



April 11, 2001  
NMP1L 1583

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

RE: Docket No. 50-220  
Licensee Event Report 00-03, Supplement 1

Gentlemen:

In accordance with 10 CFR 50.73(a)(2)(iv), we are submitting Supplement 1 to Licensee Event Report (LER) 00-03, "Reactor Trip on Low Reactor Water Level While Placing the Reactor Water Cleanup System in Service." By letter dated February 12, 2001 (NMP1L 1567), Niagara Mohawk Power Corporation committed to issuing a Supplement to LER 00-03 to provide additional details of the event described in the LER. Supplement 1 to LER 00-03 provides these additional details.

Very truly yours,

A handwritten signature in cursive script, appearing to read "LA Hopkins".

Lawrence A. Hopkins  
Plant Manager - NMP1

LAH/TRB/mlg  
Attachment

xc: Mr. H. J. Miller, NRC Regional Administrator, Region I  
Mr. G. K. Hunegs, NRC Senior Resident Inspector  
Records Management

IE22

NRC FORM 366				U.S. NUCLEAR REGULATORY COMMISSION				APPROVED OMB NO. 3150-0104 EXPIRES:			
<b>LICENSEE EVENT REPORT (LER)</b>								ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503			
FACILITY NAME (1) <b>Nine Mile Point Unit 1</b>						DOCKET NUMBER (2) <b>05000220</b>			PAGE (3) <b>01 OF 04</b>		
TITLE (4) <b>Reactor Trip on Low Reactor Water Level While Placing the Reactor Water Cleanup System In Service</b>											
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
09	27	00	00	03	01	04	11	01	N/A		
									N/A		
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)								
POWER LEVEL (10) 0%			<input type="checkbox"/> 20.2201(b) <input type="checkbox"/> 20.2203(a)(1) <input type="checkbox"/> 20.2203(a)(2)(i) <input type="checkbox"/> 20.2203(a)(2)(ii) <input type="checkbox"/> 20.2203(a)(2)(iii) <input type="checkbox"/> 20.2203(a)(2)(iv)		<input type="checkbox"/> 20.2203(a)(2)(v) <input type="checkbox"/> 20.2203(a)(3)(i) <input type="checkbox"/> 20.2203(a)(3)(ii) <input type="checkbox"/> 20.2203(a)(4) <input type="checkbox"/> 50.36(c)(1) <input type="checkbox"/> 50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(i) <input type="checkbox"/> 50.73(a)(2)(ii) <input type="checkbox"/> 50.73(a)(2)(iii) <input checked="" type="checkbox"/> 50.73(a)(2)(iv) <input type="checkbox"/> 50.73(a)(2)(v) <input type="checkbox"/> 50.73(a)(2)(vii)		<input type="checkbox"/> 50.73(a)(2)(viii) <input type="checkbox"/> 50.73(a)(2)(x) <input type="checkbox"/> 73.71 <input type="checkbox"/> OTHER <small>(Specify in Abstract below and in Text, NRC Form 366A)</small>		
LICENSEE CONTACT FOR THIS LER (12)											
NAME <b>David F. Topley, Manager Operations Unit 1</b>								TELEPHONE NUMBER <b>(315) 349 - 1752</b>			
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		
SUPPLEMENTAL REPORT EXPECTED (14)							EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)					<input checked="" type="checkbox"/> NO						

**ABSTRACT** (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On September 27, 2000 at 0123 hours, while the plant was shutdown, Nine Mile Point Unit 1 experienced a reactor trip. The operators were placing the reactor water cleanup system in service when the reactor tripped on low reactor water level. When the reactor water cleanup system was placed in service, voids in the reactor water cleanup system were filled with reactor water resulting in the reactor water level decreasing to the reactor trip setpoint.

The cause of the reactor trip was a low reactor water level condition due to inadequate filling and venting of the reactor water cleanup system prior to placing the system in service.

The corrective actions revised the procedure used for filling and venting the reactor water cleanup system and reinforced and monitored Operations management expectations regarding the acceptance of inappropriate system operating characteristics and adequacy of contingency planning. Additionally, the inlet and outlet standby reactor water cleanup filter isolation valves have been repaired and high point vents have been installed in the reactor water cleanup system.

NRC FORM 366A  U.S. NUCLEAR REGULATORY COMMISSION  <b>LICENSEE EVENT REPORT (LER)</b> <b>TEXT CONTINUATION</b>		APPROVED OMB NO. 3150-0104 EXPIRES:  ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 30.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.																						
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

## I. DESCRIPTION OF EVENT

On September 27, 2000 at 0123 hours, while the plant was shutdown, Nine Mile Point Unit 1 experienced a reactor trip. The operators were placing the reactor water cleanup system in service when the reactor tripped on low reactor water level. When the reactor water cleanup system was placed in service, voids in the reactor water cleanup system were filled with reactor water resulting in the reactor water level decreasing to the reactor trip setpoint of 53 inches.

