

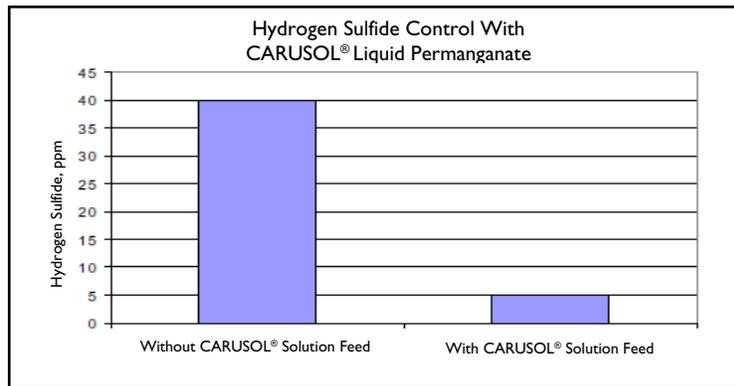


## BACKGROUND

Kootenai-Ponderay Sewer District located near Sandpoint, Idaho, was trying to control hydrogen sulfide corrosion and odor at two lift stations and several manholes. The source of the problems was from a pressure sewer line that was being discharged into a gravity line below a manhole. The pressure sewer line consists of discharge from a STEP System (septic tank effluent pump). It was determined that the best point for applying odor control chemical was at the injection station located over a valve box of the pressure line. This location was 300 feet before the pressure line discharged into the gravity line.

## EVALUATION/APPLICATION

Due to the very short reaction time allowed, a chemical that would provide almost immediate odor control was required. Additional constraints included limited space for chemical feed equipment, and the need for a simple system that required minimal manpower. Based on the information provided, Carus recommended the use of CARUSOL® Liquid Permanganate. CARUSOL was diluted from approximately 12% to 7% and was fed by a peristaltic pump at the injection station. Hydrogen sulfide levels that were averaging 40 ppm, determined by data logging H<sub>2</sub>S monitors, were immediately reduced to less than 5 ppm (shown below). Odors that had been a problem at the lift stations and manholes were eliminated.



## CONCLUSIONS

- Controlled hydrogen sulfide and other odors
- Reduced corrosion
- Significantly reduced residential complaints
- Provided a safe, simple, easy to install and effective solution to a common municipal problem

## CARUS VALUE ADDED

### LABORATORY SUPPORT

Carus has technical assistance available to answer questions, evaluate treatment alternatives, and perform laboratory testing. Our laboratory capabilities include: consulting, treatability studies, feasibility studies, and analytical services.

### FIELD SERVICES

As an integral part of our technical support, Carus provides extensive on-site treatment assistance. We offer full application services, including technical expertise, supervision, testing, and feed equipment design and installation in order to accomplish a successful evaluation and/or application.

### CARUS

During its more than 100-year history Carus' ongoing emphasis on research and development, technical support, and customer service has enabled the company to become the world leader in permanganate, manganese, oxidation, and base-metal-catalyst technologies.

Permanganate products are not registered as a pesticide under the Federal Insecticide, Fungicide and Rodenticide Act administered by U.S. EPA or similar state laws. Use as a pesticide is not government approved.