

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) PALISADES NUCLEAR PLANT	DOCKET NUMBER (2) 0 5 0 0 0 2 5 5	PAGE 15 1 OF 0 3
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TITLE (4)
INADVERTENT CONTAINMENT ISOLATION DUE TO ELECTRICAL NOISE FROM A TEMPORARY PUMP

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		
0	9	11	8	8	0	0	1	7	N/A		
0	9	11	8	8	0	0	1	0	N/A		

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more of the following) (11)

OPERATING MODE (9) N	20.402(b)	20.408(e)	<input checked="" type="checkbox"/>	60.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 0 0	20.408(a)(1)(i)	60.38(e)(1)		60.73(a)(2)(v)	73.71(e)
	20.408(a)(1)(ii)	60.38(e)(2)		60.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 308A)
	20.408(a)(1)(iii)	60.73(a)(2)(i)		60.73(a)(2)(vii)(A)	
	20.408(a)(1)(iv)	60.73(a)(2)(ii)		60.73(a)(2)(vii)(B)	
	20.408(a)(1)(v)	60.73(a)(2)(iii)		60.73(a)(2)(viii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME C S Kozup, Technical Engineer, Palisades	TELEPHONE NUMBER AREA CODE 6 1 1 6 7 6 4 1 - 1 8 1 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 NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X		P		No					

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)

Abstract

On September 11, 1988, at 1635, 1656 and 1658 inadvertent containment isolation signals [JE] were received. These signals have been attributed to electrical noise generated from starting and stopping a motor for a temporary pump which had seized. The electrical noise was received by radiation monitor RIA-2316 which subsequently alarmed. The reactor was in the refueling condition at the time of these events.

After verification of no abnormal radiation levels, RIA-2316 and the containment isolation logic were reset. The failed pump was replaced with a new pump. No further actuations were received upon energizing the new pump.

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

Description

On September 11, 1988, at 1635, 1656 and 1658 inadvertent containment isolation signals [JE] were received. These signals have been attributed to electrical noise generated from starting and stopping a motor for a temporary pump which had seized. The electrical noise was received by radiation monitor RIA-2316 which subsequently alarmed. The reactor was in the refueling condition at the time of these events.

The radiation monitor is one of two such monitors located approximately 180 degrees apart just above the reactor cavity deck elevation. The minimum actuation logic for initiation of containment isolation via these monitors is one channel out of two. These monitors are only used during the refueling condition per Technical Specification 3.8.1.c.

While cleaning the incore instrument [IG;DET] guide tubes on the upper guide structure, the flow rate to a temporary filter unit being used to collect debris decreased from 150 gallons per minute to only slightly greater than zero. The cleaning unit was secured and adjustment made based on the assumption that the reduced flow was due to hose constriction. Following hose adjustment and attempted restart of the pump at 1635, a containment isolation signal was received and radiation monitor RIA-2316 [IL;RE] alarmed. Restart of the pump did not result in increased flow to the filter and the pump was again secured. After verification by Health Physics personnel that no abnormal radiation levels were present, the work crew cleaning the guide tubes made further hose adjustments. The pump was then restarted and secured twice at 1656 and 1658. At both times, inadvertent containment isolation signals were received. Further cycling of the pump was halted and radiation levels were verified to be normal.

Cause Of The Event

Initial investigations revealed that the three inadvertent containment isolation signals directly corresponded to the starting and stopping of the temporary pump being utilized for UGS tube cleaning in the reactor cavity. Subsequent investigation revealed the motor of the pump providing flow to the filter assembly had seized.

The spiking of radiation monitor RIA-2316 and subsequent containment isolation signals have been attributed to electrical noise caused by current from a locked rotor and possible arcing within the motor of the temporary pump. The conclusion is based on the fact that:

1. Each actuation of the containment isolation signal occurred coincidentally with starting the temporary pump after its motor had seized.
2. Starting and stopping the pump prior to motor failure did not result in radiation monitor alarms.

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

3. Dedicated Health Physics coverage of the incore instrument guide tube cleaning confirmed no abnormal radiation levels were occurring at the time the radiation monitor alarmed.
4. Following replacement of the failed pump, the new pump was started without incident.

Corrective Actions

Following receipt of the inadvertent containment isolation signals and after verification that no abnormal radiation levels were present, Control Room operators reset RIA-2316 and the containment isolation logic. The failed pump/motor was replaced with a new pump/motor and incore instrument guide tube cleaning was reinitiated. The pump motor which failed is a temporary piece of equipment only utilized for the one time task of cleaning guide tubes. Since the noise induced actuations of RIA-2316 or RIA-2317 are considered isolated to this event and because the guide tube cleaning is a one time occurrence (ie, being performed in support of an in-progress modification), no further corrective actions are planned.

Analysis Of The Event

At the time of the events, all required provisions for containment integrity during refueling operations were in-place. The containment isolation system functioned as designed with no anomalies noted. Therefore, no threat to public health and safety was presented.

This event is being reported per 10CFR50.73(a)(2)(iv) as a condition which resulted in the automatic actuation of an engineered safety feature.

Additional Information

Radiation monitor RIA-2316 is a Victoreen, Incorporated model number 842-2.

The temporary pump is a Tri-Nuclear, Inc model number UFV-250.

For additional information regarding other inadvertent containment isolation signal, reference Licensee Event Reports 84-002, 84-005, 84-011, 85-030, 86-008 and 88-014.



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October 11, 1988

Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
LICENSEE EVENT REPORT 88-017 - INADVERTENT CONTAINMENT ISOLATION DUE TO
ELECTRICAL NOISE FROM A TEMPORARY PUMP

Licensee Event Report (LER) 88-017, (Inadvertent Containment Isolation Due to
Electrical Noise From A Temporary Pump) 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

OC1088-0170-NL02

*per Dennis Johnson
11:00 am
10/17/88
PCE*

*IE22
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