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 26, 1991
Docket No. 50-352
License No. NPF-39

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

SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 1

This LER reports operation in a condition prohibited by Technical Specifications (TS) in that TS Surveillance Requirements were not performed for a fire rated barrier and the TS ACTION was not taken within the required time. The cause of this event was personnel error resulting in a procedural deficiency.

Reference:	Docket No. 50-352
Report Number:	1-91-007
Revision Number:	01
Event Date:	February 26, 1991
Report Date:	July 26, 1991
Facility:	Limerick Generating Station P.O. Box A, Sanatoga, PA 19464

This revised LER is being submitted to report the results of a review of the associated Surveillance Test procedure. Changes are indicated by revision bar markers in the right hand margin. The original LER was being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(i)(B).

Very truly yours,

Garrett D. Edmunds for J. Doering

Plant Manager

DCS:rgs

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

IE22
1/1

NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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TITLE (4) Condition Prohibited by Technical Specifications in that Surveillance Requirements were not performed for a Fire Rated Barrier due to Procedural Deficiency.

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)
0 2	2 6	9 1	9 1	— 0 0 7	— 0 1	0 7	2 6	9 1		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		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)	X 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
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 NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

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 February 26, 1991, we determined that a Technical Specifications (TS) Surveillance Requirement (SR) had not been satisfied for TS Section 3.7.7, "Fire Rated Assemblies," without the associated TS ACTIONs being taken in the specified time period. This condition has existed since the April, 1989 performance of Surveillance Test (ST) procedure ST-7-022-920-1, "Unit 1 Refuel Fire Rated Assembly Inspection," when an inappropriate Temporary Procedure Change was implemented. Upon discovery of the condition, fire protection personnel verified operability of the fire detection equipment, and posted the appropriate firewatch. Upon visual inspection of the involved fire rated barrier, we determined that no degradation of the barrier existed and therefore, it was capable of performing its intended function during the period in question. This, combined with the existing automatic detection and suppression capability on the opposite side of the fire rated barrier, and the low combustible loading, lead us to conclude that the potential consequences of this event were minimal. The cause of this event was personnel error leading to a procedural deficiency. On March 25, 1991, the missed TS SR was completed satisfactorily. A comprehensive review of the ST procedure was performed to ensure that all other fire rated assembly TS SRs were met. Deficiencies identified during this review were described in Unit 1 LER 91-014 submitted on July 1, 1991.

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

Unit Conditions Prior to the Event:

Units 1 and 2 were both in Operating Condition 1 (Power Operation) at 100% power.

Description of the Event:

On February 26, 1991, we determined that a Technical Specifications (TS) Surveillance Requirement (SR) had not been satisfied for TS Section 3.7.7, "Fire Rated Assemblies," without the associated TS ACTIONs being taken in the specified time period. This condition has existed since the April, 1989 performance of Surveillance Test (ST) procedure ST-7-022-920-1, "Unit 1 Refuel Fire Rated Assembly Inspection."

During the April, 1989 performance of the ST procedure, fire protection personnel implemented a Temporary Procedure Change (TPC) to remove the TS SR for a specific fire rated assembly. The TPC was implemented to remove the requirement to visually verify the structural integrity of an exposed section of the Reactor Enclosure wall (a 3-hour fire rated barrier) because of a misinterpretation of drawings. A difficulty in performing the inspection was created by various portable equipment covering the equipment hatch on plant elevation 217 feet (Diagram 1). This hatch had to be lifted open as part of the performance of the ST procedure.

Limerick Generating Station (LGS) TS SR 3/4.7.7, requires 18-month periodic visual inspections of exposed surfaces of fire rated assemblies to verify them OPERABLE. The associated TS ACTIONs for inoperable fire rated assemblies requires that "... within 1 hour establish a continuous fire watch on at least one side of the affected assembly(s) and/or sealing device(s) or verify the OPERABILITY of fire detectors on at least one side of the inoperable assembly(s) and sealing device(, and establish an hourly fire watch patrol."

Upon discovery of the condition on February 26, 1991, fire protection personnel complied with the TS ACTIONs by verifying operability of the automatic fire detection and suppression equipment, and posting the appropriate firewatch. Fire protection personnel completed the missed TS SR satisfactorily on March 25, 1991, and the fire rated assembly was declared operable. Between April, 1989 and February 26, 1991, the TS ACTIONs for the missed SR were not satisfied within the time specified by TS. Therefore, this incident resulted in operation in a condition prohibited by TS. Accordingly, this report is being submitted in accordance with 10CFR 50.73 (a)(2)(i)(B).

