



10 CFR 50.73

NMP2L2732  
May 5, 2020

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Nine Mile Point Nuclear Station, Unit 2  
Renewed Facility Operating License No. NPF-69  
Docket No. 50-410

Subject: NMP2 Licensee Event Report 2020-002, Failure to Meet Technical Specification  
MSIV Stroke Times

In accordance with the reporting requirements contained in 10 CFR 50.73(a)(2)(v)(C), please find enclosed NMP2 Licensee Event Report 2020-001, Manual Scram due to an Electro-Hydraulic Control Fluid Leak on the Turbine Control System.

There are no regulatory commitments contained in this letter.

Should you have any questions regarding the information in this submittal, please contact Brandon Shultz, Site Regulatory Assurance Manager, at (315) 349-7012.

Respectfully,

A handwritten signature in cursive script that reads "Todd A. Tierney".

Todd A. Tierney  
Plant Manager, Nine Mile Point Nuclear Station  
Exelon Generation Company, LLC

TAT/DJW

Enclosure: NMP2 Licensee Event Report 2020-001, Manual Scram due to an Electro-Hydraulic Control Fluid Leak on the Turbine Control System

cc: NRC Regional Administrator, Region I  
NRC Resident Inspector  
NRC Project Manager

IE22  
NRR

**Enclosure**

**NMP2 Licensee Event Report 2020-001**

**Manual Scram due to an Electro-Hydraulic Control Fluid Leak on the Turbine Control System**

**Nine Mile Point Nuclear Station, Unit 2**

**Renewed Facility Operating License No. NPF-69**

<b>NRC FORM 366</b> (04-2017)		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>			<b>APPROVED BY OMB: NO. 3150-0104</b>		<b>EXPIRES: 03/31/2020</b>												
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> </div> <div> <b>LICENSEE EVENT REPORT (LER)</b>            (See Page 2 for required number of digits/characters for each block)         </div> </div> <p>(See NUREG-1022, R.3 for instruction and guidance for completing this form  <a href="http://www.nrc.gov/reading-rm/doc-collections/nureqs/staff/sr1022/r3/">http://www.nrc.gov/reading-rm/doc-collections/nureqs/staff/sr1022/r3/</a>)</p>										<small>Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOF-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>									
<b>1. FACILITY NAME</b> Nine Mile Point Unit 2					<b>2. DOCKET NUMBER</b> 05000410			<b>3. PAGE</b> 1 OF 5											
<b>4. TITLE</b> Failure to Meet Technical Specification MSIV Stroke Times																			
<b>5. EVENT DATE</b>			<b>6. LER NUMBER</b>			<b>7. REPORT DATE</b>			<b>8. OTHER FACILITIES INVOLVED</b>										
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER									
03	06	2020	2020	- 002	- 00	05	05	2020	N/A	N/A									
<b>9. OPERATING MODE</b>			<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>																
4			<input type="checkbox"/> 20.2201(b)			<input type="checkbox"/> 20.2203(a)(3)(i)			<input type="checkbox"/> 50.73(a)(2)(ii)(A)		<input type="checkbox"/> 50.73(a)(2)(viii)(A)								
			<input type="checkbox"/> 20.2201(d)			<input type="checkbox"/> 20.2203(a)(3)(ii)			<input type="checkbox"/> 50.73(a)(2)(ii)(B)		<input type="checkbox"/> 50.73(a)(2)(viii)(B)								
			<input type="checkbox"/> 20.2203(a)(1)			<input type="checkbox"/> 20.2203(a)(4)			<input type="checkbox"/> 50.73(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(ix)(A)								
			<input type="checkbox"/> 20.2203(a)(2)(i)			<input type="checkbox"/> 50.36(c)(1)(i)(A)			<input type="checkbox"/> 50.73(a)(2)(iv)(A)		<input type="checkbox"/> 50.73(a)(2)(x)								
000			<input type="checkbox"/> 20.2203(a)(2)(ii)			<input type="checkbox"/> 50.36(c)(1)(ii)(A)			<input type="checkbox"/> 50.73(a)(2)(v)(A)		<input type="checkbox"/> 73.71(a)(4)								
			<input type="checkbox"/> 20.2203(a)(2)(iii)			<input type="checkbox"/> 50.36(c)(2)			<input type="checkbox"/> 50.73(a)(2)(v)(B)		<input type="checkbox"/> 73.71(a)(5)								
			<input type="checkbox"/> 20.2203(a)(2)(iv)			<input type="checkbox"/> 50.46(a)(3)(ii)			<input checked="" type="checkbox"/> 50.73(a)(2)(v)(C)		<input type="checkbox"/> 73.77(a)(1)								
			<input type="checkbox"/> 20.2203(a)(2)(v)			<input type="checkbox"/> 50.73(a)(2)(i)(A)			<input type="checkbox"/> 50.73(a)(2)(v)(D)		<input type="checkbox"/> 73.77(a)(2)(i)								
			<input type="checkbox"/> 20.2203(a)(2)(vi)			<input type="checkbox"/> 50.73(a)(2)(i)(B)			<input type="checkbox"/> 50.73(a)(2)(vii)		<input type="checkbox"/> 73.77(a)(2)(ii)								
						<input type="checkbox"/> 50.73(a)(2)(i)(C)			<input type="checkbox"/> OTHER		Specify in Abstract below or in NRC Form 366A								
<b>12. LICENSEE CONTACT FOR THIS LER</b>																			
<b>LICENSEE CONTACT</b> Brandon Shultz, Site Regulatory Assurance Manager								<b>TELEPHONE NUMBER (Include Area Code)</b> (315) 349-7012											
<b>13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT</b>																			
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX										
X	SB	VOP	Hiller	Y	N/A	N/A	N/A	N/A	N/A										
<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO					<b>15. EXPECTED SUBMISSION DATE</b>		MONTH	DAY	YEAR										
							09	01	2020										
<b>ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)</b> On March 6, 2020 while at 0% power and in Cold Shutdown (Mode 4), Nine Mile Point Unit 2 determined through surveillance testing that three Main Steam Isolation Valves did not to meet their Technical Specification (Tech Spec) closure time of less than 5 secs. Two of the three valves are in a common Main Steam Line.  This event is reportable under 10 CFR 50.73(a)(2)(v)(C) as any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to: (C) Control the release of radioactive material  The cause of the MSIV failures is under investigation and a supplemental report is planned for submittal by September 1, 2020.  The event described in this LER is documented in the plant's corrective action program.																			