A standby reactor water cleanup system filter was left drained and isolated as part of a maintenance activity prior to the venting and filling of the reactor water cleanup system. Venting and filling of the reactor water cleanup system commenced at 1230 hours on September 26, 2000. Subsequently, at 0118 hours on September 27, 2000, the reactor water cleanup system was placed back into service. During the initial three minutes after restoring the reactor water cleanup system to service, reactor level dropped from approximately 66 to 49.5 inches above instrument zero. In the following four minutes, operators stabilized reactor water level at approximately 55 inches. The standby reactor water cleanup filter that was drained and isolated prior to placing the reactor water cleanup system in service was found filled after the reactor trip. Sufficient time elapsed between the filter isolation and the placing of the reactor water cleanup system back into service for the filter to have been completely filled over a minimum time period of 12.5 hours due to leakage past the butterfly-type filter inlet and outlet valves. During maintenance activities in refueling outage no. 16 on the standby reactor water cleanup system filter, the filter inlet and outlet valve seats were found to have degraded such that the valves were not leak-tight. Thus, leakage past the filter isolation valves created voids in the reactor water cleanup system piping that were filled from the reactor vessel inventory when the reactor water cleanup system was placed back into service. This coupled with a historical 4-inch reactor water level drop when placing the reactor water cleanup system in service (due to the inability to fully vent and fill the system) resulted in a greater reactor water level drop than had been experienced previously.

During this event, operators were controlling reactor water level with the control rod drive system. Historically when placing the reactor water cleanup in service, operators have used systems (i.e. condensate system) that have greater makeup capability than the control rod drive system. Previously, during this evolution, with the additional makeup capability, the operators noted an approximately 4-inch reactor water level drop. The operators did not question the reason for the drop in reactor water level and treated it as an expected system response. As a result, the operators did not consider the system being used to control reactor water level as an important factor in determining the amount the reactor level would drop.

Based on the systems operating at the time of the event, engineering analysis of the reactor vessel inventory relocated to the reactor water cleanup system, and the lack of other abnormal system leakage, Niagara Mohawk Power Corporation concluded that the decrease in reactor vessel level during this event resulted from the filling of the reactor water cleanup system voids.

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Nine Mile Point Unit 1	05000220						

TEXT (If more space is required, use additional NRC Form 366A's) (17)

## II. CAUSE OF EVENT

The cause of the reactor trip was a low reactor water level condition due to inadequate filling and venting of the reactor water cleanup system prior to placing the system in service. Historically, operators were aware of reactor water level decreasing approximately four inches when the reactor water cleanup system was placed in service, but did not recognize this system response as a problem needing resolution. As a result, a significant unexpected level change occurred because of the operator's decision to use the control rod drive system as the sole system to control reactor water level.

## III. ANALYSIS OF EVENT

The reactor trip is reportable in accordance with 10 CFR 50.73(a)(2)(iv), any event or condition that resulted in a manual or automatic actuation of any engineered safety feature, including the reactor protection system.

The plant was shutdown and all control rods were fully inserted prior to the reactor trip signal. Reactor water level dropped to approximately 49.5 inches and was stabilized at approximately 55 inches in approximately 7 minutes. All Emergency Core Cooling Systems were operable and in standby throughout this event.

Niagara Mohawk Power Corporation performed a probabilistic risk analysis of this event and calculated a core damage probability of  $1.0E-7$ /year.

Based on the information provided above, there were no adverse safety consequences as a result of this event. The reactor trip and recovery posed no threat to the health and safety of the general public or plant personnel.

## IV. CORRECTIVE ACTIONS

1. The Operations Department reinforced the expectations for the adequacy of contingency planning during pre-evolution briefings and establishing and maintaining reactor water level control bands.
2. The Operations Manager reinforced and monitored expectations regarding operator's accepting inappropriate system operating characteristics and the adequacy of contingency planning with appropriate Operation staff members.

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Nine Mile Point Unit 1		05000220						

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#### IV. CORRECTIVE ACTIONS (Cont'd)

3. Procedure N1-OP-3, "Reactor Cleanup System," was revised to fill and vent the standby reactor water cleanup filter and piping.
4. Operators were surveyed in a variety of situations (i.e. simulator, classroom, crew discussions, etc.) to identify any additional inappropriate but commonly known system operating characteristics.
5. The inlet and outlet standby reactor water cleanup filter isolation valves have been repaired.
6. High point vents have been installed in the reactor water clean up system to facilitate system filling and venting operations.

#### V. ADDITIONAL INFORMATION

- A. Failed components: None
- B. Previous similar Events: None
- C. Identification of components referred to in this license event report:

COMPONENT	IEEE 803A FUNCTION	IEEE 805 SYSTEM ID
Emergency Core Cooling Systems	N/A	BL, BM
Control Rods	ROD	AA
Reactor Water Cleanup System	N/A	CE
Filter	FLT	CE
Piping	N/A	CE
Control Rod Drive System	N/A	AA
Condensate System	N/A	SD
Valve, Isolation	ISV	CE