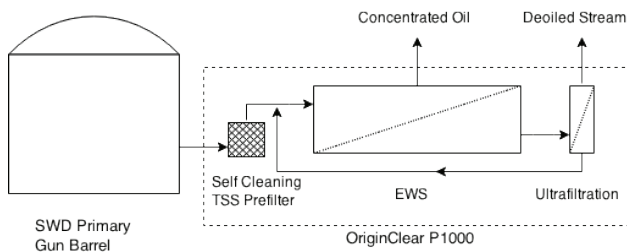


## Onsite Treatment of Salt Water Disposal Influent by OriginClear's EWS for Reuse as Feed for Clean Brine Generation

Site Location	Permian Basis
Installation Date	Sept-Oct 2014
Scale	1000 BLPD
Product	OriginClear EWS Petro

At a commercial Salt Water Disposal facility for produced and flowback water in the Texas Permian basin, OriginClear™ successfully treated the SWD influent to maximize oil recovery and minimize suspended solids prior to SWD well injection. A secondary objective was to treat the water as feed to a clean brine concentrator. Water quality showed an average turbidity reduction of 99.7% and a Specific Energy Consumption of 0.185 kWhr/bbl over the two months of field testing.



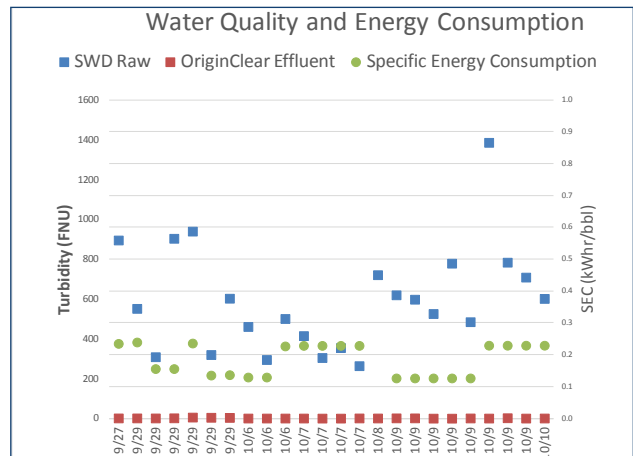
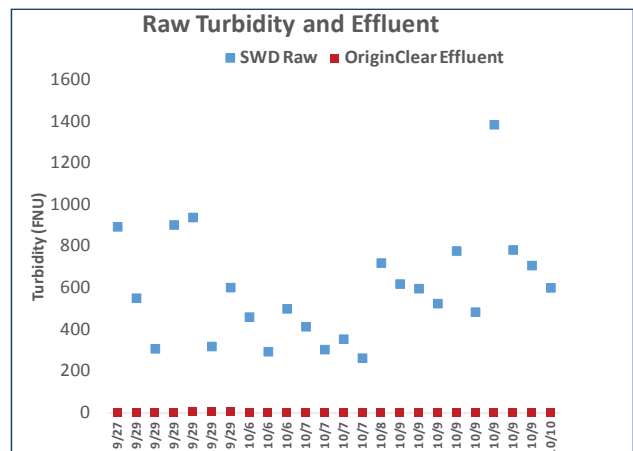
Raw produced water was sent to an upfront self-cleaning filter for coarse suspended solids removal before entering the OriginClear Electro Water Separation (EWS) for Petro (EWS Petro) system. Within the EWS Petro system the influent emulsion was broken within the EWS Electro-Coagulation (EC) reactors before being fed to the Electro-Floatation (EF) section for dispersed oil and suspended solids removal. The effluent from floatation was treated by an ultrafiltration (UF) system prior to being processed by a downstream clean brine generator.

The tables below show the Specific Energy Consumption of the process and third party laboratory oil removal rate across the hydrocarbon speciation range.

Average SEC (kWhr/bbl)	Std Dev
0.185	0.057

Long term data and process flow are shown on right.

Range	Tank (ppm)	EWS (ppm)	Removal
C6-C12	134	7.03	95%
C12-C28	158	4.32	97%
C28-C35	27.5	N/D	>99%
Total Hydrocarbon	319	11.4	96%



**Contact: +1 877-999-6645 Ext 4 sales@originclear.com**