



PNGS 2024 – PRD Pile Inspection South of Unit 2

CLIENT

Ontario Power Generation

LOCATION

Pickering, Ontario

PROJECT DESCRIPTION

In 2018, Pickering Nuclear Generating Station (PNGS) was seeking an operating license that would extend site electricity production to 2024. In support of this extended operating life, Ontario Power Generation (OPG) undertook a series of inspections and analyses demonstrating the suitability of existing structures to continue supporting electricity production. Part of this work included a soil resistivity test program that was performed in the fall of 2017. Based on the initial results and report prepared from this test program, additional inspections were requested to confirm, by direct measurement of the entire piling circumference, that the existing pilings near Unit 2 could continue to fulfill their design function throughout the extended operational life of the station.

B&M SCOPE OF WORK

Black & McDonald's (B&M) remit covered excavation, shoring as required, and backfilling the required Pressure Relief Duct (PRD) footing to facilitate access to three piles of the Pier 2 footing southwest of Unit 2.

Six vertical feet of the three piles beneath the footing were exposed on all sides to allow direct assessment of the pile condition around its entire circumference. The piles are spaced 4 ft. apart in the E-W directions and four apart in the N-S direction at the corners in Pier 2. The shoring reached a depth of 12 to 15 ft. Due to the number of utilities in the area, daylighting was performed prior to any shoring being installed.

The excavation was performed in phases, with hold points proceeding further. The Phase 1 excavation depth was approximately 6 ft. 10 in. below a 254 ft. elevation surface. After hold point cleared the Phase 2 excavation the depth was approximately 6 ft. below the PRD concrete footing.