

**Ice Plugs at Darlington Nuclear Generating Station:
Team Work In Action**

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Abstract

Ice plugs are used in piping for equipment isolation in cases where there are no isolation valves designed into the process systems. The most obvious need for isolation is in the feeders but there are other systems also incorporating pipes of various sizes that, from time to time, require ice plugs to provide isolation during equipment maintenance activities.

Operators at Darlington Nuclear Generating Station have worked with Ontario Hydro's Corporate Business Development unit (CBD -formerly Ontario Hydro Research), the site Engineering Services Department (ESD), and Darlington Mechanical Maintenance to perfect the Operator use of Ice plugs on pipe sizes up to NPS36.

Normally the Operators at a nuclear power generating station are trained to operate designed plant equipment in accordance with approved operating procedures, and all Unit Operators are trained to operate all equipment. Perfection in Ice Plug application is necessary, but there is no benefit in training all operators in the use of Ice Plug equipment. As a result, training has evolved into specialized, "as required training", depending on the scope of each ice plug job and the interaction required from the rotating shift crews.

This paper will discuss both the previous operating experiences and problems with ice plugs at Darlington as well as the present team interaction approach involving the Operator, ESD, CBD, and Maintenance personnel. This has lead to the successful development and application of Ice Plug equipment, procedures, training and task execution at Darlington Nuclear Generating Station. This will be of benefit for Operating and Engineering and Maintenance groups that currently have such a program or are considering developing an ice plug program.