



PECO NUCLEAR

A Unit of PECO Energy

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10CFR50.73

April 15, 1996

Docket No. 50-353

License No. NPF-85

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 2

This LER reports the failure to perform surveillance testing on the Unit 2 D21 Emergency Diesel Generator (EDG) on an increased frequency resulting in a condition prohibited by Technical Specifications. This event was the result of an inadequate program to ensure prompt evaluation of EDG test failures.

Reference:	Docket No. 50-353
Report Number:	2-96-003
Revision Number:	00
Discovery Date:	March 14, 1996
Report Date:	April 15, 1996
Facility:	Limerick Generating Station P.O. Box 2300, Sanatoga, PA 19464-2300

This LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

Very truly yours,

cc: T. T. Martin, Administrator Region I, USNRC
N. S. Perry, USNRC Senior Resident Inspector, LGS

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LICENSEE EVENT REPORT (LER)

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ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH
THIS INFORMATION COLLECTION REQUEST: 50.0 HRS.
FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO
THE INFORMATION AND RECORDS MANAGEMENT BRANCH
(MNB 7714), 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)

Limerick Generating Station, Unit 2

DOCKET NUMBER (2)

05000 353

PAGE (3)

1 OF 5

TITLE (4) Failure to Perform Accelerated Surveillance Testing of a Unit 2 Emergency Diesel
Generator Due to an Inadequate Evaluation Program

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
03	14	96	96	-- 003 --	00	04	15	96	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
1			20.402(b)			20.405(c)			50.73(a)(2)(iv) 73.71(b)	
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v) 73.71(c)	
100			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii) OTHER	
			20.405(a)(1)(iii) X			50.73(a)(2)(i)			50.73(a)(2)(viii)(A) (Specify in	
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B) Abstract below	
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x) and in Text.	
									NRC Form 366A)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

J. L. Kantner, Manager - Experience Assessment

TELEPHONE NUMBER (Include Area Code)

(610) 718-3400

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

SUPPLEMENTAL REPORT EXPECTED (14)

YES

(If yes, complete EXPECTED SUBMISSION DATE).

X

NO

EXPECTED
SUBMISSION
DATE (15)

MONTH

DAY

YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On 3/21/96, it was discovered that surveillance testing of the Unit 2 D21 Emergency Diesel Generator (EDG) had not been performed at the frequency of at least once per seven days as required by Technical Specifications (TS) based on the occurrence of 2 EDG valid failures within the last 20 valid demands. The appropriate TS Actions were then taken for an inoperable EDG, surveillance testing was successfully performed, and the D21 EDG was declared operable. The significance of this event is low considering the successful completion of surveillance tests performed on the D21 EDG on February 29, 1996, and March 21, 1996, and the full availability of the other 3 Unit 2 EDGs. In addition, all subsequent D21 EDG testing has been satisfactorily performed. The primary cause of this event was an inadequate administrative program to ensure that EDG testing is promptly evaluated to determine if an EDG failure occurred and if increased testing is required. The program and associated implementing documents for performing EDG failure evaluations will be reviewed and enhanced.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)		DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Limerick Generating Station, Unit 2		05000353	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 5
			96	-- 003 --	00	

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

Unit Conditions Prior to the Event

Unit 2 was in Operational Condition 1 (Power Operation) at 100% power. There were no structures, systems, or components out of service which contributed to this event.

Background

On February 24, 1996, the Unit 2 D21 Emergency Diesel Generator (EDG) (EIIS:EK) was run to verify operability and support the transferring of loads from the 20 Station Auxiliary (Aux) Bus to the 10 Station Aux Bus to allow maintenance work to be performed on the 20 Station Aux Bus. During the course of this run, the D21 EDG was manually secured by Operations personnel due to the inability of the EDG to control load. A corrective action process evaluation was then initiated to follow-up on this loss of control event. On March 14, 1996, the System Manager, in conjunction with Maintenance/Instrumentation & Controls (I&C) personnel and the EDG governor vendor, concluded that this failure was a valid failure of the D21 EDG. This failure was reported to the NRC in a Special Report dated March 25, 1996, in accordance with Technical Specifications (TS) Sections 4.8.1.1.3 and 6.9.2.

