



# Edwards Environmental Corporation

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## Hughes County Winter Saltwater Spill

A tank battery had an accidental spill during the summer of 2016 causing produced water to flow off site contaminating a drainage ditch. A total of, approximately, 410 cubic yards of soil were contaminated with saltwater. Soil samples were collected and analyzed by Environmental Testing Inc./Oilab. Inc. for Total Soluble Salts (TSS), Electro-Conductivity (EC), and Chlorides (Cl).

Test	Pre-Treat	Treatment	Post Treat	Reduction
TSS	45,500ppm	88 days	2,870ppm	93%
EC	71,400 umhos/cm	88 days	4,490 umhos/cm	93%
Cl	27,500 mg/kg	88 days	1,020 mg/kg	95%

Okla. Corp. Comm. threshold limits – TSS – 2,640 ppm, EC – 4,000 umhos/cm, Cl – 1,000mg/kg

The site received, approximately, 3 inches of rainfall during the 88 days between in remediation and the sample date of 2/25/17. A second sample, taken on 2/25/17, was collected from the same area as the initial sample. These reductions will continue to improve. The product cost varies with the severity of the contamination. The project included a saltwater remediation product and an organic liquid fertilizer and seed. These products were added without ground disturbance. These products were used to remediate the salt contamination and to promote germination of the seed to prove the site was remediated and regenerated the soil back to productive agricultural use. The site has germinated and released by the Oklahoma Corporation Commission Inspector.

This project was remediated during the coldest part of the 2016 winter.

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