

CASE STUDY

JH Campbell Generating Complex Bin Wall Replacement

West Olive, Michigan

Nucor Skyline was contracted by Consumers Engineer to produce a durable steel sheet pile divider wall at J.H. Campbell Generating Complex.

PROBLEM

Consumers Energy was drawing cool water from Lake Michigan, piping it through a condensing unit which cooled vapor from the steam turbine and then pumping the warm water back into the lake. There is an existing bin wall which divides the cool water inlet from the hot water outlet. This existing wall was deteriorating and allowing sediment to seep into the water on both sides. Controlling the quality of the water entering the environment through the generating complex was a critical factor.

SOLUTION

An independently supported double wall was constructed to contain the existing bin wall and divide the streams. The new wall was composed of Z-shaped hot rolled steel sheet piles with improved corrosion resistance (A690) and threaded tie bars. The sheet piles were driven approximately two feet outside of the existing bin wall. Vibratory hammers were used to slide the piles in place to avoid disrupting the contents of the existing bin wall. H-piles were placed in a continuous pattern, 40 feet ahead of the sheet piles, to keep the walls straight. Channel guides were placed between the H-piles to vertically guide the sheet piles.



PROJECT PARTNERS

Owner

Consumers Energy Company
Jackson, MI

Engineer

Black & Veatch Corporation
www.bv.com

Contractor

Hardman Construction, Inc.
Ludington, MI

PRODUCTS

Z-shaped Steel Piles: A690; 2,370 tons

Threaded Bars & Accessories: Grade 75;
39 tons