a disposal well.

Sheet piles were installed around the entire site, which consisted of a large central pit and several outer pit rings, completely enclosing the pits to isolate all potentially contaminated soil and fluids within a contained area. CETCO Oilfield Services initially pumped the fluids from the pits through the use of a floating suction header into CETCO's 120-Barrel Separation Tank for initial treatment.

Inlet oil and grease concentrations ranged from 9 to 55 ppm and solids concentrations ranged from 34 to 188 ppm. Personnel then pumped the fluids from the separation tank through bag filters for solids removal, and finally through CETCO's highly specialized 2-vessel, radial flow RFV-4000 filtration skid containing CETCO Oilfield Services proprietary CrudeSorb® media canisters. CETCO personnel conducted hourly static sheen tests on the treated water along with visual inspections to ensure the treated water was free of oil and grease. Personnel at the disposal well facility continuously monitored CETCO's treated water to ensure it met the criteria prior to injection into the well.

CETCO Oilfield Services successfully completed the water treatment portion of the project in just over one week. CETCO's process worked so well that a smaller unit was maintained onsite by the contractor to treat the rainwater that fell into the pit as the remediation project continued.

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