



April 14, 2006

10 CFR 50.73(a)(2)(ii)(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 06-001, Potential Loss Of Primary Coolant Makeup Function For Postulated Fire Scenario

Licensee Event Report (LER) 06-001 is enclosed. The LER describes the discovery of a postulated fire scenario in which spurious component operation could result in the potential inability to maintain a primary coolant makeup path in accordance with 10 CFR 50, Appendix R. This event is reportable in accordance with 10 CFR 50.73(a)(2)(ii)(B).

Summary of Commitments

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

Paul A. Harden
Site Vice President, Palisades Nuclear Plant
Nuclear Management Company, LLC

Enclosure (1)

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

ENCLOSURE 1

**LER 06-001, Potential Loss Of Primary Coolant
Makeup Function For Postulated Fire Scenario**

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, NEOB-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) 05000-255	PAGE (3) 1 of 3
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TITLE (4)
Potential Loss of Primary Coolant Makeup Function for Postulated Fire Scenario

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
02	14	2006	2006	-- 001 --	00	04	14	2006	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		1		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR .: (Check all that apply) (11)						
POWER LEVEL (10)		100		20.2201(b)		20.2203(a)(3)(ii)	X	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)	
				20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)	50.73(a)(2)(x)	
				20.2203(a)(1)		50.36(c)(1)(i)(A)		50.73(a)(2)(iv)(A)	73.71(a)(4)	
				20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)	73.71(a)(5)	
				20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A	
				20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)		
				20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)		
				20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)		
				20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)		
				20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		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)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT

On February 14, 2006, during review of a 10 CFR 50, Appendix R analysis, a condition was identified that could challenge the ability to maintain the primary (reactor) coolant makeup function, as required by Appendix R, paragraph III.G, "Fire Protection of Safe Shutdown Capability."

In the analysis, the specific fire scenario is assumed to render all charging pumps unavailable for maintaining the primary coolant makeup function. To compensate for the loss of all charging pumps, the analysis credited high pressure safety injection pump (HPSI) P-66B for supplying makeup. However, the review determined that the fire scenario could also result in damage to the control circuit for the HPSI pump's credited suction valve, CV-3031, resulting in a spurious closure of the valve. The spurious closure of the HPSI pump's suction valve with the HPSI pump in operation would likely render the HPSI pump inoperable, causing a loss of the ability to maintain the primary coolant makeup function.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(ii)(B) as an unanalyzed condition.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Palisades	05000-255	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 3
		2006	-- 001 --	00	

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

EVENT DESCRIPTION

On February 14, 2006, during review of a 10 CFR 50, Appendix R analysis, a condition was identified that could challenge the ability to maintain the primary (reactor) coolant makeup function, as required by Appendix R, paragraph III.G, "Fire Protection of Safe Shutdown Capability."

In the analysis, the specific fire scenario is assumed to render all charging pumps [P;CB] unavailable for maintaining the primary coolant makeup function. To compensate for the loss of all charging pumps, the analysis credited high pressure safety injection (HPSI) pump P-66B [P;BQ] for supplying makeup. The analysis further recognized that the fire scenario could result in damage to the control circuit for the HPSI pump, resulting in a spurious start. A spurious start of the HPSI pump was deemed acceptable in the analysis since this would be consistent with the desired operating state of the pump for providing primary coolant makeup.

However, the review determined that the fire scenario could also result in damage to the control circuit for the HPSI pump's credited suction valve, CV-3031 [V;BP], resulting in a spurious closure of the valve. The spurious closure of the HPSI pump's suction valve with the HPSI pump in operation would likely render the HPSI pump inoperable, causing a loss of the ability to maintain the primary coolant makeup function.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(ii)(B) as an unanalyzed condition.

CAUSE OF THE EVENT

At the time this Appendix R analysis was developed, the coping strategy for the analysis assumed only one worst case spurious actuation or signal. Current guidance for Appendix R analyses requires the consideration of equipment failure combinations and multiple spurious actuations.

SAFETY SIGNIFICANCE

The safety significance of the event is considered to be minimal. Analysis has demonstrated that sufficient primary coolant inventory would be maintained to keep the core covered and prevent core damage for greater than 24 hours without makeup capability. A 24-hour period is considered sufficient time to complete proceduralized emergency repairs to a charging pump and to restore the primary coolant makeup function.

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

CORRECTIVE ACTIONS

Compensatory actions were established for this fire scenario to preserve the HPSI pump for primary coolant makeup capability. In the event of a spurious start of the HPSI pump, guidance directs operators to stop the HPSI pump. Guidance also directs isolation of control circuit power to CV-3031 to disable it in the open position, precluding HPSI pump damage caused by pump operation without a suction flow path. Once the suction valve is assured open, the HPSI pump may be operated as necessary to maintain the primary coolant makeup function.

An extent of condition evaluation of other Appendix R credited pumps with similar potential for pump damage resulting from spurious pump and valve operation is being conducted.

Final resolution of this condition is expected to be addressed with the planned transition to National Fire Protection Association (NFPA) 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition."

PREVIOUS SIMILAR EVENTS

Licensee Event Report 95-015, "Appendix R Scenario Results in Spurious Operation and Damage to Alternate Shutdown Motor Operated Valves"

Licensee Event Report 97-008, "Spurious Valve Operation Could Result in Loss of Shutdown Capabilities Per 10 CFR 50, Appendix R, Section III.L"

Licensee Event Report 97-010, "Inadequacy in Appendix R Analysis Results in a Condition Outside the Design Basis of the Plant"