



## Secondary Containment

# Featuring Polyshield HT™

**Project:**

Secondary Containment  
for Hazardous Waste Drum  
Storage Pads

**Location:**

Newtown Square, PA

**Owner:**

Lyondell Chemical

**System:**

POLYSHIELD HT™ HP/UV  
with AE-4 (adhesion enhancer)  
in lieu of primer

**Total Area:**

26,000 square feet

**Completion Date:**

March 2000

**PROBLEM:**

Concrete storage pads with curbing (used to store hazardous waste drums) developed cracks throughout the surface. These cracks allowed water to contaminate the soil. The concrete pads were originally coated with a clear sealer that was failing.

**SOLUTION:**

The owner had previously used SPI's Polyshield SS-100® on another job with good results. This made it an easy decision to trust SPI's Polyshield HT™ high tensile strength polyurea coating to bridge the cracks in the concrete and seal any leaks.

The concrete surface was prepared using a high pressure water blaster (40,000 psi) to

remove the failing sealer and to create a profile for optimizing adhesion. Polyshield HT™ with AE-4 (Adhesion Enhancing Formula) was applied at 50 mils, eliminating the need for a primer. This was followed by an additional top coat of the polyurea into which a sand aggregate was broadcast in the coating to provide a skid resistant surface.

**RESULTS:**

The owner was extremely pleased with the results, and publicized the project throughout the company. Polyshield HT™ effectively sealed the concrete pads and prevented any ground contamination. The method used in this project was touted as the best system to repair and control concrete cracks at Lyondell facilities.



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## Secondary Containment Systems

# Featuring Polyshield SS-100®

**Project:**  
Great Western Chemical Tank Farm

**Location:**  
Fairbanks, AK

**Owner:**  
Ghemm Company

**Applicator:**  
Klondike Foam & Coating

**System:**  
Tanks coated with 6 inches of 2 lb.  
Polyurethane foam with 40 mils of  
POLYSHIELD SS-100® Polyurea  
High Pigment/UV Aluminum

**Total Area:**  
Two tanks at 30,000 gallons each.  
Concrete Liner 1,200 sq. ft.

**Completion Date:**  
Storage Tanks - Oct. 1994  
Concrete Liner - June 1995

### PROBLEM:

Great Western Chemical needed to insulate two storage tanks. Additionally, they required a protective liner on the outside of the insulated tanks, and a secondary containment system to protect the ground soil in the event of any leak or spill. The facility also experienced issues with birds pecking at foam insulation to burrow in for nesting purposes.

### SOLUTION:

Polyshield SS-100® polyurea was selected due to the fact it is a fast-set, abrasion resistant (i.e. bird-proof) coating. The project owner appreciated the coating's superior adhesion and ability to form a seamless, monolithic membrane.

Two 30,000 gallon tanks were cleaned, then sprayed with six inches of two pound density polyurethane foam. Then a protective coating of Polyshield SS-100® polyurea, High Pigment-UV Aluminum was applied at 40 mils to the foam surface. In addition to the tanks, the concrete dikes (broom finished) were sprayed with black Polyshield SS-100® at 40 mils to provide a reliable secondary containment liner.

### RESULTS:

The project was inspected eighteen months after the initial application. Polyshield SS-100® Polyurea was performing well, with some minor discoloration. The owner was very pleased with the project outcome.



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## Protective Lining

# Featuring Polyshield SS-100®

**Project:**

Soft Water Basin

**Location:**

Port Neches, TX

**Owner:**

Huntsman Corp.

**Applicator:**

Immco, Inc.

**System:**

POLYSHIELD SS-100®

4 mils Red Primer

**Total Area:**

23,000 square feet

**Completion Date:**

November 1996

**PROBLEM:**

A 60-year old 23,000 sq. ft. soft water basin was leeching water into the concrete and dissolving the surface. The previous coal tar epoxy coating had cracked, and failed to seal the water containment system.

