

set the tone: protect plant floors

By John Carafelly

Not all epoxy floor coatings protect plant floors from the harsh operating conditions and resulting surface erosion that are typical in water treatment facilities. While keeping plant floors intact may seem like a small part of plant operations, the floors' condition sets the tone for the facility and can influence how visitors perceive the company.

Epoxy floor coating withstands harsh WTP environments

Operations managers for two water treatment plants (WTPs), each on opposite coasts of the U.S., sought similar solutions and learned that using the right kind of coating system will protect the floors of their facilities, even in harsh environments.

East Coast Application

The Cooper City Utility Department's WTP in Cooper City, Fla., is in its 12th year of operation and is often a tour destination for students and people from other water treatment facilities. Although visitors consistently have been impressed with the plant's capabilities and its appearance, Lead Operator Ryan Webster was repeatedly dissatisfied with the performance of the various coatings installed to protect the plant's concrete floors.

"The floors are exposed to a lot of chemicals that we use in the water treatment process, so the epoxy floor coatings would last for about six months before they started to peel off," Webster said. "That left the concrete surface exposed, which caused the floor to erode."

In April 2009, Webster tried another epoxy floor covering that he learned about at a home show. One of the exhibits was for UCoat It floor coating systems, which are commercial-grade epoxy floor coatings available to homeowners.

"I heard about UCoat It before—the name stuck to me," Webster said. "I knew they've been around for awhile. I saw their ads in magazines and on TV. The rep I met at the home show sent me references. They did Jay Leno's garage."

"I used a 5-sq-ft space to test the floor coating in an area that was exposed to high-pH caustic soda and low-pH acid," Webster said. "After coating it, I placed raw chemicals on the test area and let them sit for a

few days, and the floor coating remained intact after I cleaned the chemicals away."

After agreeing to the job, a professional installation crew installed the new floor coating, but only after removing two or three coats of old paint with acid wash. Preparation and installation took about two weeks, with work times scheduled to accommodate plant operations. The finished floor included U-Tex anti-slip aluminum oxide additive and U-Flek decorative flake topcoat, as well as Cooper City's logo.

Unlike other coating systems that were used at the plant, this solution proved to be a durable one that did not need to be replaced after six months.

West Coast Application

When Carpinteria Sanitary District (CSD) Operations Manager Mark Bennett decided that the main entrance of the wastewater collection, treatment and disposal facility in Carpinteria, Calif., needed a new look, he discovered the solution while watching television.

"I saw a commercial for UCoat It floor coating systems while watching the Speed Channel and got the idea to use the product at the plant," Bennett said. "I went online and ordered the material, and my staff installed the floor."

The original floor of the CSD plant was constructed during its last upgrade in 1995. It was bare concrete until the new floor coating system was applied in December 2009.

"Our maintenance staff started the floor on a Friday and finished it the next day," Bennett said. "We gave it a chance to air out, and then a week later we scuffed out a circle in the middle of the floor, put our logo and lettering in and covered it with a clear coat."

Bennett was impressed with the clean look of the final product and that the floor coating systems are available as complete packages—from the preparation materials to the finished coating. The entrance area is for pedestrian traffic.

"The entryway to the treatment plant sets the tone for what we want our visitors to see in a tour," Bennett said. "It gives them that clean first impression. We believe that a clean plant means that customers enjoy high-quality water treatment in their environment."

Color was an important consideration for Bennett. "The entire plant is concrete, and it's gray everywhere," he said. "I wanted to dress up the floor in the main entryway in blue. The company that makes the signs for our trucks printed our logo and lettering on vinyl—3 ft in diameter—which we placed on the floor under the clear urethane coating."

The plant serves residents of Carpinteria and surrounding areas of the Carpinteria Valley, located on the Pacific Coast about 13 miles east of Santa Barbara. The CSD was named 2009 Small Plant of the Year at the California Water Environment Assn.'s annual conference on May 1, 2009.

"The decision to award our plant was based on many factors, of which appearance is only one," Bennett said. "But the entryway reflects our commitment to general cleanliness and attention to detail, as in all things we do."

Floors Hold Up From Coast to Coast

The WTP in Cooper City is located about 10 miles from Florida's Atlantic coast, southwest of Ft. Lauderdale.

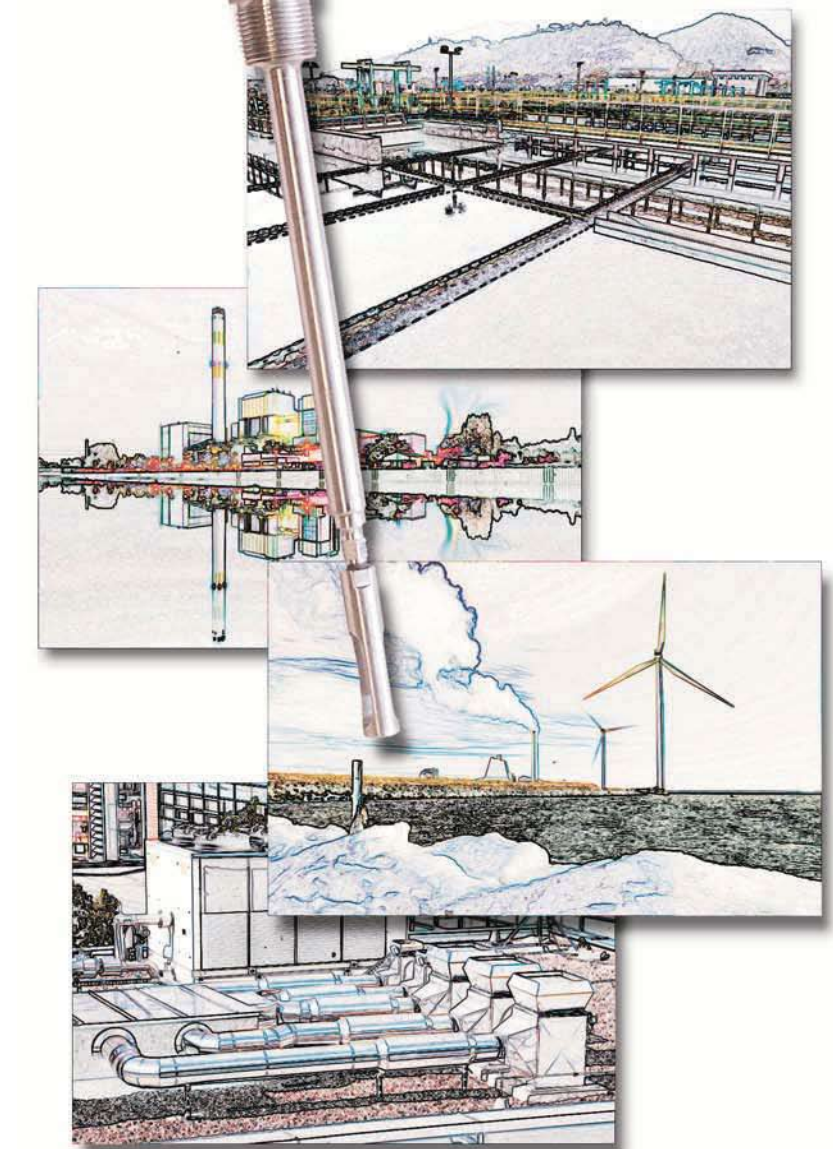


In the Cooper City facility, floor coating was installed in the plant's membrane building.

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