TDM MOLECULAR DISRUPTION TECHNOLOGY
an AQUAMONT technology.

Advanced physicochemical treatment for complex contamination cases. Ideal for water reuse projects and/or regulatory compliance.

# Oil & Gas Fracking

**Benefits and Savings**

- All contaminants are attacked in a single treatment.
- There are no toxic gas emissions.
- The waste generated is not dangerous.
- Savings in electrical energy.

**Solutions**

- Removal of multiple highly stable aromatic and aliphatic compounds.
- Removal of sulfur compounds.
- Eliminates and/or reduces odor and color.

## CASE STUDY

**Introduction**

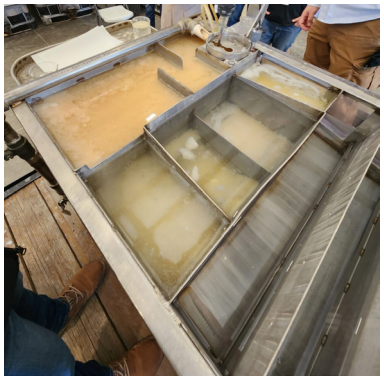
Case study for TDM treatment from oil & gas process wastewater. The source came from fracking process water, where it can be contaminated with hydraulic fracturing chemicals, heavy metals, organic compounds, suspended solids and a high concentration of salts and total dissolved solids, which can include chlorides, sulfates, and other dissolved minerals. The main challenges to treat this water is the variability in their contaminant's composition, its high salinity, and total dissolved solids. TDM faced the challenge of treating this wastewater from a USA company's refinery process, to comply with EPA regulations for discharge.

**Objective**

The client wanted to lower the high concentration of conductivity the water had caused by the total dissolved solids and salts.
On this sample, a simple treatment with TDM was made, resulting in a clear sample with no odor.

**Results**

The wastewater provided by the client came with a high concentration of TDS, hardness, and conductivity. With a simple TDM treatment, this fracking process wastewater was able to comply with customer's needs.



| Oil & Gas TDM Test | | | | |
|---|---|---|---|---|
| Variable | Inlet | Outlet | Unit | Removal |
| pH | 7.18 | 7.84 | - | - |
| TDS | 119,830 | 2,518 | mg/L | -97.9% |
| Hardness (CaCO3) | 10,860 | 295 | mg/L | -97.3% |
| Conductivity | 150,243 | 4,902 | uS/cm | -96.7% |
| Turbidity | 72 | Less than 7 | NTU | -91.1% |
| Barium | Less than 6 | Less than 6 | mg/L | - |
| Calcium | 3,770 | 104 | mg/L | -97.2% |
| Iron II (Fe2+) | Less than 0.03 | Less than 0.03 | mg/L | - |
| Iron III (Fe3+) | 1.76 | 0.11 | mg/L | -93.8% |
| Magnesium | 350 | 8.4 | mg/L | -97.6% |
| Sodium | 40,200 | 646 | mg/L | -98.4% |
| Chloride | 71,650 | Less than 1400 | mg/L | -98.0% |
| Sulfate | 500 | 67 | mg/L | -86.6% |