Analysis of the Event:

In the event of a postulated fire in the area not inspected, combined with a deficiency/failure of the fire rated barrier, there is a potential for migration of the fire into the Reactor Enclosure. In the area not inspected (Diagram 1),

the combustible material consists of only cable insulation (166 pounds in a fuel pool filter/demineralizer compartment) and the combustible loading is relatively low (1.25 pounds per square foot). The equipment in this area is not safety related and a manually operated hose station comprises the total fire suppression capability in the area. No local detection for smoke or heat is available in the area.

On the opposite side of the fire rated barrier, in the Reactor Enclosure, is a safeguard system access area including safety related equipment. The combustible material again consists of only cable insulation (3578 pounds) with a combustible loading of 1.40 pounds per square foot. There is local smoke and heat detection instrumentation, as well as automatic suppression capability consisting of a preaction sprinkler system. The safety related equipment in the area consists of components of the High Pressure Coolant Injection (HPCI) system and the Reactor Core Isolation Cooling (RCIC) system.

Upon visual inspection of the involved fire rated barrier we determined that no degradation of the barrier existed and therefore, we have concluded that the barrier was capable of performing its intended function during the period in question. This, combined with the existing automatic detection and suppression capability on the opposite side, and the low combustible loading, lead us to conclude that the potential consequences of this event were minimal.

Cause of the Event:

The cause of this event was personnel error leading to a procedural deficiency. The personnel error was a result of misinterpretation of information provided on plant layout, Architectural, and Civil design drawings. During review of drawings for development of the TPC, station personnel concluded, incorrectly, that the radwaste enclosure wall extended from plant elevation 191 feet up to elevation 217 feet in the Fuel Pool Filter Demineralizer Area precluding the need for visual verification of the structural integrity of the exposed reactor enclosure wall (See Diagram 1). The misinterpretation resulted in an incomplete performance of the ST procedure due to the incorrect TPC. An additional causal factor identified was a less than adequate cross-disciplinary review of the TPC.

Corrective Actions:

Upon discovery of the condition, the appropriate steps were taken to satisfy the TS ACTIONs. On March 25, 1991, the missed TS SR was completed satisfactorily and the fire rated assembly was declared operable. A comprehensive review of the ST procedure was performed to ensure that all other fire rated assembly TS SRs were met. Various deficiencies were identified as a result of the review. Because the causes of these deficiencies were dissimilar to that described in this report, they were not included in this supplement; rather they are described in Unit 1 LER 91-014, submitted on July 1, 1991.

Any TPCs implemented are now subject to the Station Qualified Reviewer (SQR) process. This process, implemented in the first quarter of 1991, documents the cross-disciplinary review of proposed procedures or changes to existing procedures. The SQR process helps ensure that an appropriate and knowledgeable cross-disciplinary review is completed.

Additionally, this event will be included in the ongoing Continuing Training for station personnel prior to December 31, 1991. This training will aid in heightening awareness of the need for attention to detail, and involving appropriate personnel in the development of procedures or procedure changes.

Previous Similar Occurrences:

Limerick Generating Station (LGS) Unit 1 LER 91-004 reported a missed SR due to an incomplete ST procedure as a result of a personnel error. The cause was related to misinterpretation of the requirements of TS. LGS Unit 1 LER 89-054 described a failure to perform daily TS SR channel checks for the 'D' channel reactor high level trip, caused by a procedural deficiency in the Daily Surveillance Log procedure. LGS Unit 1 LER 84-001 also described a failure to perform two required instrument system channel checks due to an incomplete Daily Surveillance Log procedure ST-6-107-591-1, used during operational conditions 4 (Cold Shutdown) and 5 (Refueling). The procedural deficiency was discovered and corrected prior to initial criticality for Unit 1. These events were caused by procedure deficiencies that resulted from errors in the development of the original procedures. The corrective actions for these events could not have prevented this event, which resulted from an incorrect change to the existing procedure.

Tracking Codes: A9 - Failure to properly interpret information/results

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

DIAGRAM 1