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June 8, 2009

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

ATTENTION: Document Control Desk

SUBJECT: Nine Mile Point Nuclear Station
Unit No. 1; Docket No. 50-220

Licensee Event Report 2009-002, High Pressure Coolant Injection System Initiation
Following a Manual Turbine Trip Due to High Turbine Bearing Vibrations

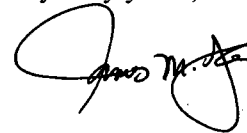
Gentlemen:

In accordance with 10 CFR 50.73(a)(2)(iv)(A), please find attached Licensee Event Report 2009-002, High Pressure Coolant Injection System Initiation Following a Manual Turbine Trip Due to High Turbine Bearing Vibrations.

There are no regulatory commitments in this submittal.

Should you have questions regarding the information in this submittal, please contact T. F. Syrell, Licensing Director, at (315) 349-5219.

Very truly yours,



JMY/MHS

Attachment: Licensee Event Report 2009-002, High Pressure Coolant Injection System Initiation
Following a Manual Turbine Trip Due to High Turbine Bearing Vibrations

cc: S. J. Collins, NRC
R. V. Guzman, NRC
Resident Inspector, NRC

JE22
MRR

ATTACHMENT

LICENSEE EVENT REPORT 2009-002

HIGH PRESSURE COOLANT INJECTION SYSTEM INITIATION

FOLLOWING A MANUAL TURBINE TRIP

DUE TO HIGH TURBINE BEARING VIBRATIONS

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: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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.

1. FACILITY NAME Nine Mile Point Unit 1	2. DOCKET NUMBER 05000220	3. PAGE 1 OF 5
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4. TITLE
High Pressure Coolant Injection System Initiation Following a Manual Turbine Trip Due to High Turbine Bearing Vibrations

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
04	10	2009	2009	002	00	06	08	2009	NA	NA
									FACILITY NAME	DOCKET NUMBER
									NA	NA
									FACILITY NAME	DOCKET NUMBER
									NA	NA

9. OPERATING MODE N	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
10. POWER LEVEL 028	<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)						
	<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

NAME Terry Syrell, 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	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO				MONTH	DAY	YEAR
				NA	NA	NA

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

On April 10, 2009, at 0538 hours, with Nine Mile Point Unit 1 (NMP1) operating at 28 percent Rated Thermal Power (RTP), operators manually tripped the turbine in response to rising turbine bearing vibrations. Following the turbine trip, the High Pressure Coolant Injection (HPCI) System automatically initiated as designed. The HPCI System initiation signal was immediately reset. Reactor water level was maintained in the normal operating range throughout the transient. There was no reactor scram since the turbine was tripped at a power level that is below the generator load rejection scram setpoint. After determining and addressing the cause of the vibration, the turbine was restarted and the generator was synchronized to the grid at 11:39 on the same day without any complications.

The HPCI System is a mode of operation that uses selected equipment of the Condensate and Feedwater System to perform its function. The HPCI System is not an Emergency Core Cooling System (ECCS).

The apparent cause of the turbine trip was failure to follow an operating procedure for placing the second stage reheaters in service.

To prevent recurrence, the applicable procedure has been revised to include better guidance on placing second stage reheaters in service. In addition, pre-outage Just-In-Time training material will be revised to include the proper method for placing second stage reheaters in service and to review this event as an internal operating experience event.

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

1. FACILITY NAME	(2) DOCKET	(6) LER NUMBER			(3) PAGE
Nine Mile Point Unit 1	05000220	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 5
		2009	002	00	

NARRATIVE

I. DESCRIPTION OF EVENT

A. PRE-EVENT PLANT CONDITIONS:

On April 10, 2009, at 0538 hours, Nine Mile Point Unit 1 (NMP1) was operating at 28 percent Rated Thermal Power (RTP).

B. EVENT:

On April 10, 2009, at 0220 hours, with NMP1 operating at 44 percent RTP with power ascension in progress from refueling outage number 20, operators commenced placing the second stage reheaters in service. While placing the second stage reheaters in service, procedural requirements to maintain a heat up rate of not more than 3 degrees/min with less than 50 degrees difference between the reheaters were exceeded. At 0523 hours, the unit received a high vibration alarm on one of the turbine bearings. In response, operators entered the Alarm Response Procedure (ARP) for high turbine vibrations. In preparation for a potential manual turbine trip, operators reduced the reactor power, in accordance with a Special Operating Procedure, to provide margin for reactor pressure control on the turbine bypass valves. As power was being reduced, bearing vibration levels and the rate of rise continued to increase. At 05:38 with reactor power at 28 percent, the operators manually tripped the turbine prior to reaching the procedural limit of the turbine vibration. Coincident with the turbine trip, the High Pressure Coolant Injection (HPCI) System automatically initiated as designed due to the turbine trip with the reactor mode switch in Run.

