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CASE STUDY

Waterford water treatment plants/Waterford, CT

Connecticut Project Takes Steps To Ensure Worker Safety

Working at water treatment plants can be dangerous, and even deadly. In a 2015 accident in Florida, a worker died when he fell into an open tank of sewage at a water treatment facility.

A project in Waterford, Connecticut demonstrated the town's commitment to the safety of its employees. Nine floor doors from BILCO were installed at various water treatment stations in the town, which has more than 19,000 residents and sits on the border between the Long Island and Block Island Sounds.

Falls at worksites, especially those where employees need to access water treatment valves, are common. According to statistics from the Occupational Health and Safety Administration, falls at worksites accounted for 338 deaths in 2018. OSHA also reports that the most frequently violated standard in the 2019 fiscal year related to fall protection.

News stories about about workers involved in deadly mishaps. In the Florida accident, a worker in West Palm Beach fell through a grate and into the sewage tank. The man's body was pulled from the sewage tank 18 hours after he was reported missing. The worker drowned in the storage tank, where he was conducting routine maintenance tasks.

Scenarios such as the accident in Florida are precisely what Waterford sought to avoid with the installation of the BILCO doors. The doors were manufactured in different sizes, and all included factory-installed fall protection.

"The old hatches were not required to have fall protection," said Jim Bartelli, Assistant Director of the Waterford Utility Commission. "When the hatches are open, they could possibly trip and fall into the opening. The new hatches have fall protection provisions that meet OSHA standards."

The doors provide access to wet wells, which are essentially holding cells that empty out when they reach a pre-determined level. While in the wet well, the wastewater is tested and carefully monitored to detect sewage levels.

Doors and other equipment at water pumping stations are susceptible to corrosion. Over time, a buildup of hydrogen sulfide can contribute to decay of concrete and metal. Humidity, effluent abrasion and erosion, and chemical attack can also lead to corrosion and failure of access doors and other equipment.



Photos: Bliss Photography and Studios



The BILCO doors are constructed with a channel frame for use in exterior applications where there is a concern of water or other liquids entering the access opening. The doors feature aluminum construction and type 316 stainless steel hardware. They also include engineered lift assistance for one-hand operation.

Fall protection grating is an important feature in the Waterford project. The grating system allows workers to safely inspect pumps and monitor underground areas. It also meets OSHA requirements for fall protection for access doors. Recently redesigned, the fall grating system includes a powder coat paint finish and a hinge design that allows the grating to open to the full 90-degree position.

The corrosion-resistant aluminum construction doors and the important fall protection grating complement each other in this project, and help ensure the safety of water treatment plant workers.

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