

PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION

P. O. BOX A

SANATOGA, PENNSYLVANIA 19464

(215) 327-1200 EXT. 2000

J. DOERING, JR.
PLANT MANAGER
LIMERICK GENERATING STATION

July 24, 1992

Docket Nos. 50-352
50-353
License Nos. NPF-39
NPF-85

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

SUBJECT: Licensee Event Report
Limerick Generating Station - Units 1 and 2

This LER reports a condition prohibited by Technical Specifications (TS) in that incorrect TS ACTION was taken upon discovery of an inoperable fire rated barrier, due to personnel error in misinterpretation of the applicable TS ACTION based on the affected plant fire area configuration.

Reference: Docket Nos. 50-352
50-353
Report Number: 1-92-014
Revision Number: 00
Event Date: November 16, 1990
Discovery Date: June 26, 1992
Report Date: July 24, 1992
Facility: Limerick Generating Station
P.O. Box 2300, Sanatoga, PA 19464-2300

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(i)(B).

Very truly yours,

J. C. Muntz
J. Doering

DCS:cah

cc: T. T. Martin, Administrator, Region I, USNRC
T. J. Kenny, USNRC Senior Resident Inspector, LGS

9207300052 920724
PDR ADOCK 05000352
S PDR

TE22

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Limerick Generating Station, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 3 5 2 1 OF 0 3									
TITLE (4) Thermo-Lag Fire Rated Barriers Inoperable Resulting in a Tech Spec Violation due to Personnel Error in Determining Applicable Tech Spec ACTION.																			
EVENT DATE (8)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (9)									
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES					DOCKET NUMBER(S)					
0 6	2 6	9 2	9 2	0 1 4	0 0 0	7	2 4	9 2	Limerick, Unit 2					0 5 0 0 0 3 5 3					
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																
POWER LEVEL (10)			20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(h)				
0 0 0			20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)				73.71(e)				
			20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 365A)				
			20.405(a)(1)(iii)				X 50.73(a)(2)(ii)				50.73(a)(2)(vii)(A)								
			20.405(a)(1)(iv)				50.73(a)(2)(iii)				50.73(a)(2)(vii)(B)								
			20.405(a)(1)(v)				50.73(a)(2)(iv)				50.73(a)(2)(ix)								
LICENSEE CONTACT FOR THIS LER (12)																			
NAME										TELEPHONE NUMBER									
G. J. Madsen, Regulatory Engineer, Limerick Generating Station										AREA CODE 2 1 5 3 2 7 - 1 2 0 0									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																			
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)									
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO									

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

On November 16, 1990, Thermo-Lag fire rated barriers surrounding electrical junction boxes for Unit 1 and Unit 2 cables located in the Common Control Enclosure were found to be damaged due to water intrusion. Station Fire Protection personnel immediately posted an hourly fire watch intended to satisfy Technical Specifications (TS) Section 3.7.7, "Fire Rated Assemblies," ACTION for an inoperable assembly with fire detection operable on one side of the assembly. On June 26, 1992, as a result of NRC Bulletin 92-01, "Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free from Fire Damage," a detailed review of the locations where Thermo-Lag fire rated assemblies are installed in the plant was conducted. This review identified that no fire detection existed in the immediate room with the damaged assemblies and therefore a continuous fire watch was required per TS, and was immediately posted. There were no fires experienced in the affected area during the period of noncompliance, therefore the degraded Thermo-Lag assemblies were never challenged. The cause of the event was personnel error on the part of Fire Protection personnel in the misinterpretation of which TS ACTION was applicable. Contributing to the misinterpretation was the uniqueness of the affected area. A letter will be issued by July 31, 1992, to all station Fire Protection personnel and Operations Supervision to clearly identify the three unique areas in the plant that contain Thermo-Lag fire rated assemblies with no fire detection equipment.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Limerick Generating Station, Unit 1	0 6 0 0 0 3 5 2 9 1 2	--	0 1 4	--	0 0	0 2	OF 0 3

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

Unit Conditions Prior to the Event:

Unit 1 was in Operational Condition (OPCON) 4 (Cold Shutdown) during a refuel outage at the time of discovery of this condition.

Unit 2 was in OPCON 1 (Power Operation) at 100% power at the time of discovery of this condition.

