

**PROJECT:**  
New Wastewater Plant Protection

**LOCATION:**  
Dequeen, Arkansas

**OWNER:**  
City of Dequeen Waste Water Dept.

**APPLICATOR:**  
Gibraltar Coatings

**COATING SYSTEM:**  
Polyshield HT™ Polyurea 120 mils  
Polyprime™ 100 Concrete Primer

**TOTAL AREA:**  
195,000 square feet

**DATE COMPLETED:**  
October 2008

**PROBLEM:**

The City of Dequeen Waste Water Department was constructing a new large sewage treatment plant. The new addition will ease the demand on existing waste water facilities and help upgrade the city infrastructure for future growth. It was imperative the new treatment facility have at least a twenty year service life for this multi- million dollar tax payer investment.

Achieving a service life of at least twenty years poses serious challenges. The waste water treatment process produces significant Sulfur Reducing Bacteria (SRB) growth and Hydrogen Sulfide gas. This causes significant concrete damage from the break down of silica and calcium. City officials needed a durable protective coating to shield the concrete from decay caused by the bacteria. Any coating solution would also need to handle thermal concrete expansion and contraction from annual freeze/thaw cycles.

**SOLUTION:**

City management chose SPI's Polyshield HT™ polyurea coating after evaluating several other

options (epoxy & urethane). The decision was based on the coating's extensive track record and high elongation & strength properties.

The applicator removed any surface latents, then roll-applied a thin-film of Deep Seal® moisture-barrier and Polyprime™ 100 primer to seal the pores in the concrete. Then 120 mils of Polyshield HT™ polyurea was spray applied on every surface that will be exposed waste water.

**RESULTS:**

City management was extremely pleased with the application. The new treatment plant now has a reliable coating that will prevent bacteria damage and increase the facility's service life. Annual follow up inspections showed the coating is continuing to perform well.

