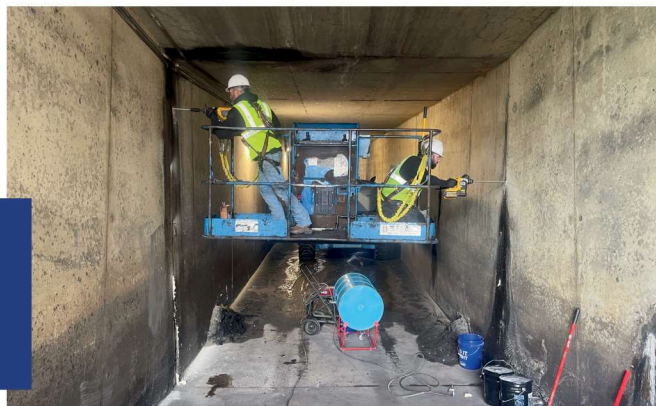


Coal Terminal Underground Leak Sealing

Newport News, VA



Problem

At a coal terminal facility in Newport News, Virginia, a several hundred foot vehicle access tunnel beneath an active railroad was facing severe water intrusion. This single-lane tunnel connected opposite sides of an equipment yard and had long suffered from persistent water infiltration at its joints. Over time, the issue worsened, resulting in standing water on the drive lane floor and visible leaks up to three feet along the tunnel walls.

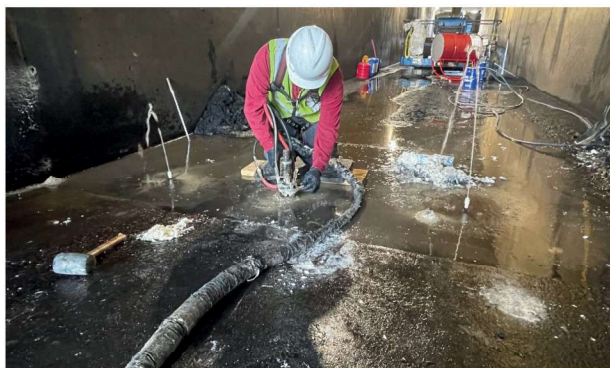
During winter months, the problem escalated. Water would freeze on the tunnel floor, creating dangerous conditions that rendered the passage unusable for vehicles. Beneath the tunnel, a large void was also discovered, though the primary concern remained the extensive and chronic water intrusion and freeze thaw cycles.

Solution

JACKCRETE of Virginia delivered a targeted polyurethane injection repair. The strategy used both single and dual-component polyurethanes:

- NCFI-4RH (formerly 24-003) filled the subsurface voids and reestablished soil connectivity.
- NCFI-120 (formerly 24-120) sealed leaking joints and water pathways, especially overhead areas.

Technicians injected along the tunnel approach, down each wall, and into every visible leak path, including weep holes. In some areas, injection followed a crisscross pattern to encapsulate joints and maximize the seal. During injections, water was displaced below the structure, which the crew referred to as “chasing the water.”



Results

The entire tunnel was sealed within just 3 days, a fraction of the time required by other methods considered. The JACKCRETE crew was able to reopen the tunnel nightly to accommodate the facility's ongoing operations. Even more critically, the railroad above remained fully operational throughout the project, minimizing disruption to the company's logistics and coal terminal activity. The repair delivered a watertight tunnel that eliminated wintertime hazards, restored safe access, and showcased the speed, precision, and non-invasive benefits of polyurethane injection.



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