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NINE MILE POINT
NUCLEAR STATION

February 7, 2012

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTENTION: Document Control Desk

SUBJECT: Nine Mile Point Nuclear Station
Unit No. 2; Docket No. 50-410

Licensee Event Report 2012-001, Forced Shutdown Due to an Increase in Drywell
Leakage in Excess of Technical Specifications Limit

In accordance with 10 CFR 50.73(a)(2)(i)(A), please find attached Licensee Event Report 2012-001, Forced Shutdown Due to an Increase in Drywell Leakage in Excess of Technical Specifications Limit.

Nine Mile Point Nuclear Station, LLC (NMPNS) is currently completing the evaluation of this event. Upon completion of this action, NMPNS will submit a supplement to the LER.

Should you have questions regarding the information in this submittal, please contact John J. Dosa, Director Licensing, at (315) 349-5219.

Very truly yours,

MAP/BTV

Attachment: Licensee Event Report 2012-001, Forced Shutdown Due to an Increase in Drywell
Leakage in Excess of Technical Specifications Limit

cc:

NRC Project Manager
NRC Resident Inspector
NRC Regional Administrator

JE22
mra

ATTACHMENT

LICENSEE EVENT REPORT 2012-001

**FORCED SHUTDOWN DUE TO AN INCREASE IN DRYWELL
LEAKAGE IN EXCESS OF TECHNICAL SPECIFICATIONS LIMIT**

LICENSEE EVENT REPORT (LER)
(See reverse for required number of
digits/characters for each block)

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 FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollect@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-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.

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4. TITLE

Forced Shutdown Due to an Increase in Drywell Leakage in Excess of Technical Specifications Limit

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
12	09	2011	2012	001	0	02	07	2012	NA	NA

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
10. POWER LEVEL 100%	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER						
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A						

12. LICENSEE CONTACT FOR THIS LER

NAME John J. Dosa, Licensing Director	TELEPHONE NUMBER (Include Area Code) (315) 349-5219
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
X	AD	V	Anchor Darling	Y	NA	NA	NA	NA	NA

14. SUPPLEMENTAL REPORT EXPECTED☒ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☐ NO**15. EXPECTED SUBMISSION DATE**

MONTH	DAY	YEAR
03	16	2012

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On December 9, 2011, at 0908, Nine Mile Point Unit 2 (NMP2) was operating at 100 percent of rated thermal power when alert alarms were received for containment monitoring particulate channels. These alarms were accompanied by a rise in unidentified drywell leakage and drywell pressure. At 1046, a manual shutdown of Unit 2 was initiated due to exceeding the Technical Specification (TS) Limiting Condition for Operation for unidentified leakage in the drywell. TS 3.4.5 requires action to be taken if unidentified leakage increases > 2 gpm within a 24 hour period while in Mode 1. Peak drywell floor drain leakage was 3.7 gpm. Entry into the drywell revealed a packing leak from the Reactor Coolant System (RCS) "A" blocking valve 2RCS*MOV18A.

The valve stem packing leak likely occurred due to a score in the packing material created by a burr on the valve stem. The burr was potentially created during packing replacement in August 2011 when the plant was shutdown due to high unidentified drywell leakage from the packing of this same valve.

Nine Mile Point Nuclear Station, LLC (NMPNS) is currently completing the evaluation of this event to determine the cause, any contributing factors, and any needed corrective actions. Upon completion of the evaluation, NMPNS will submit a supplement to this LER.

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NARRATIVE

I. DESCRIPTION OF EVENT

A. PRE-EVENT PLANT CONDITIONS:

Prior to this event, Nine Mile Point Unit 2 (NMP2) was operating at 100 percent rated thermal power with no inoperable systems affecting this event.

B. EVENT:

On December 9, 2011, at 0908, NMP2 was operating at 100 percent of rated thermal power when alert alarms were received for containment monitoring particulate channels. These alarms were accompanied by a rise in unidentified drywell leakage and drywell pressure. At 1046, a manual shutdown of Unit 2 was initiated due to exceeding the Technical Specifications (TS) Limiting Condition for Operation (LCO) for unidentified leakage in the drywell. TS 3.4.5 requires action to be taken if unidentified leakage increases > 2 gpm within a 24 hour period while in Mode 1.

There was no impact on Nine Mile Point Unit 1 (NMP1) from this event.

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

There were no inoperable components or systems that contributed to this event.

D. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES (note: all times are on December 9, 2011 unless otherwise noted):

0903 - Identified rising unidentified drywell leakage rate and a corresponding rise in drywell pressure.

0905 - Identified rising trend on particulate monitor 2CMS*CAB10A-2.

0908 - 2CMS*CAB10A-2 in alert.

0911 - 2CMS*CAB10B-2 in alert.

0915 - Reactor Coolant System (RCS) unidentified leakage is 2.35 gpm, entered TS 3.4.5 Condition B, which requires the unidentified leakage increase to be reduced to within limit within 4 hours, or the source of the unidentified leakage increase to be identified within 4 hours.

0918 - The shift manager directed unit shutdown.

1046 - Power reduction commenced.

1315 - Entered TS 3.4.5 Condition C, which requires the plant to be in Mode 3 within 12 hours and in Mode 4 within 36 hours, due to not meeting TS 3.4.5 Condition B.

2237 - All Control Rods are fully inserted.

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2317 - Mode Switch placed in Shutdown. Plant in Mode 3, Hot Shutdown.

12/10/2011 - 1813 - Reactor Operation is Mode 4, Cold Shutdown.

E. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None

F. METHOD OF DISCOVERY:

On December 9, 2011, at 0908, Operations noted that the containment particulate radiation monitors went into alarm and that RCS unidentified leakage was increasing.

G. MAJOR OPERATOR ACTION:

At 0915, TS 3.4.5 Condition B was entered for RCS unidentified leakage rate increase > 2 gpm within a 24 hour period. At 1046, a manual shutdown of NMP2 was initiated.

H. SAFETY SYSTEM RESPONSES:

None. No operational conditions requiring the response of safety systems occurred as a result of this event.

II. CAUSE OF THE EVENT:

The cause of this event is failed packing on Reactor Coolant Pump "A" discharge blocking valve 2RCS*MOV18A. This caused the RCS unidentified leakage rate to exceed the TS 3.4.5.limit. The valve stem packing leak likely occurred due to a score in the packing material created by a burr on the valve stem. The burr was potentially created during packing replacement in August 2011 when the plant was shutdown due to high unidentified drywell leakage from the packing of this same valve. In August 2011, while removing the failed packing set, destructive removal of the packing set's carbon bushing was performed. The carbon bushing is designed to be removed using a packing puller and the pre-drilled and tapped holes in the top of the carbon bushing. Due to valve stem mis-alignment, the bushing was pinched in the stuffing box and could not be removed in this manner. Hardened tools, including a machinist's punch and hammer, were used to break apart and remove the bushing. It is believed at this point a burr was created on the valve stem.

NMPNS is currently completing the evaluation of this event to determine the cause, any contributing factors, and any needed corrective actions. Upon completion of the evaluation, NMPNS will submit a supplement to this LER.

This event was entered into the NMPNS corrective action program (Condition Report CR-2011-010906).

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III. ANALYSIS OF THE EVENT:

This event is reportable in accordance with 10 CFR 50.73 (a)(2)(i)(A), "The completion of any nuclear plant shutdown required by the plant's Technical Specifications."

There were no systems inoperable and no system failures related to this event. There were no actual safety consequences from this event. The leakage was from the blocking valve packing and was not indicative of RCS component wear. The leakage was contained within the drywell. The maximum leakage rate noted during this event was 3.7 gpm, which is within the TS limit of 5 gpm. Even if the packing had catastrophically failed, the leakage would still have been contained within the drywell and the plant would have been capable of reaching a safe shutdown condition. There were no system failures that prevented the safe shutdown of the plant. It is therefore concluded that even if a design basis accident had occurred concurrent with this event, all safety systems would have operated to safely mitigate the event. Based on the above considerations, 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 not affect the NRC Regulatory Oversight Process (ROP) Index for Unplanned Scrams because the shutdown did not involve a scram. This event increases the ROP Index for Unplanned Power Changes per 7000 Critical Hours from 1.6 to 2.5.

IV. CORRECTIVE ACTIONS:

A. ACTION TAKEN TO RETURN AFFECTED SYSTEMS TO PRE-EVENT NORMAL STATUS:

1. Removed burr and polished all high spots on the stem of 2RCS*MOV18A to improve the condition of the sealing surface.
2. Installed modified packing on 2RCS*MOV18A and torqued.
3. Installed modified packing on 2RCS*MOV18B and torqued, as a precautionary measure.
4. The packing for similar RCS pump suction blocking valves 2RCS*MOV10A and 2RCS*MOV10B were re-torqued.

B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

1. Revise maintenance procedure to include tools and precautions for proper removal of valve packing.

V. ADDITIONAL INFORMATION:

A. FAILED COMPONENTS:

None

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B. PREVIOUS LERs ON SIMILAR EVENTS:

There are three similar LERs:

1. NMP2 LER 2011-002. On August 6, 2011, NMPNS identified drywell floor drain leakage exceeding the maximum limits of TS 3.4.5 for unidentified drywell leakage. The cause of the unidentified leakage was determined to be failed packing in a reactor coolant system discharge blocking valve, 2RCS*MOV18A. The corrective actions included repacking the valve to stop the leakage and re-torquing the packing for the remaining similar valves in the RCS to protect against leakage. The primary cause of the packing failure was determined to be vibration and flow turbulence. This caused the packing to relax and fail on 2RCS*MOV18A.
2. NMP2 LER 2001-007. On December 15, 2001, NMPNS identified drywell floor drain leakage approaching the maximum limits of TS 3.4.5 for unidentified drywell leakage. The cause of the unidentified leakage was determined to be failed packing in a reactor coolant system discharge blocking valve, 2RCS*MOV18A. The corrective actions included installing modified packing to stop the leakage and re-torquing the packing for the remaining similar valves in the RCS to protect against leakage. The primary cause of the packing failure was determined to be packing ring extrusion into the leak-off port.
3. NMP1 LER 2006-001. On June 11, 2006, NMPNS commenced a planned downpower to perform a drywell entry to determine the cause of increased drywell leakage. The source of the increased leakage was determined to be the reactor coolant system drain valve packing. The cause of the packing leak was installation of incorrect packing in March 1997. The packing that was installed did not have the same diameter as the inside diameter of the stuffing box. During the shutdown, NMPNS replaced the packing in the leaking RCS pump drain valve.

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

COMPONENT	IEEE 803 COMPONENT IDENTIFIER	IEEE 805 SYSTEM IDENTIFICATION
Reactor Coolant Blocking Valves	V	AD
Reactor Protection System	NA	JC

D. SPECIAL COMMENTS:

None