The HPCI System is a mode of operation that uses selected equipment of the Condensate and Feedwater Systems to perform its function. The HPCI System is provided to ensure adequate core cooling in the unlikely event of a small reactor coolant line break. The HPCI System is not an Emergency Core Cooling System (ECCS). Since the reactor water level was maintained within the normal level control band during the transient, and there was no small reactor coolant line break, the HPCI System initiation signal was immediately reset.

There was no reactor scram since the turbine was tripped at a power level that is below the generator load rejection scram setpoint.

After determining and addressing the cause of the vibration, the turbine was restarted and the generator was synchronized to the grid at 11:39 on the same day without any complications.

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

None.

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NARRATIVE

D. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES:

- April 10, 2009, 0220: Operators commenced placing second stage reheaters in service.
- April 10, 2009, 0312: Turbine vibration started to rise.
- April 10, 2009, 0523: Turbine Bearing Number 4 High Vibration Alarm received and Alarm Response Procedure entered.
- April 10, 2009, 0532: Emergency power reduction commenced in accordance with a Special Operating Procedure.
- April 10, 2009, 0538: Turbine manually tripped. The HPCI System initiated automatically.
- April 10, 2009, 1108: After completion of immediate corrective actions, turbine roll commenced.
- April 10, 2009, 1139: Generator synchronized to the grid.

E. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None.

F. METHOD OF DISCOVERY:

This event was immediately apparent by control room indications.

G. MAJOR OPERATOR ACTION:

Operators failed to maintain a heat up rate of not more than 3 degrees/min with less than 50 degrees difference between the reheaters. To prepare for a potential manual turbine trip, operators reduced the reactor power to provide margin for reactor pressure control on the turbine bypass valves. The turbine was manually tripped. The HPCI initiation signal was reset. After determining and addressing the cause of the vibration, the turbine was restarted and the generator was synchronized to the grid without any complications.

H. SAFETY SYSTEM RESPONSES:

The HPCI System initiated upon turbine trip as designed. The HPCI System is a mode of operation that uses selected equipment of the Condensate and Feedwater System to perform its function. The HPCI system is not an ECCS.

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

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NARRATIVE

II. CAUSE OF EVENT:

The cause of this event is failure to follow the operating procedure for placing the second stage reheaters in service. The procedure guidance required raising the second stage reheater tube temperatures at a maximum rate of 3 degrees F per minute while placing the second stage reheaters in service. The procedure guidance also required limiting the temperature differential between the left and the right sides of the turbine to 50 degrees F. The operators utilized an average heat rate of 3 degrees F per minute for the second stage reheater's tube temperatures while placing the second stage reheaters in service. This resulted in reheater outlet temperature varying more than 50 degrees F between the left and the right sides of the turbine causing a turbine rub.

NMP Condition Report (CR) 2009-002238 applies to this LER.

III. ANALYSIS OF THE EVENT:

This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) which states that any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph 10 CFR 50.73(a)(2)(iv)(B) is reportable. The NMP1 HPCI System is a feedwater coolant injection system, which is one of the systems listed 10 CFR 50.73(a)(2)(iv)(B).

There were no equipment failures associated with this event, and all safety related structures, systems, or components performed per design. Therefore, there was no adverse impact on the operability/functionality of any safety related structures, systems, or components associated with this event. It is therefore concluded that had a design bases accident occurred coincident with this event, plant systems would have responded per design to mitigate the accident.

As plant systems performed per design and plant parameters (other than turbine vibrations) remained within normal bounds throughout this event, this event did not pose a significant threat to the health and safety of the public or plant personnel.

IV. CORRECTIVE ACTIONS:

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

The HPCI System initiation signal was immediately reset following the turbine trip.

**LICENSEE EVENT REPORT (LER)
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NARRATIVE

B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

NOTE: There are no NRC regulatory commitments in this LER.

To prevent recurrence, the applicable operating procedure has been revised to include better guidance on placing second stage reheaters in service. In addition, pre-outage Just-In-Time training material will be revised to include proper placement of second stage reheaters in service and to review this event as an internal operating experience event.

V. ADDITIONAL INFORMATION:

A. FAILED COMPONENTS:

None.

B. PREVIOUS LERs ON SIMILAR EVENTS:

None.

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 FUNCTION IDENTIFIER	IEEE 805 SYSTEM IDENTIFICATION
Generator	GEN	TB
High Pressure Coolant Injection System	NA	BJ
Reheater	RHTR	SN
Turbine	TRB	TA

D. SPECIAL COMMENTS:

None.