NMC
Committed to Nuclear Excellence

Palisades Nuclear Plant
Operated by Nuclear Management Company, LLC

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

January 21, 2003

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

DOCKET 50-255
LICENSE DPR-20
PALISADES NUCLEAR PLANT
LICENSEE EVENT REPORT 02-002, AUTOMATIC REACTOR TRIP AND SAFETY SYSTEM ACTUATION

Licensee Event Report (LER) 02-002 is attached. The LER describes an automatic reactor trip 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.

Douglas E.Cooper
Site Vice-President, Palisades

CC Regional Administrator, USNRC, Region III
Project Manager, USNRC, NRR
NRC Resident Inspector, Palisades

Attachment

27780 Blue Star Memorial Highway • Covert, MI 49043
Telephone: 616.764 2000

IE22

NRC FORM 366 (7-2001) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 31500104 EXPIRES 7-31-2004
Estimated burden per response to comply with this mandatory information 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 Management Branch (T-6 E6), U S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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 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

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
PALISADES NUCLEAR PLANT	05000255	1 OF 3

4. TITLE

AUTOMATIC REACTOR TRIP AND SAFETY SYSTEM ACTUATION

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
12	01	2002	2002	- 002 -	00	01	21	2003	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE	1
10. POWER LEVEL	100

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR ɔ: (Check all that apply)

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)	

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER (Include Area Code)
Barb Dotson, Regulatory Analyst	(269) 764-2265

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
D	FK	H	J120	Y					

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

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

On December 1, 2002, at approximately 2154 hours, with the plant operating at 100% power, an automatic reactor trip occurred on main generator loss of load. The loss of load occurred when a transmission tower's static line hanger failed, allowing one of two static lines to contact a 345 KV transmission line, tripping the main generator. The static line also contacted the rear bus in the switchyard that supplies the plant non-1E 4160 volt startup transformers. The rear bus tripped on a fault-to-ground causing a loss of non-1E 4160 volt AC buses. Consequently, both main feedwater pumps tripped, and the auxiliary feedwater system started automatically on low steam generator level, as expected.

The plant was maintained at or near normal operating pressure and temperature subsequent to the trip, on natural circulation, since startup power for primary coolant pumps was also lost. The plant was returned to service on December 5, 2002.

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

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
PALISADES NUCLEAR PLANT	05000255	2002	- 002 -	00	2 OF 3

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

EVENT DESCRIPTION

On December 1, 2002, at approximately 2154 hours, with the plant operating at 100% power, an automatic reactor [RCT] trip occurred on main generator [GEN] loss of load. The loss of load occurred when a transmission tower's [TWR] static line hanger [H] failed, allowing one of two static lines to contact a 345 KV transmission line, tripping the main generator. The static line also contacted the rear bus [BU] in the switchyard [FK] that supplies the plant non-1E 4160 volt startup transformers [XFMR]. The rear bus tripped on a fault-to-ground causing a loss of non-1E 4160 volt AC buses. Consequently, both main feedwater pumps [P;SJ] tripped, and the auxiliary feedwater system [BA] started automatically on low steam generator [SG] level, as expected.

The plant was maintained at or near normal operating pressure and temperature subsequent to the trip, on natural circulation, since startup power for primary coolant pumps [P;AB] was also lost.

The plant was returned to service on December 5, 2002.

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

CAUSE OF THE EVENT

Inadequate preventive maintenance over a 30-year service life allowed mechanical wear of the hanger to the point of ductile failure. The additional mechanical load/force of the falling line caused a similar failure of the hanger and the pin/shoe connection on an adjacent tower. Evaluation of the event concluded that previous reviews of industry operating experience did not identify all hardware requiring inspections, which resulted in a lack of preventive maintenance activities.

SAFETY SIGNIFICANCE

The safety significance of this event was minimal. All safety systems functioned as expected during the plant trip.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
PALISADES NUCLEAR PLANT	05000255	2002	- 002 -	00	3 OF 3

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

CORRECTIVE ACTIONS

Authorization was obtained to operate without one static line on the section of 345 KV transmission line between the main power transformer and the switchyard. A new static line will be installed during the 2003 refueling outage, in accordance with original design.

The remaining static line was inspected and worn parts were replaced to prevent a similar event from occurring on this line. Also, the connections and conductors of the 345 KV lines were inspected with no anomalies identified.

Applicable industry operating experience is being re-evaluated and preventive maintenance activities for 345 KV components will be revised, as needed.

PREVIOUS SIMILAR EVENTS

A Consumers Energy hydro plant, Ludington Pumped Storage, had a failure of a static line hanger on October 14, 1995. The static line fell onto an arm of the tower that prevented it from contacting a conductor and creating an equipment trip. No incident report was distributed and Palisades' personnel were not previously aware of this occurrence.

PREVIOUS LERs

None