

# Wastewater Treatment Case Study

## Problem

A wastewater treatment plant in Georgia needed to upgrade their chemical and scrubber system. Their old leaking caustic system was painted red. The entire piping system, from the chemical room to point-of-use, had to be replaced due to multiple failures both above and below ground. The original CPVC carrier, clear PVC “clam shell” double containment system had failed underground. Asahi/America had the solution.



## Solution

In a joint meeting with the owner, contractor, and engineering firm at the plant, Asahi/America and its distributor demonstrated the simplicity of socket fusion and butt fusion joining methods. Asahi recommended Proline<sup>®</sup> polypropylene piping system for the above ground caustic piping, Super Proline<sup>®</sup> PVDF piping for the sulfuric acid piping and Poly-Flo<sup>®</sup> HDPE double containment piping system for the buried sodium hydroxide line. The owner decided to go with Asahi for their new systems. The engineering firm approved each system for the application. The specification changed with the contractor's authorization to replace the existing CPVC lines with Asahi's fusion-welded piping systems.

All the above ground systems (both sulfuric acid and caustic) were installed by the contractor using butt and socket fusion welding. The contractor, who was trained and certified by Asahi's field technician, installed approximately 2,500 feet of Poly-Flo<sup>®</sup> double containment piping. Commissioning the leak detection system was done by Asahi's field technician.

## Results

The CPVC caustic system was replaced three times over a 14-year period. Asahi's original piping systems are still in service today. Replacing this old system with Asahi/America's Proline<sup>®</sup> single wall piping and Poly-Flo<sup>®</sup> double containment piping system has provided many years of reliable service.

## Asahi Advantage

- Low-cost maintenance and installation
- Leak-free performance
- Butt and socket fusion joining methods
- Start-to-finish project assistance from specification, weld training and installation

## Other Asahi Offerings

Asahi/America is a supplier of a wide range of valves, actuators, pipe, fittings, and welding equipment for high purity, commercial, industrial and environmental applications. Discover more at [www.asahi-america.com](http://www.asahi-america.com)

## Poly-Flo® PP & PP-R Piping System



### Features and Benefits

- Unique co-extruded system (acts like a single wall piping system)
- Available with manual and low point leak detection sensors only
- Fewer concerns during expansion and contraction

### Pipe and Fittings

- 32mm x 50mm (1" x 1 - 1/2")
- 63mm x 90mm (2" x 3")
- 110mm x 160mm (4" x 6")

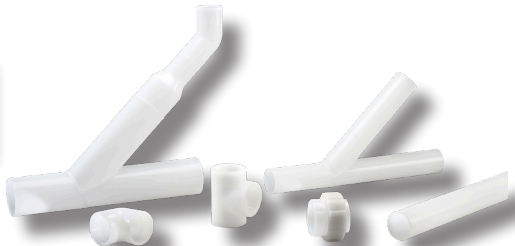
### Available Fittings

- Full pressure fittings
- Drainage fittings
- Machined fittings
- Dogbones

### Welding Methods



## Super Proline® PVDF Piping System



### Features and Benefits

- Ideal applications include 93%-96% sulfuric acid high temperature fluid transfer, acids

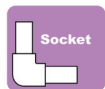
### Pipe and Fittings

- 20 - 315mm (1/2" - 12") SDR 21, 230psi
- 90 - 400mm (3" - 6") SDR 33, 150psi

### Available Fittings

- Molded fittings
- Fabricated fittings - wyes, p-traps, laterals, chemical injection quills, regulator valves

### Welding Methods



## Proline® PP Piping System



### Features and Benefits

- Ideal applications include pH range 1-14, process chemical and waste, caustic, acids, industrial water

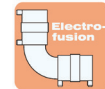
### Pipe and Fittings

- 20 - 500mm (1/2" - 20") SDR 11, 150psi
- 110 - 1200mm (3" - 48") SDR 33, 45psi

### Available Fittings

- Molded fittings
- Fabricated fittings - wyes, p-traps, and laterals

### Welding Methods



## Corrosion Resistant Industrial Piping Systems

Asahi/America's thermoplastic piping systems are designed and engineered for the toughest and most demanding industrial applications. With our partner, AGRU of Austria, we provide a wide variety of industrial single and double wall piping systems, including Chem Proline® (Advanced PE), Ultra Proline® (Halar® ECTFE), Proline® (polypropylene), Super Proline® (chemical-grade PVDF) and Poly-Flo® (PP & PP-R) piping systems.

**Another  
Corrosion  
Problem  
Solved.™**