Unit 4 CCW Travelling Screens

CLIENT

Ontario Power Generation

LOCATION

Darlington, Ontario

PROJECT DESCRIPTION

Travelling screens were a major component in the CCW system. Their function was to remove debris from lake water that was then used as the process fluid for the system. Failure of the screens to perform their function would have an adverse impact on the operation of the system and unit as there would be insufficient flow.

For the CCW system, the loss of the travelling screens results in a shutdown of the unit if the system is unable to provide CCW to critical safety related loads that require cooling.

In order to address the issues of degraded CCW travelling screens, the existing screens were replaced with a modern day equivalent provided by the OEM. These screens were the same fit and function as the legacy screens. This ensured that the travelling screens would maintain their design function, improve equipment reliability and mitigate potential failures of the equipment.

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B&M SCOPE OF WORK

The scope of work for this contract consisted of completing the construction activities required to replace six CCW Travelling Screens (4-71110-SC1 to SC6) on Unit 4 with new screens supplied by the OEM.

The construction activities for replacing each screen were as follows:

- Removal of the existing screens. All components of the screens were replaced except for the guideways (the vertical, metal channel embedded into the concrete walls of the travelling screen pit).
- Cleaning the travelling screen pit and the guideways of any debris that may restrict installation of the new screen.
- Identifying any repairs required to the concrete walls of the travelling screen pit and floor around the pit opening.
- Replacement of the travelling screen anchor bolts
- Removal of legacy lighting fixtures in the north and south screen pit, with cut associated cables and prepared ends to allow cables to be abandoned in-place
- Installation of the new travelling screens in the travelling screen pit
- Replacement of the 600 V power supply cables, modification of conduit and completing tie in at MCC and travelling screen motor
- Providing support for vendor post installation inspections and function testing

BENEFITS TO THE CLIENT

This project was categorized under high risk category due to underwater scope. to: This project was categorized as high risk due to the underwater scope. Black & McDonald rose to the occasion and completed the project event free and within projected cost and schedule.