

# LITTLE SIOUX CORN PROCESSORS SECONDARY

The Little Sioux Corn Processors refinery near Marcus, Iowa, is typical of ethanol plants throughout the Midwest where containment systems for storage tanks are coated with a proven breach-free liner that includes a high build reinforced novolac epoxy from Tnemec. "Morgan Painting and Sandblasting has specified this coating system on secondary containment bunkers for years," according to Tnemec coating consultant Rory Sudbeck. "They researched products that could withstand 98 percent sulfuric acid and decided on Series 365 Tank Armor which they specify on nearly all of these projects."

Tank Armor is a 100 percent solids novolac epoxy lining formulated for use in aggressive chemical immersion service and cures in 24 to 48 hours. The lining protects steel storage tanks and other containment areas against corrosion from acid solutions, alkalis, sour crude and fuels.

The Little Sioux Corn Processors project consisted of two 20-foot by 25-foot concrete containment bunkers that were prepared in accordance with SSPC-SP13/NACE No. 6 Surface Preparation of Concrete. Series 365 was applied at 30 mils dry film thickness (DFT) to create a monolithic liner free of voids that could enable chemicals to corrode the concrete substrate of the secondary containment structures. The project required 60 gallons of Tank Armor to complete.

Under U.S. Environmental Protection Agency (EPA) requirements, secondary containment systems are usually designed to hold up to 110 percent of an aboveground storage tank's capacity. Containment systems, including walls and floors, must be capable of containing a discharge until cleanup occurs. "Secondary containment at Little Sioux Corn Processors can contain spills for 72 hours," Sudbeck noted.

When spills are reported, the containment system is quickly drained and evaluated for signs of cracking or failure. "In all cases involving spills, Series 365 has worked for the applicator so they use it on all their secondary containment systems," Sudbeck added.

The Little Sioux refinery processes more than 30 million bushels of corn into 92 million gallons of ethanol, and 275,000 tons of distillers grains (DDGs) annually. Iowa is the largest ethanol-producing state in the U.S.

## FEATURED PRODUCTS

**Series 365 Tank Armor**



## PROJECT INFORMATION

### Project Location

Marcus, Iowa

### Project Completion Date

June 2008

### Owner

Little Sioux Corn Processors

### Applicator/Engineer

Morgan Painting & Sandblasting  
Cherokee, Iowa

A 100% solids novolac epoxy lining formulated for use in aggressive chemical service protects the interior of the Little Sioux Corn Processors secondary containment structures in Marcus, Iowa.

