

CASE STUDY

Burt Process Equipment Supplies Multiple ChemPLUS Chemical Feed Skids for Major Water Reclamation Facility Upgrade

2024





Background

A California water reclamation facility serving 200,000+ residents partnered with Burt Process Equipment to improve treatment efficiency and meet regulations. The ChemPLUS Chemical Feed Skids provide precise chemical dosing, supporting sustainable operations and regulatory compliance. This case study highlights how the systems enhance performance and dosing for critical chemicals.

Project Objectives

The facility's upgrade aimed to:

1. Optimize chemical dosing accuracy:

Required for consistently high-quality treatment outcomes.

2. Increase operational reliability:

Ensuring robust performance and minimal downtime.

3. Enhance environmental compliance:

Supporting adherence to updated wastewater treatment and discharge standards.



Solution

Burt Process Equipment supplied ChemPLUS Chemical Feed Skids, designed for flexibility, reliability, and corrosion resistance. These skids were configured to dose four key chemicals:

1. Sodium Hydroxide for pH adjustment.
2. Scale Inhibitor to prevent scaling and protect infrastructure.
3. Citric Acid for mineral deposit removal.
4. CIP Solution for cleaning and disinfecting equipment.

The ChemPLUS Chemical Feed Skids featured:

- **Flexible Pump Selection:** Multiple pump types (solenoid, motor-driven diaphragm, peristaltic) for varying chemical viscosities and dosing needs.
- **Corrosion-Resistant Construction:** Made from HDPE and resistant materials, ideal for aggressive chemicals like sodium hydroxide and citric acid.
- **Customizable Design:** Available in Simplex, Duplex, or Triplex configurations with redundancy options, plus adaptable piping materials.
- **Enhanced Monitoring and Safety:** Includes pressure relief valves, pulsation dampeners, and calibration columns for precise dosing and process control.



Implementation

The ChemPLUS skids were installed in phases, allowing the facility to smoothly transition from legacy systems to the new, more efficient dosing units. Burt Process Equipment collaborated closely with the sanitation district's team, ensuring each skid was integrated seamlessly with existing infrastructure. Factory testing of each unit, including hydrostatic and pressure relief valve tests, ensured immediate reliability upon commissioning.

Results

The implementation of the ChemPLUS Chemical Feed Skids yielded substantial benefits:

- **Increased Treatment Efficiency:** Precise chemical dosing reduces waste and optimizes treatment efficiency, lowering operational costs and enhancing effectiveness for each specific application.
- **Improved Reliability:** The skids' robust construction and monitoring systems support continuous, dependable dosing for all chemicals, from pH adjustment to CIP processes.
- **Enhanced Compliance and Environmental Protection:** Consistent, accurate dosing helps meet stricter discharge standards, ensuring treated water quality and supporting environmental preservation efforts.

Conclusion

Burt Process Equipment's ChemPLUS Chemical Feed Skids have successfully elevated the facility's water treatment capabilities. Their adaptable, corrosion-resistant design and advanced control features support critical dosing applications for sodium hydroxide, scale inhibitor, citric acid, and CIP solutions. Through this tailored solution, Burt Process has helped the sanitation district achieve a cost-effective, sustainable, and compliant water treatment process, reinforcing its commitment to high-quality water management.

