CASE STUDY

Corrosion Protection for Two Out-of-Service Single Bottom Storage Tanks on Sand Foundation by Internal Flood IDS

Zerust® OIL & GAS
WORLDWIDE CORROSION SOLUTIONS

Project Specifics

Installation Dates
July 7-11, 2020

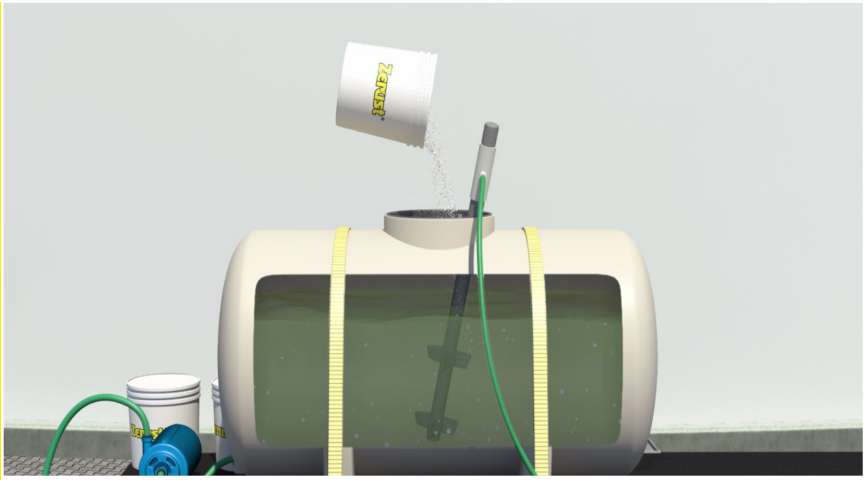
Location
Texas, USA

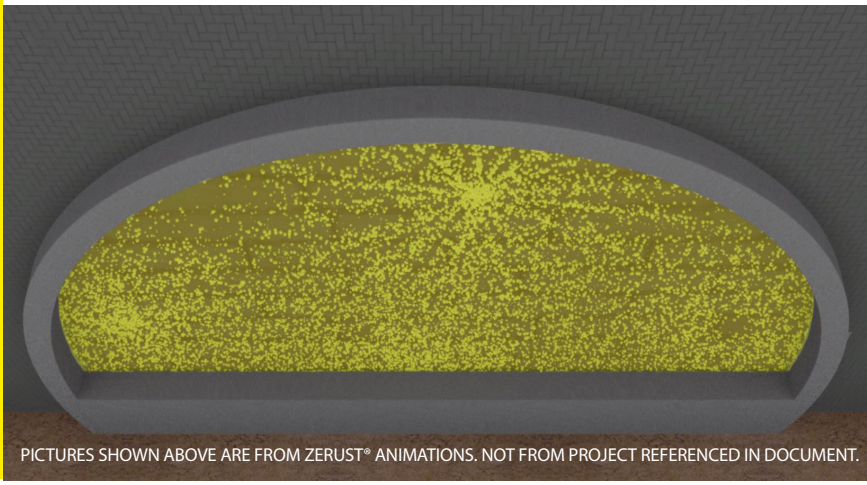
Environmental Conditions
Avg. Temp: 90°F, 88% humidity, hot and sunny with some clouds.

Details
Storage Product: Diesel
Tank 1: 134-ft, Tank 2: 143-ft
Vessel Construction: Single-Bottom, Out-of-Service, Concrete Ring Wall, Existing Liner, 6 Existing Ports Tank 1, and 3 Existing Ports Tank 2.
Foundation Details: Sand, 2-3 feet deep

Inhibitor Delivery System (IDS)
Internal Flood IDS (2 Tanks)
ER Probe Monitoring System

Zerust Product(s) Used
Zerion® FVS (Corrosion Inhibiting Powder)





PICTURES SHOWN ABOVE ARE FROM ZERUST® ANIMATIONS. NOT FROM PROJECT REFERENCED IN DOCUMENT.

Project Specifics
The client wanted corrosion protection for two out-of service, single-bottom aboveground storage tanks on sand foundation with a concrete ring wall and liner.

Zerust Solution
The engineers at Zerust® Oil & Gas developed custom solutions for this client, and with the support of local contractors, successfully completed the injection of the corrosion inhibiting solution on the tank using Zerust's Internal Flood IDS method.

Project Installation
Corrosion inhibitor solution was injected through all four (4) existing leak detection ports, including the leak detection ports previously used for the installation of ER probes. One (1) day after the injection, each of the ports was opened to check for any leaks. None were found.

The injection ports on the North, East and South ports were left in place. All valves were left closed, to prevent the loss of applied corrosion inhibitor compound.

Tank 1 Installation
All inhibitor was injected through the floor. Three of the six ports were selected for probe installation. We suggest additional probes be installed if another tank projected is performed at George West for added monitoring since there are six ports available. No issues.

Tank 2 Installation
Water had to be removed simultaneously while injecting. A hose was connected from the center port to the sump, and a pump was used to remove the water from the sump. All inhibitor was injected through the ports. No issues.

Conclusion and Recommendations
All provided corrosion inhibitor compound was applied beneath the targeted tank with no issues through each of the existing leak detection ports and the chime area was sealed as much as was possible.