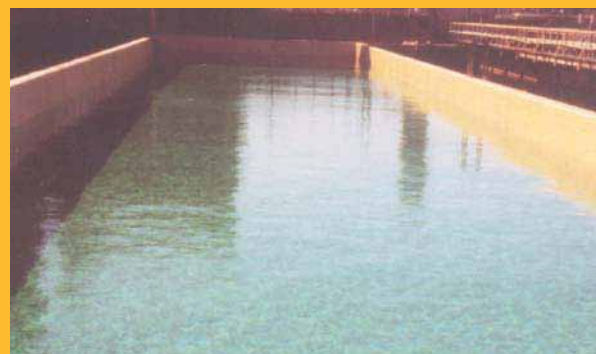
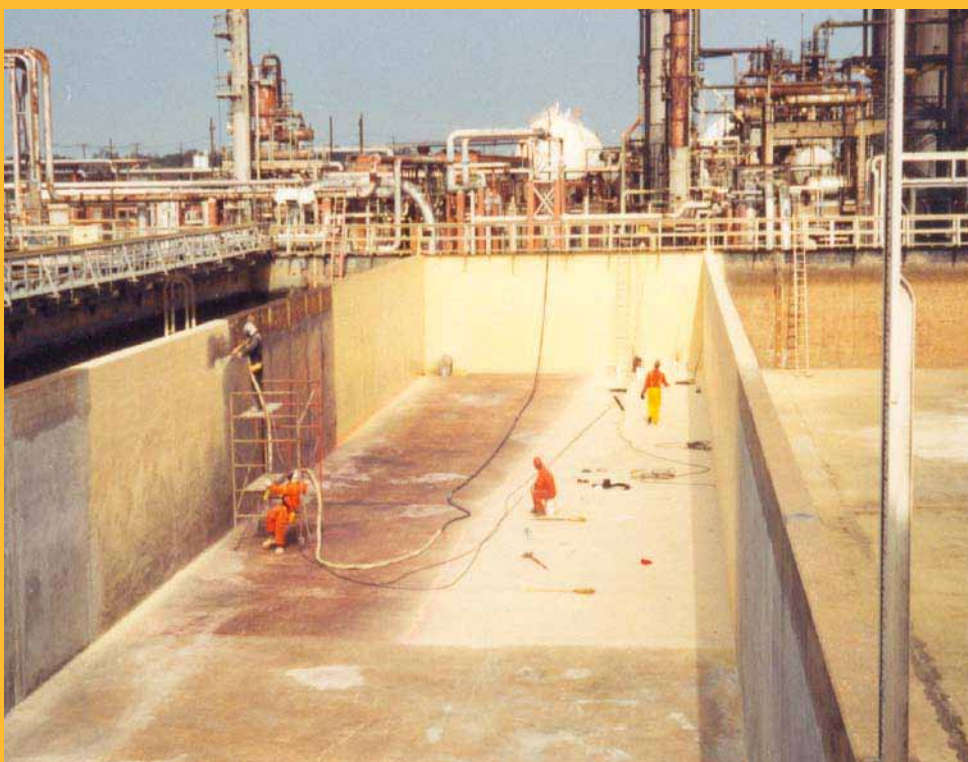
**SOLUTION:**

The owner selected SPI's Polyshield SS-100® polyurea coating for this project. The basin was hydro-blasted at 6,500 PSI and followed up by the application of a cementitious grout on the seams. The basin was then sealed with 4 mils of primer, and coated with 80 mils of Polyshield SS-100®.

The owner considered PoliBrid polyurethane and GlassMat epoxies for this project, but decided to use a fast-set, durable polyurea that was less sensitive to moisture. The owner was very familiar with the benefits of using this type of Polyurea product.

**RESULTS:**

Huntsman Corp. was pleased with the project results. They now have a durable, waterproof, elastomeric liner protecting their soft water containment system from leaks. The basin was inspected in January 2001 and was holding up well.



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