

CASE STUDY

Sewaran 7 Power Plant

Woodbridge, New Jersey

HISTORY

The coastline of New Jersey is dotted with industrial parks and is home to many utility company power plants. These power plants are situated close to water because they need water for cooling the condensers that produce high quality steam that runs the turbines.

PROBLEM

New Jersey was reminded of the vulnerability of the location of such power plants when Hurricane Sandy swept through the eastern seaboard, wreaking havoc with the tides and causing major flooding.

SOLUTION

One of several flood mitigation projects that Nucor Skyline has contributed to was the Sewaran 7 Power Plant retaining wall in Woodbridge, NJ. This plant, owned and operated by PSEG Fossil, is situated very close to the shoreline, and needed protection from the storm tide surges.

Nucor Skyline provided up to 19,000 tons of AZ 48-700 sheet piles, SKZ 23 sheet piles, 18" x .625 OD pipe piles and fabricated bent caps for this large construction job on the coast. Skyline was also able to provide value-added engineering support, and changed the originally specified sheet pile, the AZ 48, to the AZ 48-700. This new sheet pile is part of a family of the largest sheet piles available from Nucor Skyline.

The sheet piles were driven to an elevation of 20 feet above sea level to protect the facility from the rising tides. This was the first project using the AZ 48-700 steel sheet piles. The



AZ 48-700 is 20% wider and 6% lighter, while maintaining the same bending properties as the originally specified AZ 48.

Many of the products used for this project were produced domestically, which saved the customer time, as well as money. One of the benefits of using the AZ 48-700 steel sheet pile were fewer sheet piles needed to cover the same area due to their increased width.

PROJECT PARTNERS

Owner

PSEG Fossil (subsidiary of PSEG Power) – Woodbridge, NJ

General Contractor

American Pile – Branchburg, NJ

Ferreira Construction – Branchburg, NJ

PRODUCTS

AZ 48-700 Sheet Pile:

800 doubles X 48' – 4,100 tons

SKZ 23 Sheet Pile: – 420 tons

Fabricated Bent Cap: 18 x .625 – 14,000 tons

PROJECT TIME FRAME

March 2016 through July 2018