Optimizing Frac Water Treatment

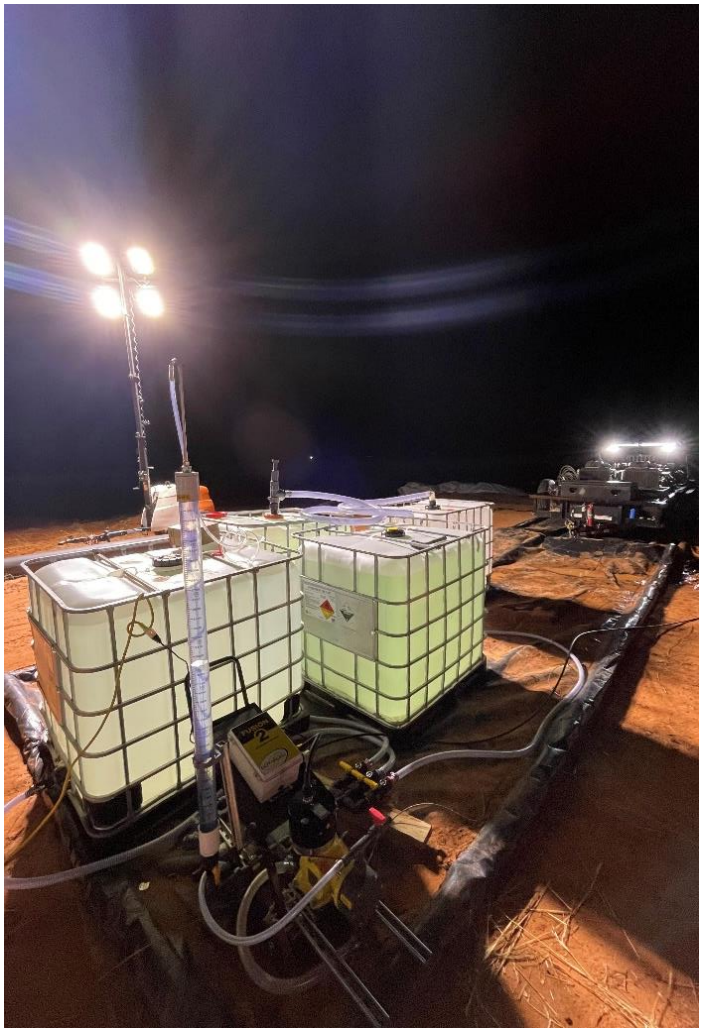
Application Sheet #50

REAL TIME
BENEFIT

Reduced manpower by 50%, eliminated safety concern, reduced maintenance costs.

SITUATION

- A Chemical company in New Mexico was treating produced water on a fracking site using a highly corrosive mixture of hydrogen peroxide and peracetic acid. Injection rates were determined based on production flow rate measurements.
- Injection rates were manually controlled by adjusting the pump stroke length.
- At lower stroke lengths the pumps were prone to vapor lock. Degassing valves were added, which required regular replacement. The degassing bleed fluid required safe containment and disposal.
- The setup required staff to monitor each pump 24 hours per day.



SOLUTION

- A Sirius plastic pump along with the Fusion^2 controller was used to provide continuous injection, controlled autonomously using feedback from the flow meter.
- Variable speed control allowed for the stroke length to be fixed at 100%. The degassing valve was no longer required.

RESULTS

- Increased accuracy and feedback control allowed the operator to reduce monitoring by 50%, allowing one person to monitor twice as many systems.
- Chemical exposure, disposal, and maintenance costs associated with the degassing valve were eliminated.
- The Sirius control system provided all the communication features necessary for the future integration of SCADA, empowering the operator to further refine and optimize the treatment.