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August 14, 2014

U.S. Nuclear Regulatory Commission
ATTENTION: 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: Revision 01 to Licensee Event Report 2014-001, Emergency Diesel
Generator Actuation Due to Loss of Offsite Power Source Line 5

Licensee Event Report (LER) 2014-001, Emergency Diesel Generator Actuation Due to Loss of Offsite Power Source Line 5 was submitted on April 17, 2014 in accordance with 10 CFR 50.73 (a)(2)(iv)(A). Attached is Revision 1 to LER 2014-001. This revision summarizes the results of the transmission owner's causal analysis which is identified by revision bars in the right margin.

There are no regulatory commitments in this submittal.

Should you have questions regarding the information in this submittal, please contact Theresa Darling, Acting Manager Site Regulatory Assurance at (315) 349-2221.

Sincerely,

A handwritten signature in black ink that reads "Christopher R. Costanzo".

Christopher R. Costanzo
CRS/KP

Attachment: Revision 1 to Licensee Event Report 2014-001, Emergency Diesel
Generator Actuation Due to Loss of Offsite Power Source Line 5

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

TE22
NRK

ATTACHMENT

**REVISION 1 TO LICENSEE EVENT REPORT 2014-001,
EMERGENCY DIESEL GENERATOR ACTUATION DUE TO LOSS
OF OFFSITE POWER SOURCE LINE 5**

**Nine Mile Point Nuclear Station, LLC
August 14, 2014**

**LICENSEE EVENT REPORT (LER)**(See Page 2 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 and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollections.Resource@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.

1. FACILITY NAME

Nine Mile Point Unit 2

2. DOCKET NUMBER

05000410

3. PAGE

1 OF 5

4. TITLE

Emergency Diesel Generator Actuation Due to Loss of Offsite Power Source Line 5

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
02	16	2014	2014	- 001	- 01	08	14	2014	N/A	N/A
									N/A	N/A

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
1	<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)
	<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)
100	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" 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 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**LICENSEE CONTACT**

Theresa Darling, Acting Manager Site Regulatory Assurance

TELEPHONE NUMBER (Include Area Code)

(315) 349-2221

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
B	FK	XCT	Unknown	Y	N/A	N/A	N/A	N/A	N/A

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

MONTH	DAY	YEAR
NA	NA	NA

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

On February 16, 2014 at 1216, Nine Mile Point Unit 2 (NMP2) was operating at 100 percent power when an automatic actuation of the Division I and III Emergency Diesel Generators (EDG) occurred due to a loss of a 345 kV bus owned by National Grid. The bus outage resulted in the loss of off-site power source (Line 5) owned by Exelon. Automatic actuation of the EDGs is reportable under 10 CFR 50.72(b)(3)(iv)(A) and 10 CFR 50.73(a)(2)(iv)(A). The cause of the loss of Line 5 is due to a faulted current transformer associated with 345kV Breaker R210 owned by National Grid, the transmission owner. The faulted transformer caused a voltage transient for both station service and offsite power loads. This resulted in the loss of: 1) the service water radiation monitor and radwaste/reactor building vent gaseous effluent monitoring systems 2) the 'C' and 'D' Reactor Water Cleanup (WCS) filter strings, and 3) spent fuel pool cooling. The voltage transient also caused Feed Water level control valve actuator controls to lock up and go to manual operation. The causal analysis identified the failure mechanism of the CT as an insulation breakdown internal to the CT. The corrective actions include purchasing spare CTs and performing follow up tests and repairs on damaged equipment. NMP1 LER 2008-001 and NMP2 LER 2012-004 are similar LERs submitted previously which involve the actuation of the EDGs due to a loss of Power Line 5.

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

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 and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Nine Mile Point Unit 2	05000410	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 5
		2014	- 001	- 01	

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

Prior to the event, Nine Mile Point Unit 2 (NMP2) was operating at rated reactor power.

B. EVENT:

On February 16, 2014, at 1216, Offsite Power Line 5 was lost due to a fault and fire on a National Grid Current Transformer (CT) related to Breaker R210. This occurrence resulted in the actuation of the Division I and Division III EDGs, 2EGS*EG1 and 2EGS*EG2. In response, Operations personnel entered the action statements for TS 3.8.1, Condition A, for Line 5 inoperability.

The fault resulted in a voltage transient for both station service and offsite power loads. It caused Feed Water level control valves (2FWS-LV10A and 2FWS-LV10B) actuator controls to lock up and go into manual operation. It resulted in the loss of 'C' and 'D' Reactor Water Cleanup (WCS) filter strings. The fault of Breaker R210 also resulted in the loss of Service Water Radwaste Monitor 2SWP*RE146A and Radwaste/Reactor Building Vent Gaseous Effluent Monitoring Systems and a loss of spent fuel pool cooling.

Immediate actions in plant procedure N2- SOP-3, Loss of AC Power, were taken to stabilize the plant. Actions were taken in N2-SOP-38, Loss of Spent Fuel Pool Cooling, to start the Division II Spent Fuel Pool Cooling and Cleanup pump in cooling only mode. Operations personnel took further action per N2-SOP-6, Feed Water Failures, and restored control to automatic with a slight rise in reactor water level. Review of feed water level control drawings and condition reports validated that a momentary loss of control voltage or a large dip can cause the controls for these valves to lock up. Compensatory measures were also established for Service Water Radiation Monitor, 2SWP*RE146A and the Radwaste/Reactor Building Vent Gaseous Effluent Monitoring Systems in accordance with plant procedures and the Offsite Dose Calculation Manual.

