

Low Pressure Service Water (LPSW) Travelling Screen

CLIENT

Ontario Power Generation

LOCATION

Darlington, Ontario

PROJECT DESCRIPTION

The travelling screens were a major component in the Low Pressure Service Water (LPSW) system. Their function is to remove debris from lake water that is 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 the unit as there would be insufficient flow. For the LPSW system, loss of the travelling screens would result in a shutdown of the system if it was unable to provide LPSW to critical safety related loads requiring cooling.

In order to address the issues of degraded LPSW travelling screens, the old screens were replaced with a modern day equivalent provided by Ontario Power Generation. The new screens would be the same fit and function of the previous 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 two LPSW Travelling Screens on Unit 1 with a new screen supplied by the OPG.

The construction activities for replacing each screen were:

- Removal of the existing screen. All components of the screen were replaced except for guide ways (the vertical, metal channel embedded into the concrete walls of the travelling screen pit)
- Cleaning stop log tracks, installing and removing the stop logs to isolate flow through the LPSW pit for replacement
- Cleaning the travelling screen pit and the guide ways of debris that may restrict installation of new screen
- Identifying any repairs required to the concrete walls of the travelling screen pit and floor around the pit opening
- Replacing the travelling screen anchor bolts
- Removing legacy lighting fixtures in the north and south screen pit, and cut associated cables and prepare ends to allow cables to be abandoned in-place
- Installing the new travelling screen in the travelling screen pit

BENEFITS TO THE CLIENT

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