CPC FLOOR COATINGS
A DIVISION OF CAROLINA PAINTING CO.

CASE STUDY:

Saluda Hydroelectric Transformer Containment Project

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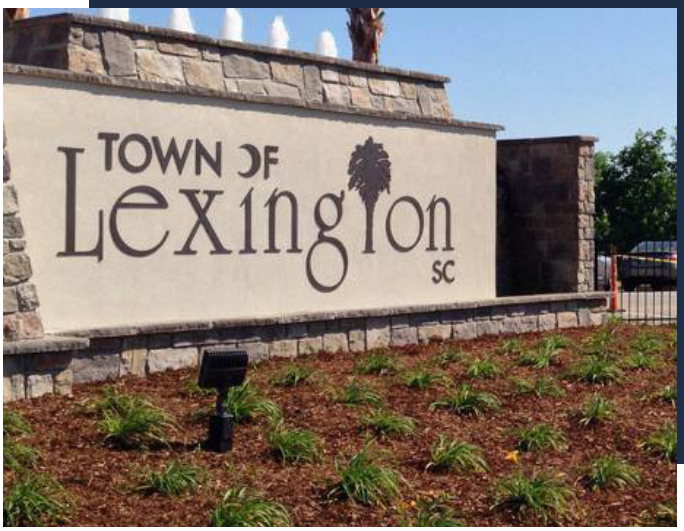
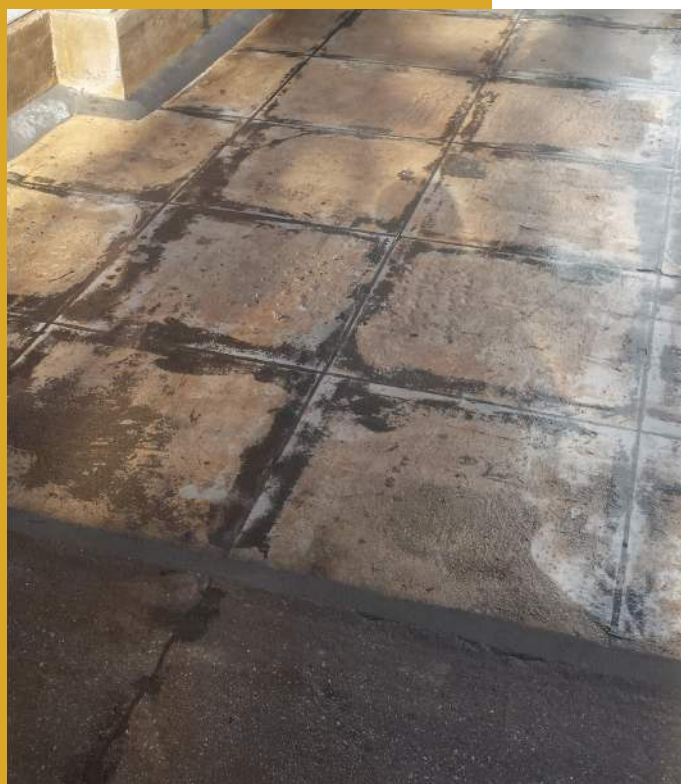
A record-breaking feat of engineering when it was built in 1930, the Saluda Hydroelectric Project in Lexington County, SC provides more than 245 million kilowatt hours of power to homes and businesses each year.

The 87-year-old facility, however, does show its age from time to time, and CPC Floor Coatings was called in to help with a water leakage problem.





