



CLLEEN™ Water and Power™

CLLEEN™ VAP™

Mobile and Stationary
Treatment Units for
Treatment of PFAS/PFOS
Backwash & Reject
Wastestreams





How Serious is the Problem?

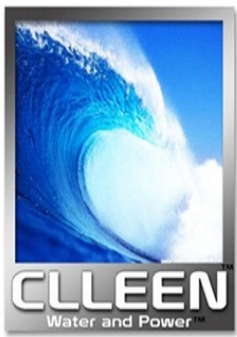
- EPA and several States establishing very low (**parts per trillion**) potable water standards for PFAS/PFOS substances.
- Current PFAS/PFOS treatment technologies generate **millions of gallons** of backwash and reject water that may be deemed hazardous, requiring very costly off-site disposal

The Solution

CLLEEN™MOBILE VAP to solve your water and/or wastewater treatment system's reject water PFOA/PFOS problem.

The CLLREEN™MOBILE VAP Crystallizer (evaporator) is delivered in a self-contained shipping container, or, trailer-mounted, and built **in modules of 25 GPM**, so it is scalable to treat any flowrate. At the TDS levels of wastewater, **it will treat wastewater using less than 2.5 kWh/m³**, which is 1/30th the energy usage of any comparable industrial evaporator.



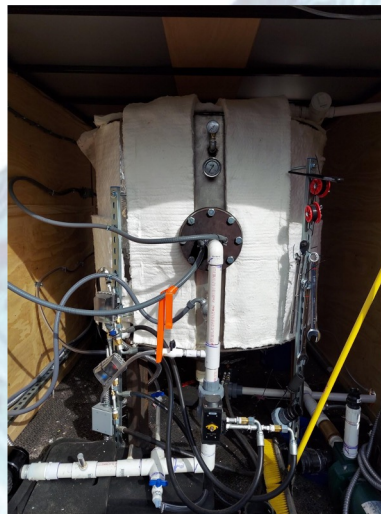


What the Customer Provides:

1. Pumping (with an 18-mesh screen or higher to limit TSS diameters to under 1mm) from the source to our skid-mounted pump on the CLLEEN™ VAP unit.
2. 65A@240V/1 phase power for every 25 gallons per minute chamber
3. An additional 60A@240V, 1 phase or 3 phase, for our air compressor
4. Recovered salt (box) changeout, removal, transportation and disposal

What CLLEEN Provides:

- Units (CLLEEN owns the units - clients only pay a per gallon treatment cost)
- Unit customization (as needed per specific client needs)
- Equipment delivery, start-up, training
- Treatment redundancy, equipment repair & replacement)
- 24/7/365 SCADA Monitoring





Management Bios:

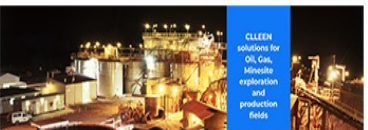
Anthony Migyanka, Founder, CEO, and Inventor of the CLLEEN™VAP technology.

Published Technical Papers:

- “What to do with the Brine?” Frac Water Treatment, Knovel Publishing, March 2012
- Featured article, “Chemical Engineering” Magazine, on the CLLEEN™ system, April 2012

Speaking Invitations:

- Shale Gas Water Management Initiative, Dallas, Texas, November 2011
- OZWater’12 Water Conference, Sydney Australia, May 2012
- International Water Technology Conference (IWTC), Istanbul, Turkey, May 2012
- Engineering Account Manager, Betz-Dearborn (Now Suez), oversaw water treatment for Brooklyn Navy Yard Cogen Startup, JFK Airport Cogen startup, Stonybrook University Cogen Startup, certified pesticide applicator and Betz NY, NJ, CT, EPA liaison





A CLLEEN™ MOBILE VAP 16-foot gooseneck trailer evaporates 25 gallons per minute of wastewater down to dry solids for safe, economical transport to a landfill.