When Hurricane Gustav struck U.S. soil in September 2008, it caused substantial damage and flooding in the southern portion of the nation. One of the structures hit was a utility plant in Louisiana that operates a sewage pumping station. The storm left behind several feet of standing water in the building, putting the plant’s electrical equipment at serious risk of being destroyed.

The utility plant was in the process of installing a Type 4X stainless steel enclosure from nVent HOFFMAN, provided by R S Integrators in Pineville, North Carolina, to house electrical equipment critical to its operations. At the time of the hurricane, the plant’s duplex pump control panel and electrical motor controls were contained in the enclosure—which was, by the end of the storm, three-quarters of the way underwater.

“We had installed the electrical components and shipped the enclosure, and the utility plant mounted it on the wall but had not run the conduits yet,” said Ron Sigmon, president of R S Integrators. “The enclosure was located in a pit that filled up with water, submerging the panel. We’re not sure for how long, but it could have been underwater for days.”

After the hurricane, R S Integrators received a call from the plant requesting a quote for a replacement panel, and the enclosure was sent back to Sigmon to inspect for damage and salvage any equipment that he could.

“We opened the panel, and we could see no evidence of water entry,” Sigmon said. “The enclosure’s not rated for submersion, so we expected to see equipment damage. But we tested the electrical equipment, and everything was working fine.”

HOFFMAN’s Type 4X, continuous hinge stainless steel enclosure is constructed to protect sensitive equipment while resisting corrosion in water and wastewater applications. It also features a PowerGlide handle with 3-point latching, designed to provide operators with the right combination of security and easy access to electrical components. In this case, the latch kept out floodwaters as well.

“We’ve had enclosures submerged before, but they were totally destroyed when water entered,” Sigmon said. “We could tell where the water level was at the plant, because the outside of the panel was filthy, but the enclosure and electrical equipment were fully functional. The only condensation we saw was on some of the...
screws that weren’t made of stainless steel, but that’s common for an enclosure even in ordinary operating conditions.

“The stainless steel enclosure had sustained more damage from the plant shipping it back to us than it did from the storm,” Sigmon added.

After R S Integrators found that both the enclosure and equipment had escaped Hurricane Gustav virtually unharmed, Sigmon said he simply returned the panel to the plant—telling them that the enclosure was still ok to use, if they so chose. The results of this investigation left Sigmon and others at R S Integrators—a company that has worked with HOFFMAN for 12 years—pleasantly surprised.

“We wouldn’t have expected the enclosure to withstand this,” Sigmon said. “I was pretty impressed.”