Description of the Event:

On November 16, 1990, Thermo-Lag fire rated assemblies surrounding electrical junction boxes (EJIS:JBX) for Unit 1 and Unit 2 cables (EJIS:CBL) located in the Common Control Enclosure were found to be damaged due to water intrusion. Station Fire Protection personnel immediately posted an hourly fire watch intended to satisfy Technical Specifications (TS) Section 3.7.7, "Fire Rated Assemblies," ACTION for an inoperable assembly with fire detection operable on one side of the assembly. The encapsulated junction boxes are located in the Recombiner Access Area, Room 259 (Fire Area 1, Control Enclosure, Elevation 200'). The hourly fire watch was established because even though this room has no installed fire detection, the adjacent rooms in the same fire area (Rooms 258 and 259, Control Enclosure chillers and chilled water pump areas respectively) do have installed fire detection. The encapsulation protects cables necessary to assure safe shutdown of Unit 1 and Unit 2 in the event of a fire.

On June 26, 1992, as a result of NRC Bulletin 92-01, "Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free from Fire Damage," a detailed review of the locations where Thermo-Lag fire rated assemblies are installed in the plant was conducted. This review identified that no fire detection existed in the immediate room with the damaged fire rated assemblies. We concluded, based on further evaluation of this fire area configuration, that a continuous fire watch was required by TS. Accordingly, a continuous firewatch was immediately posted to satisfy the TS Section 3.7.7 ACTION, on June 26, 1992, at 1657 hours.

The failure to implement a continuous fire watch on November 16, 1990, within one hour of the discovery of the inoperable fire rated assembly, resulted in a condition prohibited by TS. Accordingly, this report is being submitted in accordance with 10CFR50.73(a)(2)(i)(B).

Analysis of the Event:

There were no fires experienced in the affected area and an hourly roving fire watch was established during the period of non-compliance. Therefore, the degraded Thermo-Lag assemblies were never challenged. The Fire Hazards Analysis concludes there is no combustible loading in the area. Transient combustible loading is limited by Administrative (A) procedure A12.2, "Control of Combustible Materials, Flammable and Non-Flammable Compressed Gases." The cables used at Limerick Generating Station (LGS) meet the IEEE-383-1974 Standard, and therefore, ignition is extremely unlikely in the absence of an external fire source.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 3/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Limerick Generating Station, Unit 1		05	000352	92	—	014	— 00 013 OF 03

TEXT (If more space is required, use additional NRC Form 368A 4) (17)

In the extreme unlikely event that a fire occurred of such magnitude as to damage the cables which are routed through conduits and located in junction boxes, safe shutdown of the plant could not be assured. However, we believe that the emergency response capability, including the use of the LGS Transient Response Implementation Plan (TRIP) procedures would provide the operators a success path to safely shutdown the plant in the event that the fire had occurred. The TRIP procedures, derived from the Emergency Procedure Guidelines developed by the BWR Owners' Group, provide distinct symptom-oriented operator guidance in bringing the plant to a cold shutdown condition.

Cause of the Event:

The cause of this event was personnel error on the part of station Fire Protection personnel in the misinterpretation of which TS ACTION was applicable based on the affected fire area configuration. This area (i.e., the Recombiner Access area) is a small part of a larger fire area in the Common Control Enclosure on Elevation 200' which contains operable fire detection equipment. On November 16, 1990, the station Fire Protection personnel interpreted the TS requirement for operable fire detection on one side of the barrier to mean operable fire detection in the areas adjacent to the affected area. In actuality, the barrier was the Thermo-Lag assembly itself and not the wall separating the individual areas. Therefore, the appropriate TS ACTION was to post a continuous fire watch in the room with the damaged fire rated assemblies.

Corrective Actions:

Upon discovery of the condition on June 26, 1992 a continuous firewatch was immediately posted. A fire watch will remain in place until completion of repairs which have been determined to meet the required fire rating for the assemblies. Additionally, station Fire Protection personnel are reviewing the feasibility of installing fire detection in the area. A letter will be issued by July 31, 1992 to all station Fire Protection personnel and Operations Supervision to clearly identify the three unique areas in the plant that contain Thermo-Lag fire rated assemblies with no fire detection equipment. The letter will reinforce the need to implement the appropriate TS ACTION when dealing with operable fire rated assemblies in these areas. Because these fire rated assemblies consist of Thermo-Lag 330 and are within the scope of NRC Bulletin 92-01, corrective actions being developed through an industry program in response to the Bulletin will provide the long term corrective actions for these assemblies.

Previous Similar Occurrences:

There have been no previous occurrences of this type of event at Limerick Generating Station.

Tracking Codes: A6 - Failure to properly identify equipment.