The loss of Power Line 5 event which resulted in the EDG actuation has been entered into the corrective action program as CR-2014-001352.

Nine Mile Point Unit 1 (NMP1) was unaffected by the condition associated with the loss of Power Line 5.

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NARRATIVE

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

The fault and fire on a National Grid CT related to Breaker R210 resulted in the loss of power to Power Line 5 and resulted in the automatic actuation of the EDGs.

D. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES:

The dates, times and major occurrences for this event are as follows:

February 16	1216	Received multiple annunciations due to loss of Line 5
	1216	Division I and Division III EDGs energized
	1216	Entered TS 3.8.1
	1216	Entered N2-SOP-3 and 6
	1235	Operator dispatched to Scriba switchyard due to report of smoke
	1253	N2-SOP-38 is entered
	1327	N2-SOP-6 is exited
	1430	N2-SOP-38 is exited
	1450	Service Water Radiation Monitor restored
February 17	0240	Radwaste/Reactor Building Vent Gaseous Monitoring restored
	1449	N2-SOP-3 is exited
	1628	Line 5 restored to OPERABLE

E. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

No other systems or secondary functions were affected beyond systems discussed in Section I.B.

F. METHOD OF DISCOVERY:

Operations received multiple annunciations in the Control Room due to a loss of Power Line 5. A plant operator was dispatched to investigate report of smoke coming from the Scriba switchyard. The investigation confirmed that a current transformer related to Breaker R210 had failed and was on fire.

G. MAJOR OPERATOR ACTION:

Operations personnel made entries into the Action Statements for TS 3.8.1, Condition A, for Line 5 inoperability. Operations personnel also entered procedures N2-SOP-3, N2-SOP-6, N2-SOP-38 and took compensatory measures as required by station procedures and the Offsite Dose Calculation Manual (ODCM).

H. SAFETY SYSTEM RESPONSES:

Following the loss of Power Line 5, Division I and Division III EDGs were automatically actuated.

**LICENSEE EVENT REPORT (LER)
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II. CAUSE OF EVENT:

The loss of offsite Power Line 5 was due to a fault and fire on a National Grid CT associated with Breaker R210. The causal analysis identified the failure mechanism of the CT as an insulation breakdown internal to the CT.

III. ANALYSIS OF THE EVENT:

This event is reportable in accordance with 10 CFR 50.72(b)(3)(iv)(A), and 10 CFR 50.73(a)(2)(iv)(A). The event caused a valid actuation of the Division I and Division III EDGs, a safety system named in 10 CFR 50.73(a)(2)(iv)(B). The actuation was not part of a preplanned sequence during testing or reactor operation.

Offsite power source Line 5 was lost due to a fault and fire on National Grid Current Transformer (CT) R210. This condition resulted in the actuation of protective relays and the isolation of Bus A which powers Line 5. On February 16, 2014 the (CT) in Phase A of a power line connected to Bus A, Line 21 catastrophically failed causing extensive damage to primary equipment and secondary AC circuitry. The causal analysis identified the failure mechanism of the CT as an insulation breakdown internal to the CT. Bus A was subsequently restored, after isolating the failed CT on both the primary side and the secondary side. All protective systems operated as designed.

The onsite emergency (safety-related) AC power system includes the standby diesel generators that feed the safety-related loads in case of a loss of offsite power (LOOP). The onsite emergency AC power system is divided into three physically separate and electrically independent divisions, any two out of three divisions being capable of bringing the plant to safe shutdown in case of a loss-of-coolant accident (LOCA) or any other Design Basis Accident (DBA). The emergency AC power system is normally energized from offsite power sources. In case of a LOOP, this system is energized by the standby diesel generators. When the loss of Line 5 occurred, the diesel generators actuated automatically, as designed, to energize the safety-related loads. NMP2 was operating at steady-state 100 percent power prior to, during, and following the event.

There were no actual nuclear safety consequences associated with this event.

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 not affect the NRC Regulatory Oversight Process Indicators.

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

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NARRATIVE

IV. CORRECTIVE ACTIONS:

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

Operations personnel took action per N2-SOP-3, N2-SOP-6 and N2-SOP-38 to restore the plant to pre-event conditions.

B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

Replaced damaged CTs
Purchase spare CTs
Perform follow up repairs and testing on damaged equipment

V. ADDITIONAL INFORMATION:

A. FAILED COMPONENTS:

There were no other failed components that contributed to this event.

B. PREVIOUS LERs ON SIMILAR EVENTS:

NMP2 LER 2012-005 reported that on October 29, 2012 at 21:00, NMP2 was operating at 100 percent power when an automatic actuation of the Division I EDG occurred due to the loss of a 115 kV off-site power source (Line 5) due to remnant winds of Hurricane Sandy.

NMP1 LER 2008-001 reported that emergency diesel generators actuated when the plant experienced a loss of offsite power. A power line shared with the James A. FitzPatrick was lost.

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

<u>COMPONENT</u>	<u>IEEE 803 FUNCTION IDENTIFIER</u>	<u>IEEE 805 SYSTEM IDENTIFICATION</u>
Current Transformer	XCT	FK
Emergency Diesel Generator	DG	EK
Spent Fuel Pool Cooling Pump	P	DA
Service Water Radiation Monitor	N/A	IL
Reactor Water Cleanup Filter	FDM	CE

D. SPECIAL COMMENTS:

None