

# CASE HISTORY

## CH-057

### BIO-GARD 257 SEALS AND PROTECTS GULF COAST SHIP UNLOADER

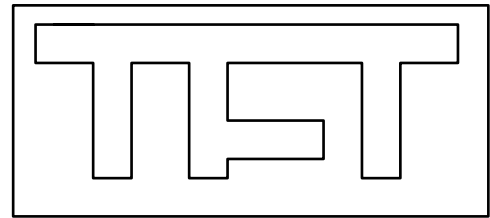
**THE CHALLENGE:** The ship unloader in the port of Beaumont, Texas, operated by Kinder Morgan was in urgent need of recoating. After long exposure to the Texas sun, high humidity, and constant contact with a variety of harsh chemicals, the existing coating had reached the end of its useful life.

The choice of the recoating system was complicated by a prohibition on abrasive blasting and spraying imposed by the Port of Beaumont and Kinder Morgan's insistence on an overall eco-friendly painting process.



*Appearance during application*

**THE SOLUTION:** Working closely with Micah Young, the Kinder Morgan Facility Manager, TFT personnel determined that the best coating for the job was BIO-GARD 257. The fact that BIO-GARD 257 is solvent-free was an important



consideration in its selection for minimal impact on the environment. This coating is able to be applied to wet surfaces and would therefore be suitable for application after a high pressure water blast. Due to its anticipated long exposure to the fierce Texas sun, the BIO-GARD 257 was treated with a powerful UV absorber to minimize chalking.

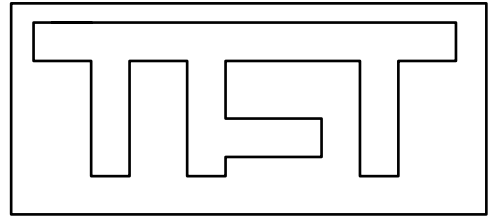
During an initial trial application, it was found that the available water jet equipment operating at 6,000 psi was barely adequate to remove the heavy rust scale on the structure. Some of the heavier, loose scale was easily removed, but a great deal of the tightly attached scale was impossible to blast off. Treatment by the CorrBan® process was specified in order to maximize adhesion and to give the best possible performance over the highly compromised surface. CorrBan is a patented decontamination process that utilizes environmentally acceptable chemicals to strip ionic contaminants from a surface. Coating adhesion to both bare steel and tight rust scale is thereby optimized for maximum service life.

Work began on the highest levels of the structure and progressed downwards. Manlift and platforms allowed access to the open steel structure. After water blasting and CorrBan treatment, the BIO-GARD 257 was applied mainly by roller with some brush work in tight areas and around nuts and bolts.

Care was taken to assure good coverage on sharp edges, nuts and bolts, and similar areas. BIO-GARD 257 is made with a robust thixotropy or "false body" which gives excellent edge retention. Application of an additional "stripe coat" on sharp edges assured satisfactory coverage.

Work progressed well in spite of frequent Texas sized thunderstorms. Fortunately the freshly applied BIO-GARD 257 is completely tolerant of immersion even immediately after application. Port operations were another matter, however, and all work had to be suspended while ships were alongside being unloaded.

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*BIO-GARD 257 applied over complex surface*

**RESULT:** The coating contractor is pleased with the tolerance of BIO-GARD 257 to wet or moist conditions during application. The steel structure is now protected with a tough and durable epoxy coating to resist the effects of a brutal marine and industrial Gulf Coast exposure.

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*Ship Unloader – General View*