ONTARIOPOWER GENERATION

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N-FORM-10134-R002*

Barrier Analysis Worksheet

Consequence(s) **(What Happened?)** *(List one at a time, need not be in sequential order.)*	**Barrier(s) that should have Precluded Event**	**Barrier Failure Mechanism** **(How the Barrier Failed)** *(List all physical and administrative barriers for each consequence.)*	**Barrier Assessment** **(Why the Barrier(s) Failed)** *(Identify if the barrier was missing, weak, or ineffective; and why.)*
OPG Engineering Oversight Department at the direction of OPG Projects and Modifications conducted an isolation assessment in support of Work Protection for the EPC. OPG Engineering Oversight is not staffed to provide such support.	ES-MSA Objectives of Engineering/Design Oversight per NK38-PLAN-38000-10002	Requesting services beyond the Engineering/Design oversight role in the project where the objective is to provide for the execution of engineering process and completion of engineering deliverables by the Contractor to ensure requirements of the contract terms and conditions are fulfilled in a timely way with the appropriate level of quality. Project Schedule pressure to support installation Lack of Questioning attitude regarding EPC Scope when instructing OPG Engineering Oversight to take on work to support an EPC installation activity. Lack of understanding of the role of OPG Engineering Oversight as documented in the Project Plan NK38-PLAN-38000-10002 The barrier regarding the ES-MSA and Project oversight plan are weak as it is often not referenced by Projects and Modifications staff or Engineering staff.	**CF-K2 - Manpower Resource Management** Managerial Oversight did not ensure that manpower requirements are identified, developed and are capable to effectively support the organization goals and work programs. Resource needs regarding personnel to provide engineering isolation assessments to support work protection are not identified clearly to determine whether it is in the scope of the EPC or in the scope of OPG.

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

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Evaluate to ensure Ops are included in the process before going to Design, where work protection is required.	Operations Involvement in Work Plans, development of AWPP.	Barrier did not fail. Use of AWPP was advised by the Shift Manager. AWPP is an approved operations document. Work Plans are authorized by operations.	Barrier did not fail.