NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

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

TITLE (4)

UNTIMELY COMMUNICATION RESULTS IN INADVERTENT DIESEL GENERATOR ACTUATION

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)
									N/A	0 5 0 0 0
0 7	1 2	8 7	8 7	— 0 2 3	— 0 0				N/A	0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)							
N		20.402(b)		20.405(c)	X	50.73(a)(2)(iv)		73.71(b)	
POWER LEVEL (10)		20.405(a)(1)(i)		50.36(a)(1)		50.73(a)(2)(v)		73.71(c)	
0 0 0		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
		20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)			
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)			
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
JGLewis, Technical Director, Palisades	AREA CODE 6 1 6 — 7 6 4 - 8 9 1 3

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	
A											

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

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

On July 12, 1987 at 0346, diesel generators 1-1 and 1-2 [EK;DG] inadvertently actuated while Operations personnel were latching the turbine generator [SB;TG] during performance of a Reactor Protection System (RPS) [JC] checklist. The Plant was in hot shutdown condition (primary coolant system: 2011 psia, 528 degrees F) at the time of the event. Electric/hydraulic circuit timing during the latching process creates a situation which can result in inadvertent diesel generator start if not carefully prevented.

On June 21, 1987, a similar event occurred which resulted in the inadvertent actuation of the diesel generator when latching the turbine generator. The corrective actions for this event included procedure changes and notification of Operations personnel as to the cause of the event. Procedural changes were completed prior to the assigned due date, however, all Operations personnel had not been notified.

The failure to notify all operators in a timely manner resulted because the Operations Superintendent and Plant Corrective Action Review Board Chairman approved a 30 day completion date, assuming the Plant would not be shutdown during the action completion time. Procedural changes have been completed, and Operations personnel notified of these changes and their significance.

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

Description

On July 12, 1987 at 0346, diesel generators 1-1 and 1-2 [EK;DG] inadvertently actuated while Operations personnel were latching the turbine generator [SB;TG] during performance of a Reactor Protection System (RPS) [JC] checklist. The Plant was in hot shutdown condition (primary coolant system: 2011 psia, 528 degrees F) at the time of the event.

In preparation for returning the Plant to service, Operations personnel were performing Checklist 36; "Reactor Protective System Checklist, Breakers and Cables". During performance of this checklist, operators are directed to latch the turbine generator and then verify that turbine trip output functions would receive an actuation signal. As the turbine generator was latched, and prior to any further operator action with regard to Checklist 36, diesel generators 1-1 and 1-2 actuated.

Investigations into the cause of the event revealed that operators on-shift did not hold the diesel generator control switch in the stop position when latching the turbine generator. Direction to perform this action was added to Standard Operating Procedure (SOP) 8; "Main Turbine and Generating Systems" on July 10, 1987. This action and additional precautionary statements were added to SOP 8 in response to the June 21, 1987 inadvertent diesel generator actuation. Information regarding the June 21, 1987 actuation can be found in Palisades Licensee Event Report 87-019, "Failure of Autostop Oil Pressure Switch Results in Inadvertent Diesel Generator Actuation".

The diesel generators were subsequently secured and Checklist 36 completed at 0417.

Cause Of The Event

The failure of on-shift Operations personnel to be aware of the preceeding event has been attributed to corrective action due date assignment the Operations Superintendent and the Plant Corrective Action Review Board (PCARB) Chairman. On June 21, 1987, diesel generators 1-1 and 1-2 inadvertently actuated while operators attempted to latch the turbine generator. Investigations revealed that the inherent design of the turbine autostop oil pressure system and associated mercoid pressure switches 63 AST/1&2 [TD;PS] could yield turbine trip and consequent diesel generator actuation signals. Corrective actions taken to preclude subsequent diesel generator actuations included the revision of SOP 8. This revision instructed Control Room operators to hold the diesel generator control switch in the stop position for 45 seconds when latching the turbine generator. This practice has been inconsistently performed in the past without procedural guidance, it was not performed during the June 21, 1987 turbine latching. Additionally, a precautionary statement was added to alert operators of the possibility of

diesel generator actuations due to vibration within mercoid pressure switches. This action was completed July 10, 1987 (prior to the assigned July 24, 1987 completion date), however, all Operations personnel on-shift had not been made aware of the procedural changes. This action was also to be completed by July 24, 1987.

When this date was assigned by PCARB, it was assumed the Plant would not be shutdown during the period when the actions were to be completed and that the diesel generators would not be subject to inadvertent actuation.

Corrective Actions

This item is considered to be an isolated incident as other similar situations have been controlled and appropriate actions implemented without event by the individuals involved.

As stated, SOP 8 has been revised to include precautionary statements and operator guidance regarding the potential for diesel generator actuation when latching the turbine. All shifts of Operations personnel have been made aware of the event and procedure changes made.

System Engineering personnel are evaluating the necessity for system modifications. This evaluation is to entail a review of actuation logic and the feasibility of utilizing a different style pressure switch ie, without mercury as the conducting mechanism. Included in this review of switch design will be the elimination of bouncing and circuit continuity loss if a switch design utilizing a conducting mechanism other than mercury is utilized.

Analysis Of The Event

In that the reactor was in hot standby condition at the time of the event and the deenergizing of autostop oil pressure switches 63 AST/1&2 results in a turbine trip and diesel generator actuation signal, no safety hazard existed.

Also, as the bouncing effect seen in the mercoid pressure switch is believed to only occur during the rapid autostop oil pressure increase when the turbine is latched, no additional safety consequences are believed to exist.

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

For information regarding inadvertent diesel generator actuation when latching the turbine generator, reference Licensee Event Report 87-019.

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Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
LICENSEE EVENT REPORT 87-023 - UNTIMELY COMMUNICATION
RESULTS IN INADVERTENT DIESEL GENERATOR ACTUATION

Licensee Event Report (LER) 87-023, (Untimely Communication Results in Inadvertent Diesel Generator Actuation) 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

IE22
1/1

OC0787-0116-NL02