

LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) COOPER NUCLEAR STATION (CNS)	DOCKET NUMBER (2) 05000298	PAGE (3) 1 OF 3
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TITLE (4)  
Inoperability of Diesel Generator Number No. 1 Due To Degraded Lube Oil 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 NAME	DOCKET NUMBER
11	06	97	97	015	00	12	12	97		
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
	20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)	50.73(a)(2)(viii)					
POWER LEVEL (10) 100	20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(iii)	50.73(a)(2)(x)					
	20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)	73.71					
	20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)	OTHER					
	20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A					
	20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)						

LICENSEE CONTACT FOR THIS LER (12)

NAME Daniel Mangan, Licensing Engineer	TELEPHONE NUMBER (Include Area Code) (402) 825-3811
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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
D	LA	P	V120	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE).	<input type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH 01	DAY 26	YEAR 98
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

Approximately 1315 hours on November 06, 1997, Diesel Generator Number 1 (DG1) shut down prematurely during a monthly surveillance test to demonstrate operability. This surveillance test involved a "slow start" of DG1 in which the low lube oil DG trip was operable in contrast to an emergency start in which this trip is bypassed.

Subsequent investigations determined that the cause of DG1 failure to successfully come to rated conditions was due to a degraded engine driven lube oil pump. It was concluded that this failure was the result of improper clearances not in conformance with the pump vendor's recommended values. These clearances were set during the most recent refueling outage which potentially could have rendered DG1 inoperable from the time that the clearances were reset during the most recent refueling outage, that is from April 20, 1997, until November 06, 1997, when the problem was first identified.

DG1 was repaired by installing a new engine driven pump, with the proper clearances verified by the vendor. On December 09, 1997, DG1 again failed to achieve rated conditions during a slow start. On December 10, 1997, DG1 successfully completed a fast start in accordance with station procedures, which demonstrated DG1 operability and that there are no safety concerns.

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

NOTE

This LER was due on December 08, 1997, however, as explained in the December 08, 1997 telephone call between Bradford L. Houston, CNS Licensing, and Charles S. Marschall, NRC, additional time was required to provide a full and accurate description of the event. Subsequent to this call, DG1 again failed to a slow start and the decision was made to provide an abstract so that the investigations into this event could be included in a supplemental report.

PLANT STATUS

Cooper Nuclear Station (CNS) was at a power level of 100% power at the time of this event.

EVENT DESCRIPTION

Approximately 1315 hours on November 6, 1997, Diesel Generator Number 1 (DG1) (EK) failed to achieve steady slow start operation following Post Maintenance Testing (PMT) for the replacement of the output breaker. This test was required in order to declare DG1 operable following the maintenance performed on DG1. DG1 apparently achieved a speed greater than 300 rpm for about 1.5 minutes before shutting itself down. No obvious failure mechanisms were identified during this DG1 start. As part of the incident investigation a subsequent slow start was performed at about 1515 hours on November 6, 1997, with a successful slow start operation with the engine loaded to the monthly surveillance test requirements.

Following a relay replacement in an attempt to determine a potential failure mode for the initial DG1 slow start failure, a third slow start run was attempted at about 2300 hours on November 6, 1997. DG1 again failed to achieve steady state operation and shut itself down after about 1.5 minutes. During this latter event certain key parameters were monitored by station personnel to allow for a detailed analysis of the situation. From this data and indications of burned paint at various locations on the DG1 engine driven lube oil pump (P) it was ascertained that the cause of the DG1 slow start was a degradation of the engine driven lube oil pump. DG1 was repaired by installing a new engine driven lube oil pump and demonstrated by test to be operable.

During a monthly surveillance test on December 09, 1997, DG1 again failed to achieve rated conditions during a slow start. On December 10, 1997, DG1 successfully fulfilled its procedural requirements following a fast start which demonstrated that DG1 was operable and that there are no safety concerns. DG2 successfully achieved rated conditions in a slow start on November 07, 1997, so that there is no common mode failure concern.

CAUSE

This information will be provided in a supplemental report.

SAFETY SIGNIFICANCE

Since both DG1 and DG2 are operable there are no safety concerns. CNS demonstrated DG1 operability using a fast start which is conformance with CNS Technical Specifications. The slow start option is intended only to improve diesel generator reliability and does not demonstrate any safety function that is not fulfilled by a fast start. CNS will continue to use the fast start option to verify

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DG1 operability until the problems associated with the DG1 slow start have been resolved. The effect of the failure of the DG1 engine driven lube oil pump on past safe plant operation will be provided in a supplemental report

CORRECTIVE ACTIONS

This information will be provided in a supplemental report.

PREVIOUS EVENTS

This information will be provided in a supplemental report.

Correspondence No: NL2970216

The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
NONE	