

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) PALISADES NUCLEAR PLANT										DOCKET NUMBER (2) 0 5 0 0 0 2 5 5										PAGE (3) 1 OF 012	
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TITLE (4)

AUTOMATIC ACTUATION OF REACTOR PROTECTION SYSTEM

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)											
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES						DOCKET NUMBER(S)					
01	15	87	87	002	00	02	16	87	N/A						0 5 0 0 0					
									N/A						0 5 0 0 0					
OPERATING MODE (9) N			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																	
POWER LEVEL (10) 0 0 0			20.402(b)			20.408(e)			<input checked="" type="checkbox"/> 90.73(a)(2)(iv)			73.71(b)								
			20.408(a)(1)(i)			90.38(a)(1)			<input type="checkbox"/> 90.73(a)(2)(v)			73.71(a)								
			20.408(a)(1)(ii)			90.38(a)(2)			<input type="checkbox"/> 90.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 388A)								
			20.408(a)(1)(iii)			90.73(a)(2)(i)			<input type="checkbox"/> 90.73(a)(2)(vii)(A)											
			20.408(a)(1)(iv)			90.73(a)(2)(ii)			<input type="checkbox"/> 90.73(a)(2)(vii)(B)											
			20.408(a)(1)(v)			90.73(a)(2)(iii)			<input type="checkbox"/> 90.73(a)(2)(viii)											

LICENSEE CONTACT FOR THIS LER (12)

NAME C S Kozup, Technical Engineer, Palisades										TELEPHONE NUMBER AREA CODE 6 1 6 7 6 4 - 8 9 1 3									
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	
B	I G R I		G 3 0 5	Yes							

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)										<input checked="" type="checkbox"/> NO										EXPECTED SUBMISSION DATE (15)			MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On January 15, 1987, a noise spike in nuclear instrumentation resulted in an inadvertent Reactor Protection System actuation. The Plant was in cold shutdown condition at the time of the event; therefore, no transients resulted from the reactor trip signals.

The noise spikes were attributed to a highly corroded cable connector pin at the interface of the detector element, and signal and high voltage leads.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Palisades Nuclear Plant	DOCKET NUMBER (2) 0 5 0 0 0 2 5 5 8 7	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		87	002	00	02	OF	02

TEXT (If more space is required, use additional NRC Form 306A's) (17)

Description

At 1333 on January 15, 1987, with the Plant in cold shutdown condition (107 degrees, 16.7 psia), plant personnel were in the process of zeroing control rod drive packages when a noise spike was experienced in Nuclear Instrumentation NI-04 [IG;RI]. The noise spike resulted in high start-up rate, low steam generator pressure, low primary coolant system flow and thermal margin/low pressure trips in the Reactor Protection system [JC]. All equipment functioned normally.

Upon indication of reactor protection system actuation, control rod drive package zeroing was halted and zero power mode bypass keys were removed. Operations personnel also investigated the possibility of welding operations occurring, which may have caused the noise spike due to a past occurrence; however, no welding operations were occurring.

Cause of the Event

Trouble shooting revealed the source of the electrical noise to be from a highly corroded cable connector pin at the interface of the detection element and signal and high voltage leads. This corrosion caused a high continuity resistance between the cable shield and signal and high voltage leads, providing a degraded coax shield, resulting in induced noise in the detector leads. The corrosion is believed to be caused by exposure to a boric acid atmosphere.

Analysis of the Event

The event resulted from electrical noise generated within a nuclear instrument. All equipment operated normally.

This event is being reported under 10CFR50.73(a)(2)(iv) due to an event occurring which actuated the reactor protection system.

Corrective Actions

The detection element of the nuclear instrumentation has been replaced. Engineering evaluations will be initiated to redesign/revise the detection element well cover and/or gasket to prevent moisture intrusion. An additional investigation will be undertaken to evaluate the feasibility of utilizing heat shrink tubing over detection element connections to prevent corrosion.

Additional Information

Similar events: reference LER 85-013 and LER 86-011.

NI-04 is a Gulf General Atomic Inc. Model NLW-2, Wide Range Neutron Sensor.



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February 16, 1987

US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
LICENSEE EVENT REPORT 87-002 - AUTOMATIC ACTUATION
OF REACTOR PROTECTION SYSTEM

Licensee Event Report (LER) 87-007, (Automatic Actuation of Reactor
Protection System) is attached. This event is reportable to the NRC per
10CFR50.73(a)(2)(iv).

Brian D Johnson
Staff Licensing Engineer

CC Administrator, Region III, USNRC
NRC Resident Inspector - Palisades

Attachment