

Ashbridges Bay Water Treatment Plant

Unmatched performance in ferric and ferrous chloride

Background

The City of Toronto has used various fiberglass piping products from NOV Fiber Glass Systems in ferric and ferrous chloride service for more than 25 years.

In 2015, a system re-design at both the Ashbridges Bay Water Treatment plant and Humber Treatment Plant was initiated with the goal of preventing phosphorous in the plant effluent from entering Lake Ontario.

The project involved multiple small diameter lines carrying ferric and ferrous chloride through long tunnels throughout the plant. To enhance worker safety and environmental protection, it was decided that a secondary containment line would also be required for all ferrous chloride piping and tanks.

Solution

Our Green Thread™ HP16 product was selected for the carrier pipe based on chemical resistance and long-term performance. In the tunnel areas, our Red Thread™ HP16 piping was used for the secondary containment. The fiberglass tanks and the Green Thread fill/overflow/vent lines were contained within concrete retaining walls in the tank farm.

The Ashbridges Bay installation involved over 7,000 ft. of 2 to 8 in. Green Thread HP16 for carrier piping, and another 3,500 ft. of 3 and 8 in. Red Thread HP16 used as secondary containment.

The ferric and ferrous chloride solutions are conveyed in concentrations ranging from 8 to 13%, with a specific gravity of 1.4.

Continued Success

Due to the success of this project, the installation of a similar project at the Humber Treatment plant is starting in late 2019. This project involves about 9,000 ft. of 1 and 1.5 in. Green Thread HP16 pipe for the ferric and ferrous chloride carrier system, along with another 9,000 ft. of 3 in. Red Thread HP16 for the containment piping.