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form  
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to [InfoCollect.Resource@nrc.gov](mailto:InfoCollect.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Nine Mile Point Unit 2	05000410	2020	- 002	- 00

**NARRATIVE****I. DESCRIPTION OF EVENT****A. PRE-EVENT PLANT CONDITIONS:**

Prior to the event, Nine Mile Point Unit 2 (NMP2) was in the Cold Shutdown Condition conducting its scheduled refueling outage. On March 6<sup>th</sup>, surveillance procedure N2-OSP-MSS-CS001 was begun to meet the requirements of Tech Spec Sections 3.6.1.3.7 and 5.5.6 to verify the full closure time of the MSIVs is between 3.0 and 5.0 seconds.

**B. EVENT:**

On March 6, 2020 during the performance of the two-year surveillance procedure to verify MSIV stroke times, it was determined that three of eight MSIVs (2MSS\*AOV6A, 2MSS\*AOV6D and 2MSS\*AOV7A) were "slow" in that they failed to meet their minimum Tech Spec required closure time of 5.0 seconds. As a result, Operations declared the three MSIVs inoperable.

NMP2 is designed with four Main Steam Lines. Two of the three valves (2MSS\*AOV6A and 2 MSS\*AOV7A) are the inboard and outboard isolation valves on the common Main Steam Line A. Troubleshooting was conducted during the refueling outage that inspected for oil leaks from the dashpots, nitrogen check, checked for loose/broken speed control needle valves, and checked for loose/broken air fittings and SOVs. No adverse conditions were identified.

The air packs for the valves were replaced and the MSIVs tested satisfactory in accordance with the maximum 5.0 second requirement of Tech Spec 3.6.1.3.7. The air packs will be examined by the vendor for further casual determination.

Nine Mile Point Unit 1 (NMP1) was unaffected by the three MSIVs being declared inoperable at NMP2.

Since the plant was in Mode 4 when MSIVs are not required to be operable per the Tech Specs, no ENS notification was required..

This event has been entered into the plant's corrective action program as IR 4324557.

**C. INOPERABLE STRUCTURES, COMPONENTS, OR SYSTEMS THAT CONTRIBUTED TO THE EVENT:**

No other systems, structures, or components contributed to this event.

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**NARRATIVE****D. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES AND OPERATOR ACTIONS:**

The dates, times, and major occurrences and operator actions for this event are as follows.

