



October 24, 2005

10 CFR 50.73(a)(2)(iv)(A)

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 05-005, Reactor Protection System and Auxiliary Feedwater System Actuation

Licensee Event Report (LER) 05-005 is attached. The LER describes a manual actuation of the reactor protection system and subsequent actuation of the auxiliary feedwater system. This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A).

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

JE22

**ENCLOSURE 1**

**LER 05-005, REACTOR PROTECTION SYSTEM AND  
AUXILIARY FEEDWATER SYSTEM ACTUATION**

2 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.

<b>FACILITY NAME (1)</b> Palisades Nuclear Plant	<b>DOCKET NUMBER (2)</b> 05000-255	<b>PAGE (3)</b> 1 of 2
---	---------------------------------------	---------------------------

**TITLE (4)**  
Reactor Protection System and Auxiliary Feedwater System Actuation

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
09	01	2005	2005	-- 005 --	00	10	24	2005	FACILITY NAME	DOCKET NUMBER

<b>OPERATING MODE (9)</b> 1	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR •: (Check all that apply) (11)</b>									
<b>POWER LEVEL (10)</b> 100	20.2201(b)	20.2203(a)(3)(ii)	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)	X 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)**

<b>NAME</b> Daniel G. Malone	<b>TELEPHONE NUMBER (Include Area Code)</b> (269) 764-2463
---------------------------------	---

**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
X	TB	PSF	W120	Y					

<b>SUPPLEMENTAL REPORT EXPECTED (14)</b>				<b>EXPECTED SUBMISSION DATE (15)</b>		
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO		MONTH	DAY	YEAR

**ABSTRACT**

On September 1, 2005, at 1025 hours, with the plant operating at 100% power, the reactor was manually tripped due to a hydrogen leak associated with the main generator. The manual reactor trip was a precautionary measure to facilitate expeditious removal from service of the main generator to allow hydrogen to be isolated and purged from the main generator, and preclude the potential for formation of an explosive hydrogen/air mixture. Following the reactor trip, the auxiliary feedwater system started automatically to maintain steam generator water level. The plant was stabilized in Mode 3 to investigate and repair the cause of the hydrogen leak. The hydrogen leak was at a socket weld at a piping tee connection on the main generator's leak detection line. The socket weld was repaired by grinding out the weld area and re-welding the connection. The most probable causes are cyclic fatigue of the weld due to vibration of the line and a weld flaw.

The safety significance of this event was minimal. All safety systems functioned as expected during the plant trip. This event does not involve a safety system functional failure.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in a manual actuation of the reactor protection system and automatic actuation of the auxiliary feedwater system.

**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 2
		2005	-- 005	-- 00	

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

**EVENT DESCRIPTION**

On September 1, 2005, at 1025 hours, with the plant operating at 100% power, the reactor [RCT;AB] was manually tripped due to a hydrogen leak associated with the main generator [GEN;TB]. The manual reactor trip was a precautionary measure to facilitate expeditious removal from service of the main generator to allow hydrogen to be isolated and purged from the main generator, and preclude the potential for formation of an explosive hydrogen/air mixture. Following the reactor trip, the auxiliary feedwater system [BA] started automatically to maintain steam generator [SG;AB] water level. The plant was stabilized in Mode 3 to investigate and repair the cause of the hydrogen leak.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in a manual actuation of the reactor protection system [JC] and automatic actuation of the auxiliary feedwater system.

**CAUSE OF THE EVENT**

The hydrogen leak was at a socket weld at a piping tee connection on the main generator's leak detection line. The primary purpose of the leak detection line is to allow detection of either a service water [KG] leak from the hydrogen coolers [CLR;TK] or a seal oil [TB] leak into the main generator. The socket weld was repaired by grinding out the weld area and re-welding the connection. The grinding associated with the repair effectively precluded the ability to examine the socket weld and to positively determine a root cause. The most probable causes are cyclic fatigue of the weld due to vibration of the line and a weld flaw.

**SAFETY SIGNIFICANCE**

The safety significance of this event was minimal. All safety systems functioned as expected during the plant trip. This event does not involve a safety system functional failure.

**CORRECTIVE ACTIONS**

As noted above, the socket weld was repaired by re-welding the connection.

**PREVIOUS SIMILAR EVENTS**

None