

CASE HISTORY ~ CH-045

BIO-GARD 255/ BIO-GARD 258 SEAL DRAINS IN TANK WASH-DOWN FACILITY

THE CHALLENGE: A chemical tank wash down facility in a Gulf Coast port has an extensive drainage system in the concrete floor. As chemical transport tanks of all shapes and sizes are drained and cleaned in readiness for their next cargoes the "heels" or last remnants of the previous cargoes are flushed into the drainage system for proper treatment or disposal.

A previously applied vinyl ester lining had failed disastrously through disbonding from the concrete substrate – examination showed the concrete to be slightly damp. A replacement, chemical resistant lining was required which would tolerate dampness in the concrete during application and subsequent service.

THE SOLUTION: A combination of TFT Kevlar® reinforced epoxy coatings was chosen for this project:

BIO-GARD 258, thickened to a pasty consistency with a proprietary polyolefin fiber was used to create a $\frac{1}{2}$ " cove in the lower edges of the drain. This cove assured adequate film thickness from the subsequent coats.

BIO-GARD 258 was then applied by roller at a nominal thickness of 16 mils, (400 microns), to provide the first chemical resistant coat. This product has a wide chemical resistance including 70% sulfuric acid and 50% caustic soda.

BIO-GARD 255 was applied by roller at a nominal film thickness of 16 mils, (400 microns), to become the final, extremely chemical resistant skin for the system. BIO-GARD 255 has enhanced chemical resistance including 98% sulfuric acid.



The BIO-GARD 255 and BIO-GARD 258 products are both 100% solids, moisture tolerant products. Unlike the previously applied vinyl ester coating there was NO odor during the application and subsequent curing period.

Application was completely predictable and problem free. Complete moisture tolerance allows application under all atmospheric conditions – even in 100% humidity Gulf Coast conditions – without blushing or amine bloom. Some coats were applied as soon as the previous application had reached "thumb-print" curing in order to increase productivity.

RESULT: Application by roller was completely without problems. The BIO-GARD materials cured well overnight and have formed a tough, tightly adherent protective coating over the extensive drain system at this facility.

For more information regarding this project, contact:

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LOCATION:

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