



## APPLICATIONS DEVELOPMENT

### Introduction

A cornerstone to the USP Technologies (USP) applications development process is support from the industry's most experienced technical experts and engineering professionals. We maintain one of the largest and most capable teams, which ensures our programs are the right fit for your application. Our commitment to this dedicated technical team has enabled USP to support the ongoing development of new peroxygen based technologies and customer solutions. Our application development process includes:

- Consultative Approach
- Survey and Modeling
- Program Development and Management
- Sampling and Monitoring
- Compliance Goals
- Dosing Optimization
- Performance Monitoring and Evaluation

### Consultative Approach

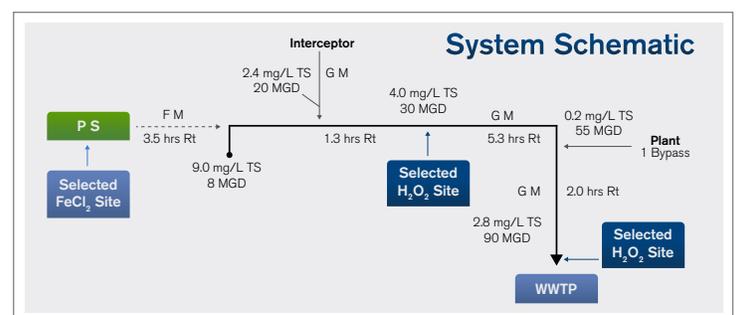
USP offers our customers multiple technology solutions, which allows us to provide the most cost-effective treatment approach. We use a holistic process to determine the best overall solution. Our technical experts spend a lot of time in order to understand the problem, process and system specifics and the desired treatment goals in order to recommend the best solution.

### Survey and Modeling

Before putting together a proposal or providing a solution, USP's technical experts put their 'boots on the ground' and spend the time necessary with our customers in order to diagnose the problem. Our survey work includes mobilizing personnel, sampling and monitoring equipment, and collecting data. This data is analyzed and a model of our customer's process/system identifies the problem areas. This detailed approach allows us to get to the heart of the problem and to offer an appropriate solution.

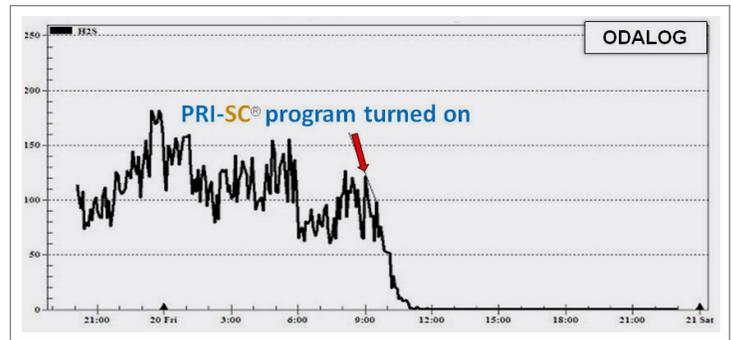
### Program Development and Management

Program management and operations drives overall program performance in terms of achieving treatment and cost optimization goals. It forms the backbone of accountability to our customers in terms of program compliance, sampling/monitoring, documentation and reporting, and cost containment. It also establishes a highly interactive and transparent operating framework for the working relationship of USP's program team and the customer, creating the opportunity for shared thinking, and the application of innovation and continuous improvement initiatives.



## Sampling and Monitoring

What differentiates USP is our ability to provide complete solutions to our customers. We provide field resources to sample and monitor the implementation and ongoing operation of our programs to ensure compliance goals are being met. Through routine data sampling and monitoring, feed rate programs are adjusted and maintained to avoid drift and out of compliance treatment situations. By monitoring performance feedback and altering as necessary USP optimizes program performance.



## Compliance Goals

In order to measure success, it is critical to establish clear and concise compliance goals to ensure the customer's needs are being met. Where clear compliance goals are already established by our customers, USP provides the equipment and resources to ensure these are met in a reliable and cost-effective manner. In applications where the problem does not have a clearly defined target, USP utilizes its industry expertise to work with our customers to establish appropriate compliance goals to solve the problem.

## Dosing Optimization

Based on the monitoring results and compliance goals, the chemical feed rate profiles are adjusted to maintain performance with the most efficient use of chemicals. Some of our programs integrate process controls to automate the dosing optimization process. In some of our other programs where feedback control is not practical, seasonal re-optimization of chemical feed rates must occur. The procedure involves adjusting the chemical feed rates over several days to identify the lowest daily feed rates that achieve the program objectives.

## Performance Monitoring and Validation

USP's job doesn't end when the equipment is installed and the chemical treatment programs are commissioned. We continue with our program management approach to provide ongoing field and technical operations support through the development of a very specific performance-driven management program. Operational performance metrics are used to ensure program compliance, thorough documentation and reporting, and as a means for regular feed rate, seasonal optimization and cost containment measures. Routine data collection and sampling to document that compliance targets are being met is a vital part of our programs.

## About USP Technologies

USP Technologies is the leading supplier of peroxygen-based technologies and services for environmental applications. We have been serving the water, wastewater and remediation markets for over 20 years and have offices and field service locations throughout North America. Our consultative approach to problem solving includes application assessment, technology selection and development of a tailored treatment approach. Our full service programs successfully integrate storage and dosing equipment systems, chemical supply, inventory and logistics management, and ongoing field and technical support. This approach provides cost-effective, "hands-off" solutions to our customers. USP Technologies also can provide access to experienced application partners for a turn-key program encompassing engineering, site characterization and technology selection, program implementation, execution and report generation.

## Getting Started

We look forward to supporting your treatment needs, whatever the scale of your requirements. To obtain a streamlined treatment solution tailored to your specific project, give us a call at (877) 346-4262.

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