Description of the Event

On March 21, 1996, while preparing the Special Report to the NRC concerning the February 24, 1996, D21 EDG start failure, station personnel ascertained that this was the second failure of the D21 EDG within the last twenty (20) valid demands. A previous start failure on the D21 EDG had been reported to the NRC in a Special Report dated December 28, 1995. TS Section Surveillance Requirement (SR) 4.8.1.1.2.a requires that the frequency of the specified EDG surveillance testing be increased from "at least once per 31 days" to "at least once per 7 days" if two (2) or more failures occur in the last twenty (20) valid demands. This accelerated schedule is required until there have been seven (7) consecutive failure free EDG demands performed and the number of failures in the last twenty (20) demands have been reduced to one (1).

Since the second failure had occurred on February 24, 1996, the next performance of the TS SR was due by March 2, 1996. This TS SR for the

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Limerick Generating Station, Unit 2	05000 ₃₅₃	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 5
		96	-- 003 --	00	

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

D21 EDG was successfully performed on February 29, 1996 as per the previously determined monthly schedule. The next performance of the TS SR was then due by March 7, 1996. However, the need to increase the frequency of the TS SR testing for the D21 EDG was not recognized and the D21 EDG was not tested by the March 7th due date. Although the February 24, 1996, test performance was determined to be a valid test on March 14, 1996, it was not recognized until March 21, 1996, that the D21 EDG should be on an increased test frequency. Consequently, the appropriate TS actions of TS Section 3.8.1.1 for an inoperable EDG were not taken within the required time limits resulting in operation prohibited by TS.

On March 21, 1996, the operations personnel initiated the appropriate actions for the inoperable D21 EDG. Following successful performance of testing per TS SR 4.8.1.1.a, the D21 EDG was declared operable at 2105 hours on March 21, 1996. The testing frequency of the D21 EDG remains at the seven (7) day frequency per the TS SR.

Since this event involved operation prohibited by TS, this report is submitted in accordance with the requirements of 10CFR50.73(a)(2)(i)(B).

Analysis of the Event

There were no adverse consequences as a result of this event. There was no release of radioactive material to the environment as a result of this event.

The significance of this event is low considering the following successful tests performed on the D21 EDG: 1) the post maintenance testing performed on February 25, 1996, following troubleshooting and repair of the cause of the February 24, 1996, EDG start failure, 2) the "monthly" EDG operability run performed on February 29, 1996, which was within seven days of the post maintenance testing, and 3) the operability testing performed on March 21, 1996, following identification of the failure to perform the increased surveillance testing in accordance with TS. In addition, all subsequent increased frequency testing of the D21 EDG has been satisfactorily performed with no additional operability problems.

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If the D21 EDG had been unavailable to perform its design function, the remaining three (3) unaffected Unit 2 EDGs were capable of supplying onsite AC power to ensure and maintain safe shutdown of the unit.

Cause of the Event

The primary cause of this event was an inadequate administrative program to ensure that EDG testing is promptly evaluated to determine if an EDG failure occurred and if increased testing is required. The operators who perform the EDG testing record the results in a surveillance test which includes test data collected over a week and does not provide for timely review of the EDG test results. Additionally, the guidance for what to document regarding the EDG failure does not ensure the appropriate information is provided to determine if the test was a failure. Additionally, there is no method to transmit the EDG test data to the appropriate personnel in a timely manner to ensure that the EDG failures are analyzed and the test frequency revised as required. As a result, the decision to increase the testing frequency is not assured to be performed within the seven (7) days of the failure.

A contributing factor was the untimely evaluation of the event. On February 25, 1996, based on a cursory understanding of the event, the condition was viewed as a failure of the electronic governor operating in the test mode which would have been backed-up by the mechanical governor operating in the emergency mode. A more detailed review was initiated on March 11, 1996, and included discussions with the EDG governor vendor. This review concluded on March 14, 1996, and revealed that the failure was in fact a valid EDG failure. However, by this time, the TS SR for conducting the EDG testing at the increased frequency of at least once per seven (7) days had not been satisfied.

Corrective Actions

The program and associated implementing documents for performing Unit 1 and Unit 2 EDG failure evaluations will be reviewed and enhanced as necessary. This action will ensure completion of the failure evaluation and revision of the EDG testing frequency within the seven (7) days of the testing, to ensure compliance with the TS SR.

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Until the final corrective actions are in place, Operations personnel have been provided with instructions to promptly inform Shift Supervision and the EDG System Manager of potential EDG failures to ensure timely evaluation of the test data. Additionally, the EDG System Manager has been instructed to promptly evaluate the EDG test data to ensure that increased EDG testing frequency is scheduled when required.

Previous Similar Occurrences

None