- March 4, 2020 at 12:05 - Unit 2 Operators insert a manual reactor scram. Subsequently the decision is made to enter the scheduled refueling outage.
- March 5, 2020 at 08:40 - Unit 2 enters Mode 4.
- March 6, 2020 at 18:00 - MSIV Technical Specification Surveillance 3.6.1.3.7 and 5.5.6 are completed concluding that MSIVs 2MSS\*AOV6A, 2MSS\*AOV6D and 2MSS\*AOV7A are slow and do not meet the maximum required Tech Spec stroke times. The three MSIVs are declared inoperable.
- Refueling Outage - The air packs replaced for MSIVs (2MSS\*AOV6A, 2MSS\*AOV6D and 2MSS\*AOV7A).
- March 24, 2020 at 00:05 - MSIVs test satisfactory in accordance with N2-OSP-MSS-CS001

**E. METHOD OF DISCOVERY:**

This event was discovered by Operations during the performance of Tech Spec required surveillance testing.

**F. SAFETY SYSTEM RESPONSES:**

This LER concerns a failed Tech Spec surveillance test. No system responses were necessary.

**II. CAUSE OF EVENT:**

The cause of the MSIV failures is being investigated and will be provided in the supplement.

**III. ANALYSIS OF THE EVENT:**

The inoperable MSIVs are reportable under 10 CFR 50.73(a)(2)(v)(C) as any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to: (C) Control the release of radioactive material. Two of the three valves were in a common Main Steam Line.

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CONTINUATION SHEET**

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**NARRATIVE**

All design basis accident, transient criteria and regulatory limits remain satisfied with no overall impact to dose and EQ/HELB requirements. This conclusion is based on the following analyses.

1. Design Basis Secondary Containment HELB Outside Containment Peak Sub Compartment Pressure and Temperature. The slow closure increases the steam tunnel wall differential pressure due to the extended blowdown. The maximum differential pressure remains within the steam tunnel design margins. Steam tunnel temperature reaches the maximum prior to assumed closure of the MSIVs; therefore, the delay in the closure does not result in a change in peak temperature.
2. Design Basis Secondary Containment HELB Piping Outside Containment – Dose rates are substantially below current USAR because the increased mass release attributable to the delayed MSIV closure is substantially offset by the actual iodine concentration.
3. Equipment Qualification – The peak pressure envelope is extended from the assumed 9 seconds to 11 seconds. The additional 2 second duration does not result in a significant change in the peak pressure since the rate of pressure increase is mitigated by the large primary relief path through the steam tunnel blowout panels. The peak temperature remains the same with the duration of the peak temperature extended from 5.5 seconds to 11 seconds. The temperature envelope duration was drawn to start to decrease at 9 seconds, the 2 second shift in the peak duration does not represent a significant change that impacts equipment qualification.
4. Primary containment Peak Pressure and Temperature: The impact on peak containment pressure is defined by the fast closure specification. The slow closure has no impact on the containment peak pressure and temperature since the slow closure results in less total mass energy inside containment.

Based on the above discussion, it is concluded that the safety significance of this event is low, and the event did not pose a threat to the health and safety of the public or plant personnel.

This event does affect the NRC Regulatory Oversight Process Indicator for safety system failures.

**IV. CORRECTIVE ACTIONS:****A. ACTION TAKEN TO RETURN AFFECTED SYSTEMS TO PRE-EVENT NORMAL STATUS:**

The MSIV air packs were replaced and tested satisfactory in accordance with Tech Spec surveillance requirements sections 3.6.1.3.7 and 5.5.6.

**B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:**

To be provided in the supplement when the cause is completed.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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**1. FACILITY NAME**

Nine Mile Point Unit 2

**2. DOCKET NUMBER**

05000410

**3. LER NUMBER****YEAR**

2020

**SEQUENTIAL  
NUMBER**

- 002

**REV  
NO.**

- 00

**NARRATIVE****V. ADDITIONAL INFORMATION:****A. FAILED COMPONENTS:**

MSIVs 2MSS\*AOV6A, 2MSS\*AOV6D and 2MSS\*AOV7A, Air Packs

**B. PREVIOUS LERs ON SIMILAR EVENTS:**

None

**C. THE ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIIS) COMPONENT FUNCTION IDENTIFIER AND SYSTEM NAME OF EACH COMPONENT OR SYSTEM REFERRED TO IN THIS LER:****COMPONENT**

Main Steam Isolation Valves, Air Pack

**IEEE 803  
FUNCTION  
IDENTIFIER**  
VOP**IEEE 805  
SYSTEM  
IDENTIFICATION**  
SB