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Palisades Nuclear Plant
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December 6, 2007

10 CFR 50.73(a)(2)(i)(B)
10 CFR 50.73(a)(2)(v)(B)

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

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

Licensee Event Report 07-008, Auxiliary Feedwater Pump Inoperable in Excess of
Technical Specification Requirements Due to a Postulated Steam Line Break

Dear Sir or Madam:

Licensee Event Report (LER) 07-008 is enclosed. The LER describes the discovery that a postulated steam line break occurring in the turbine building could potentially render the turbine driven auxiliary feedwater pump inoperable. The occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(B).

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

A handwritten signature in black ink, appearing to read "C. Schwarz".

Christopher J. Schwarz
Site Vice President
Palisades Nuclear Plant

Enclosure (1)

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

ENCLOSURE 1

LER 07-008

**Auxiliary Feedwater Pump Inoperable in Excess of Technical Specification
Requirements Due to a Postulated Steam Line Break**

3 Pages Follow

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, (3150-0066), 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.

FACILITY NAME (1) Palisades Nuclear Plant	DOCKET NUMBER (2) 05000255	PAGE (3) 1 of 3
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TITLE (4)
Auxiliary Feedwater Pump Inoperable in Excess of Technical Specification Requirements Due to a Postulated Steam Line Break

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	11	2007	2007	-- 008 --	00	12	6	2007	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.73(a)(2)(i)-(viii)(B): (Check all that apply) (11)									
POWER LEVEL (10)	000	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
		<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)						
		<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 73.71(a)(4)						
		<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(5)						
		<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A						
		<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)							
		<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(D)							
		<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)							
		<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
<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)(B)									

LICENSEE CONTACT FOR THIS LER (12)

NAME Daniel G. Malone	TELEPHONE NUMBER (Include Area Code) (269) 764-2463
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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
YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>				

ABSTRACT

On December 19, 2006, it was determined that the effects of a postulated steam line break occurring in the turbine building had not been rigorously evaluated for the potential effects on safety related components within the area; specifically, auxiliary feedwater (AFW) pumps P-8A and P-8B, and their associated support components. Subsequently, a bounding engineering analysis was performed, which considered a circumferential break of a 36-inch main steam line in the turbine building. The engineering analysis determined that the resultant ambient conditions in the turbine building constituted a harsh environment under the electrical environmental qualification program, due to the combination of steam, temperature and pressure.

A subsequent evaluation of operability on October 11, 2007, determined that P-8B would have been inoperable following a steam line break in the turbine building from the harsh environment created from building pressurization. Therefore, over the previous three years, P-8B and its corresponding AFW train were inoperable for periods of time longer than allowed by Technical Specifications.

This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications, and 10 CFR 50.73(a)(2)(v)(B) as a condition that could have prevented the fulfillment of the safety function of a system that is needed to remove residual heat.

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

EVENT DESCRIPTION

On December 19, 2006, it was determined that the effects of a postulated steam line break occurring in the turbine building had not been rigorously evaluated for the potential effects on safety related components within the area; specifically, auxiliary feedwater (AFW) pumps P-8A and P-8B [P;BA], and their associated support components. Subsequently, a bounding engineering analysis was performed, which considered a circumferential break of a 36-inch main steam line in the turbine building. The engineering analysis determined that the resultant ambient conditions in the turbine building constituted a harsh environment under the electrical environmental qualification (EEQ) program, due to the combination of steam, temperature and pressure.

On August 10, 2007, in consideration of the engineering analysis results, a past operability assessment was completed. The conclusion of the past operability assessment was that the AFW pumps and their support components would have been able to perform their design basis functions in the event of a steam line break in the turbine building, although certain components should be considered operable but non-conforming with respect to meeting EEQ program guidelines for qualification in a harsh environment.

On October 11, 2007, a re-assessment of past operability determined that several components in the turbine building that were originally considered to be operable but non-conforming should have been considered inoperable due to uncertainty that the components would function as designed in the harsh environment. Among these components were solenoid valves SV-0522B and SV-0522C [V;SB], which must function in order to open steam supply valve CV-0522B [V;SB] for turbine driven AFW pump P-8B. Since the opening of CV-0522B is not assured, the inoperable solenoid valves ultimately result in P-8B being inoperable.

P-8B would have been inoperable following a steam line break in the turbine building except during periods when the turbine building roll-up doors were open, which would mitigate pressure effects by creating a large flow path to vent steam. In general, the roll-up doors are only closed during cold weather and during severe weather conditions such as high winds or heavy precipitation.

Therefore, over the previous three years, P-8B and its corresponding AFW train were inoperable for several periods of time longer than the 72 hours allowed by Technical Specification (TS) 3.7.5.A. During the period P-8B was inoperable, AFW pumps P-8A and P-8C [P;BA] were periodically made inoperable for routine testing and maintenance, resulting in less than two AFW pumps being operable for periods of time in excess of TS 3.7.5.B. Additionally, during the periods P-8B was inoperable, there was one brief occasion (< 1 hour) when P-8A and P-8C were simultaneously inoperable due to both pumps being placed in manual for testing. This condition

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

resulted in not meeting the required action and associated completion time of TS 3.7.5.C to immediately initiate action to restore one AFW train to operable status.

This occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications, and 10 CFR 50.73(a)(2)(v)(B) as a condition that could have prevented the fulfillment of the safety function of a system that is needed to remove residual heat.

CAUSE OF THE EVENT

The potential interaction between a steam line break in the turbine building and AFW system components in either the turbine building or AFW pump room was not previously analyzed. The design basis document contained a general statement that the turbine building is of sufficient size to dissipate any energy release from a postulated main steam line failure without significant pressurization or other adverse environmental effects.

CORRECTIVE ACTIONS

As an interim compensatory measure, the turbine building roll-up doors were controlled in the open position to mitigate the pressure effects of a steam line break in the turbine building until a permanent modification was completed. Subsequently, a modification was completed to install a blow-out panel in the turbine building, which will function to reduce the pressure gradient and prevent moisture and steam intrusion into component internals.

SAFETY SIGNIFICANCE

The event is considered to be of very low safety significance based on a combination of low initiating event frequency, and availability of AFW from at least one alternate AFW pump.

The low initiating event frequency includes consideration that the issue was precluded during approximately 6 months of the year when the turbine building was vented by its open roll-up doors.

AFW flow remained available via operable AFW pumps P-8A and/or P-8C, except for one brief period when P-8A and P-8C were inoperable due to being in manual for testing. In that instance, operators would have been directed by procedure to recover steam generator level, and could have readily started P-8A or P-8C from the control room.

PREVIOUS SIMILAR EVENTS

None