EPOXYTEC™

Elko Water Reclamation Facility Concrete Infrastructure Rehabilitation

Municipal governments throughout the country are constantly encountering issues with corrosion in their infrastructure, and Elko, Nevada is no exception. The city is constantly balancing its resources and responsibilities to provide the best municipal services and maintain public infrastructure.

An example of the effects of corrosion was recently addressed at one of the wastewater treatment plants in Elko. Wastewater treatment plants are typically some of the worst environments for corrosion attack on infrastructure. There are many structures throughout these plants that handle the extremely hard work that wastewater processing requires.

If proper protection is not in place, this harsh environment will deteriorate both concrete and steel and cost treatment plants time and money to replace these critical structures.

One of the structures at this wastewater treatment plant had been coated previously. However, given the high flow and hydrogen sulfide gases from the wastewater pumping into it, the device failed because it was not coated properly or with right coating product.

Epoxytec, a leader in water and wastewater infrastructure rehab, was called in to consult with Camino Constructors and Elko WRF to provide the best solution for this structure's repair. After careful consideration, it was determined that Epoxytec CPP would be the best solution for the project.

Epoxytec CPP is a highly adhesive (2) component structural epoxy with 16,000 psi compressive strength. Both qualities are important for an application of this level, where failures have been an issue. The first thing that needed to be done was to remove the old coating from the structure.

Removing the old coating was done carefully in order to avoid damaging the concrete underneath. The process involved scraping

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Project Information

Location
Elko, Nevada

Completion Date
2010

Structure
Concrete Plant Structure Structure

Applicator
Camino Constructors, LLC.

Featured Products

CPP Trowel-Liner

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Elko Water Reclamation Facility Concrete Infrastructure Rehabilitation (cont.)

off the coating and then grinding what was left in order to achieve a surface that met NACE Surface Preparation Standard SSPC-SP 13/-NACE No. 6.

Once the surface was properly prepared, Epoxytec CPP was applied by trowel directly to the cleaned surface. This is particularly important when trying to get the structure back in service within a limited time frame.

Epoxytec CPP is an all-in-one self-priming rebuilding and lining system. Another great quality is its ease of use and the simple equipment needed to apply it. With a drill gun, a mixing bit, and a trowel, you're ready to apply CPP anywhere.

Once CPP was troweled on the substrate, water was used to smooth the surface and knock down the trowel marks. This allows easy clean-up of any contaminants that may embed themselves in the coating and potentially cause damage.

The rehabilitated structure was completed and allowed to cure overnight so the working area could be used the following day without damaging the newly applied coating. In cooler weather, as in Elko, a wall is built on the open side of the structure to prevent cold air from coming into the building. Heating lamps helped to moderate the temperature inside the structure so the product would cure in the proper time frame and allow the area to return to service as soon as possible.

Once the coating was completed, a final inspection was done to ensure that were no voids or bug holes in the coating and that it had cured prior to the area being put back in service. The total application took less than two days to complete, and the Epoxytec CPP coating will provide more than adequate protection for the concrete in this environment. Now the city of Elko can continue to provide its citizens with a clean, safe community through a responsive, transparent, and financially sound municipal government.