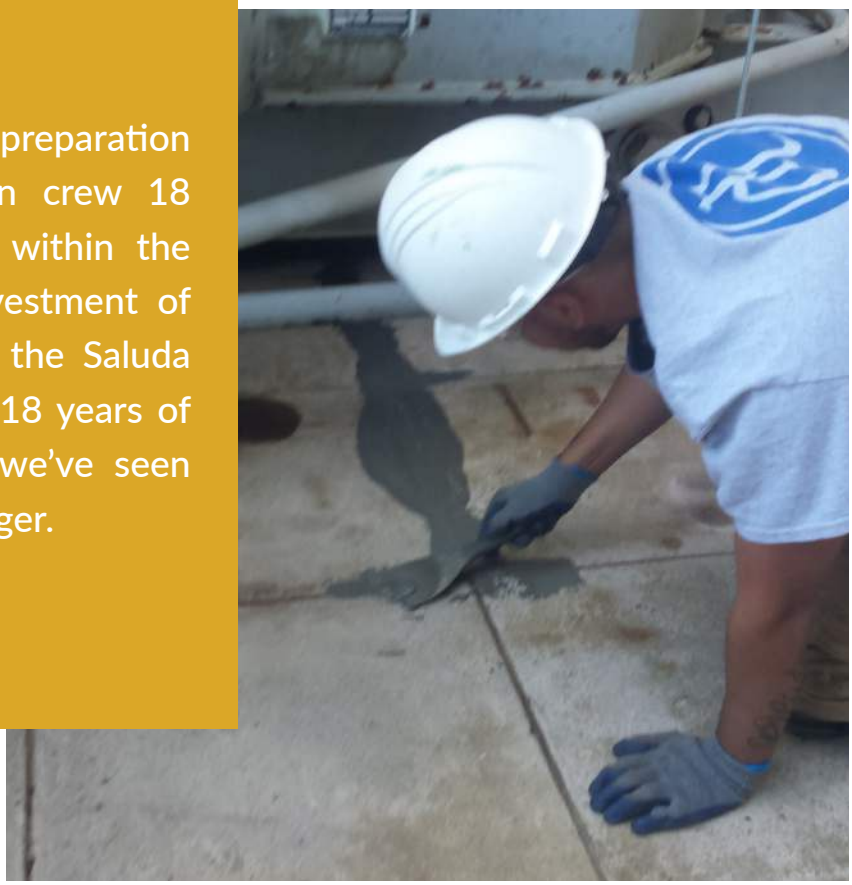
CHALLENGES_

The containment areas for the plant's transformers are located on a 1,930-square-foot elevated concrete slab, which had begun to leak rainwater into the rooms below.

The concrete cant cove had also been damaged over time, and there were other sections in which new cove needed to be added. Several pipe penetrations also needed to be sealed off.

PROCESS_

The entire process, from surface preparation to topcoat, took our five-man crew 18 days to complete, which was within the original project scope. This investment of time and labor should provide the Saluda Hydroelectric Plant with 12 to 18 years of watertight protection, though we've seen similar coatings last for even longer.



SOLUTIONS_

Surface Preparation:

First we started by prepping the surface, using a wet-abrasive blast cleaning process to achieve a particular profile (in this case, CSP 3). Surface preparation is the most important step to ensure coating system adhesion.

Concrete Repair Work:

After surface preparation, our team had to repair damage to the concrete slab itself. We used the Tnemec Series 206 flexible epoxy to fill cracks. In addition, our crews tackled more than 400 feet of cant cove, handling both repairs and new installation. The pipe penetrations were sealed off using fiberglass cloth and the same flexible epoxy.

Installing Waterproof Coating:

The Saluda Hydro containment area includes the 1,930 square feet of slab as well as the 1,016 square feet of masonry perimeter and separation walls—all of which needed a waterproof coating.

To line the containment area, we installed a TNEMEC system designed to stop water penetration. We primed the area with an 8.0-mil layer of Tnemec's Series 201 Epoxoprime, and then applied an one-eighth-inch layer of a thick aggregate reinforced flexible epoxy coating (Tnemec's Series 206 Sub-Flex).

Finally, since the containment area is outdoors and epoxy doesn't fare well in sunlight on its own, we applied a UV-resistant polyurethane coating (Tnemec's Series 291 CRU) as a topcoat to protect it.