

CASE STUDY



PROJECT SNAPSHOT

PROJECT

Wet Well M-19-A at Union Pacific Rail Yard, Chicago, IL

PROBLEMS

Major infiltration problem in an aging concrete wet located at a Union Pacific railyard. Approximately 50,000-95,000 gallons of ground water per day (35 gpm) was seeping into the wet well, adding to the cost of water treatment and taxing the sewer system.

SOLUTION

Application of Structure Guard®, 100% solids epoxy, a corrosion resistant protective coating that will also guard against oil and diesel fuel.

DIMENSIONS

8' x 38'

CONTRACTOR

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Structure Guard®, 100% Solids Epoxy Rehabilitates Concrete Wet Well Near Union Pacific Rail Yard

UNION PACIFIC M-19A WET WELL REHABILITATION

VORTEX PRODUCTS USED

1 Structure Guard®

THE CHALLENGE

A wet well near one of Union Pacific's rail yards located in Chicago, IL was suffering from major infiltration at the rate of 50,000 - 95,000 gallons over a time period of 24 hours. The 8'x38', concrete structure, is used to collect storm water, oil and diesel fuel. The infiltration problem was occurring at 12' below ground level. Additionally, the bottom of the wet well was corroded to the point, if left untreated, would have suffered catastrophic failure. Union Pacific also did not want to keep paying to treat the ground water from the infiltration.



THE SOLUTION

After comparing rehabilitation to dig and replace methods, Union Pacific officials chose to rehab the wet well using Structure Guard®, 100% solids epoxy for its long-term sealing and corrosion resistant properties. Timing, safety and cost were also key reasons why the choice was made to rehabilitate rather than dig and replace.





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THE APPLICATION

After cleaning and power washing the old wet well, a high performance, water stopping grout was used to fill, plug and stop the leaking voids within the wet well. The installation contractor took special care to avoid the hazards of the fast-moving trains still in operation. Once the leaks were plugged, Structure Guard® was applied and allowed to cure.

The old wet well was functioning like new in just 11 days.

ABOUT STRUCTURE GUARD

Quadex® Structure Guard® is a 100% solids, monolithic epoxy with zero shrinkage and can be applied up to 250 mils in a single pass. Once applied, Structure Guard will not delaminate, is holiday-free, and provides an impermeable, corrosion-resistant coating on deteriorated structures. Structure Guard provides superior adhesion to moist surfaces and an uncompromised application in damp, humid environments such as the Union Pacific wet well.



Access to the well will was very close the active rail road.



Benefits of Rehabilitation VS Dig and Replace

- **Safety** — Wet well was located close to a mainline.
- **Minimal Downtime** — Rehabilitation took only 11 days. Dig and replace would have taken 30 days.
- **Cost-effective** — Rehabilitation solution was 75% less.
- **Environmentally Friendly** — Epoxies 100% solids, no VOCs.
- **Quick Drying**
- Smooth surface **greatly decreases time** spent cleaning high-maintenance structures.



GREENBOOK APPROVAL

Greenbook/City of Los Angeles
Department of Public Works
Approves Structure Guard®

City of Los Angeles Approved Products
Select Lining and Coating