

APPROVED FOR OMB NO 3180-0106
EXPIRATION 8/31/95

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) PALISADES NUCLEAR PLANT						DOCKET NUMBER (2) 0 5 0 0 0						PAGE (3) 1 OF 0 3									
TITLE (4) INADVERTENT EMERGENCY 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 (9)									
									NA			0 5 0 0 0									
0	6	1	7	8	6	8	6	-	0 2 0 - 0 0 0			7	1	7	8	6	NA			0 5 0 0 0	
OPERATING MODE (10)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or many of the following) (11)																		
POWER LEVEL (10)		0	0	0	20.402(b)		20.405(a)		X	80.73(a)(2)(iv)		75.71(b)									
			20.405(a)(1)(i)		80.36(a)(5)			80.73(a)(2)(v)		75.71(a)											
			20.405(a)(1)(ii)		80.36(c)(2)			80.73(a)(2)(vi)		OTHER (Specify in Abstract below and in Text, NRC Form 385A)											
			20.405(a)(1)(iii)		80.73(a)(2)(i)			80.73(a)(2)(vii)(A)													
			20.405(a)(1)(iv)		80.73(a)(2)(ii)			80.73(a)(2)(vii)(B)													
			20.405(a)(1)(v)		80.73(a)(2)(iii)			80.73(a)(2)(ix)													
			20.405(a)(1)(vi)		80.73(a)(2)(iv)																
LICENSEE CONTACT FOR THIS LER (12)																					
NAME Daniel G Malone, Senior Licensing Engineer, Palisades										TELEPHONE NUMBER											
										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	MANUF- TURER	REPORTABLE TO NPROS		CAUSE	SYSTEM	COMPONENT	MANUF- TURER	REPORTABLE TO NPROS											
SUPPLEMENTAL REPORT EXPECTED (14)																					
☒ YES (If yes, complete EXPECTED SUBMISSION DATE)										EXPECTED SUBMISSION DATE (15)		MONTH 1	DAY 0	YEAR 1 8 6							
☐ NO																					

On June 17, 1986, a spurious emergency diesel generator actuation was initiated at the conclusion of a flushing evolution in the turbine lube oil system. The oil pressure utilized during flushing was sufficient to reset pressure switches in the turbine oil trip system. When the flushing was terminated, turbine oil trip system pressure decayed below the pressure switch setpoint, resulting in an automatic activation of the emergency diesel generator start circuitry. The Plant was in cold shutdown at the time of the occurrence. Both emergency diesel generators started and functioned normally in response to the occurrence. The emergency diesel generators were subsequently restored to standby status. No equipment was rendered inoperable.

A modification to provide effective isolation of the diesel start circuitry from the turbine protection circuitry during plant shutdown is being evaluated.

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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 6	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		0	2	0	0	0	2 OF 03

TEXT (If more space is required, use additional NRC Form 308A's) (17)

Description of Event

On June 17, 1986, at 1510, flushing of the turbine oil system [TD] resulted in the automatic actuation of the emergency diesel generators [DG;EK]. The Plant was in cold shutdown condition at the time of the occurrence. Both emergency diesel generators started and functioned normally in response to the start signal. The generators did not assume any load, as off-site supplied AC power remained available throughout the occurrence. The emergency diesel generators were subsequently returned to standby status.

Cause

Prior to the occurrence, the turbine lube oil system was being flushed using the High Pressure Seal Oil Back-up Pump (P-24) [P;TD]. Although performing a separate function, the oil in the turbine lube oil system is also common to the turbine oil trip system (auto-stop oil). The pressure produced during the flushing evolution was sufficient to reset the pressure switches [PS] in the turbine oil trip system which start the emergency diesel generators. When P-24 was secured at the termination of flushing, the turbine oil trip system pressure decayed below the pressure switch setpoint, resulting in activation of the emergency diesel generator start circuitry.

The root cause of the occurrence was personnel error by the cognizant system engineer in the failure to anticipate that the flushing evolution would ultimately result in the stated occurrence. Normally, with the turbine "unlatched", the requisite pressure (45 psig) cannot be generated through such flushing evolutions to reset the diesel start pressure switches. During this particular flushing evolution, however, a flow orifice had been removed from the system (purposely for unrelated reasons). With the flow orifice removed, flow increased in the portion of the system with the diesel start pressure switches at a faster rate than could be relieved by the system, accounting for the increased pressure and reset of the pressure switches.

Corrective Actions

The pressure switches which automatically initiate an actuation of the emergency diesel generators have been manually isolated. The effect of the isolation is to preclude the pressure switches from being reset by system pressure. The isolation will remain in effect while the Plant is maintained in the cold shutdown condition.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES 8/31/86

FACILITY NAME (1) PALISADES NUCLEAR PLANT	DOCKET NUMBER (2) 0500025586	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		86	020	00	03	OF	03

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

While this action will prevent inadvertent emergency diesel generator actuations due to pressure fluctuations in the turbine oil trip system, it will not preclude all potential diesel actuations from the turbine protection circuitry. Consequently, a study is in progress to determine the feasibility of a modification to fully (electrically and hydraulically) isolate the diesel auto start function from the turbine protection circuitry when the Plant is shutdown.

Analysis of Event

The event does not involve any adverse safety consequences or implications of any kind. By design, the emergency diesel generators receive a start signal in conjunction with a loss of turbine oil trip system pressure. Although the emergency diesel generators were activated inadvertently, the diesels started and functioned normally. No equipment was rendered inoperable by the occurrence.

Additional Information

Related occurrences were reported in LERs 86-06, 86-08, 86-14 and 86-19.



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July 17, 1986

US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
LICENSEE EVENT REPORT 86-020 - (INADVERTENT
EMERGENCY DIESEL GENERATOR ACTUATION)

Licensee Event Report (LER) 86-020, (Inadvertent Emergency 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