

Water Treatment Case History



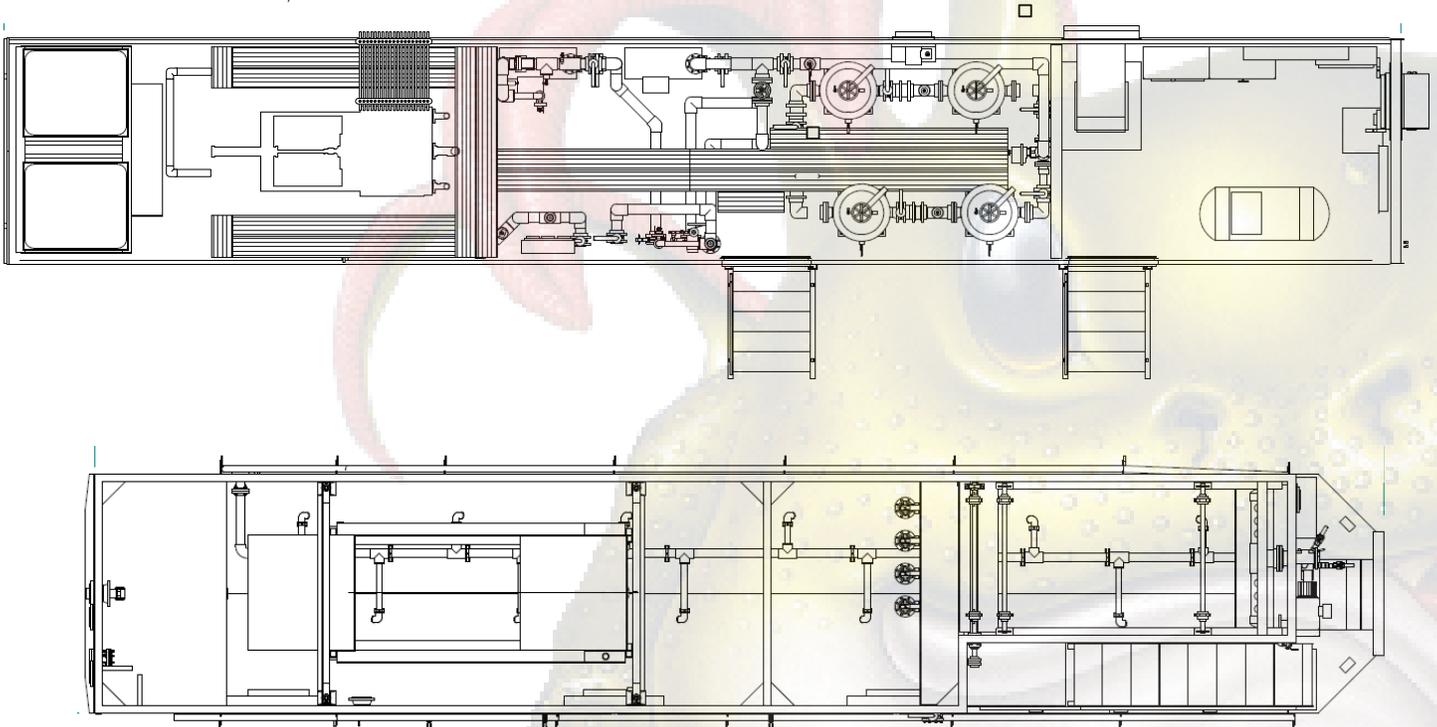
Mobile Water Treatment Plant for Water Recycling

Challenge

Water in West Texas is a scarce and valuable commodity. A customer operating in the Permian Basin was reviewing their water management practices and determined that implementing a process to reuse flowback and produced water for hydraulic fracturing operations would be of great benefit, both operationally and economically. Hauling fresh water into remote operating locations was not only a great operational challenge, but very costly as well. The water treatment process for this wastewater was required to achieve specific water quality criteria for the water to be reused, and specific water quality parameters were determined and outlined by the operator for CETCO Energy Services.

CETCO Solution

CETCO proposed its ElectroCoagulation System (ECS), a mobile water treatment plant incorporating advanced and unique water treatment technologies in a highly mobile package. The water treatment system is controlled at an HMI within the process trailer and contains online monitors for water quality operational parameters. The following is the layout of the ECS treatment system.



The site for this particular operation was specifically designed for continuously receiving all of the wastewater from the field into a pit with an adjacent holding pond for the treated water from CETCO to be stored for later reuse. Flowback and produced water were piped from the wells in the field to the pit for storage during treatment. CETCO's ECS was positioned by this pit to treat this fluid while pumping the treated water into the adjacent holding pond. This was a continuous operation with wastewater constantly added to the storage pit, while ongoing treatment operations supplied treated water into the holding pond for reuse during fracturing operations.

Outcome

Although highly mobile, ECS has been onsite continuously treating water since initial mobilization in August 2013 due to the large volumes of wastewater produced in the field and the great demand for water to be used in further fracturing operations. With various wastewaters continually flowing into the pit, treatment schemes are regularly modified to meet the treated water quality criteria. Initially CETCO's ECS effectively treated over 200,000 BBL for reuse. In addition to reusing this water for fracturing operations, the water has also been taken for miscellaneous uses including coiled tubing and road building operations.