ONTARIOPOWER GENERATION

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N-FORM-10134-R003*

Barrier Analysis Worksheet

Adverse Condition	Barrier(s) that should have precluded Condition	How the Barrier Failed	Why(s) the Barrier Failed
Delay to TRF re-start due to ACS project 16-38401 delays	Inadequate TRF maintenance procedure	TRF maintenance procedure NK38-MMI-39500-10001 lacked details about minimum clearances & tolerances i.e. baffle end plate projection	TRF was aware of legacy internal interferences in Fan 1 issues since 1990 between the impellers and end baffle plate. This legacy interference condition had not been addressed by TRF in subsequent revisions of the maintenance procedure to enable re-assembly of Fan 1. Project was not made aware of the legacy interference issue by TRF, during detailed design or installation planning.
	Engineering documentation and drawings on length of power supply cables	Project team was informed that TRF did not have any engineering drawings or documents on the fan motors or power supply cables	Lack of documentation and drawings
	Directed Change from TRF	The postponement of ACS maintenance window within the TRF T1301 outage reduced the schedule float for the ACS modification and extended the overall outage duration.	TRF wanted to minimize ACS unavailability by having LPSW tie-in work and TRF ACS work executed during the same TRF maintenance window (ACS is a poised system & requires DOM approval for >24hours outage or to take it out of service).

*Associated with N-STD-RA-0008, Incident Investigation