

## 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. 50-353  
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 a condition prohibited by the Unit 2 Technical Specifications (TS) in that a TS Surveillance Requirement for the Average Power Range Monitor flow units was not performed due to procedural non-compliance, and the associated TS Actions were not taken within the specified time period.

Reference:	Docket No. 50-353
Report Number:	2-91-011
Revision Number:	00
Event Date:	June 4, 1991
Discovery Date:	June 20, 1991
Report Date:	July 26, 1991
Facility:	Limerick Generating Station P.O. Box A, Sanatoga, PA 19464

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(i)(B). This LER is being submitted 4 days late to allow thorough identification of all contributing causal factors and the development of corrective actions. We regret any inconvenience this delay may have caused.

Very truly yours,

*James D. Doering*  
Plant Manager

DMS:cah

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

9107300303 910726  
PDR ADOCK 05000353  
S PDR

IF22  
11

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Limerick Generating Station, Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 5 3 1 OF 0 3										PAGE (3) 1 OF 0 3									
TITLE (4) This LER reports a condition prohibited by Technical Specifications (TS) in that a TS Surveillance Requirement for the Average Power Range Monitor flow units was not performed.																													
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 6	0 4	9 1	9 1	0 1 1	0 0 0	7	2	6 9 1						0 5 0 0 0															
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																										
2			20.402(h)					20.405(c)					50.73(a)(2)(v)					73.71(b)											
POWER LEVEL (10)			20.406(a)(1)(i)					50.38(c)(1)					50.73(a)(2)(v)					73.71(e)											
0 0 7			20.406(a)(1)(ii)					50.38(c)(2)					50.73(a)(2)(vii)					OTHER (Specify in Abstract below and in Text, NRC Form 366A)											
			20.406(a)(1)(iii)					50.73(a)(2)(i)					50.73(a)(2)(viii)(A)																
			20.406(a)(1)(iv)					50.73(a)(2)(ii)					50.73(a)(2)(viii)(B)																
			20.406(a)(1)(v)					50.73(a)(2)(iii)					50.73(a)(2)(ix)																
LICENSEE CONTACT FOR THIS LER (12)										TELEPHONE NUMBER																			
NAME G. J. Madsen, Regulatory Engineer, Limerick Generating Station										AREA CODE 2 1 5 3 2 7 1 - 1 1 2 0 1 0																			
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																													
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS																			
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 June 20, 1991, plant personnel discovered the daily Jet Pump and APRM flow unit operability verification Surveillance Test (ST) procedure was not performed on June 4, 1991. Technical Specifications (TS) Table 4.3.1.1-1 requires that an Average Power Range Monitor (APRM) flow unit channel check be performed once per 24 hours in Operational Condition (OPCON) 1, Power Operation, to ensure that the total core flow is greater than or equal to the APRM percent flow. TS Surveillance Requirement (SR) 4.0.4 requires that this SR be performed within 24 hours prior to entry into OPCON 1. Because the ST procedure was not performed on June 4, 1991, within the applicable surveillance interval, the APRM flow units were not in surveillance when the Reactor Mode Switch was placed in OPCON 1 at 0525 hours on June 5, 1991. This resulted in a condition prohibited by TS SR 4.0.4. Readings from the Daily Surveillance Log ST procedure were subsequently utilized to determine that total core flow was greater than the APRM percent flow on June 4, 1991 and therefore the actual APRM Trip setpoints were conservative which is what the SR was intended to verify. The cause of this event was personnel error resulting in procedural non-compliance. Contributing factors were procedural ambiguity and lack of attention to detail. The Unit 1 and 2 ST procedures will be revised to remove the identified ambiguities. Corrective actions for the procedure non-compliance and the lack of attention to detail are being addressed by a comprehensive review program.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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

TEXT (If more space is required, use additional NRC Form 360A's) (17)

Unit Conditions Prior to the Event:

Unit 2 was in Operational Condition (OPCON) 2 (Startup) at 7% power level. Reactor startup was in progress in accordance with General Plant procedure GP-2, "Normal Plant Startup."

Description of the Event:

On June 20, 1991, plant personnel discovered that Surveillance Test (ST) procedure ST-6-043-320-2, "Daily Jet Pump and APRM Flow Unit Operability Verification for Two Recirculation Loop Operation," was not performed on June 4, 1991. Technical Specifications (TS) Table 4.3.1.1-1, "Reactor Protection system Instrumentation Surveillance Requirements," part 2.b.1 subnote g requires that an Average Power Range monitor (APRM) flow unit channel check be performed once per 24 hours in OPCON 1, to ensure that the total core flow is greater than or equal to the APRM percent flow. Additionally, TS Surveillance Requirement (SR) 4.0.4 requires that this SR be performed within 24 hours prior to entry into OPCON 1. The procedure frequency as specified on the ST is once per 24 hours in OPCONs 1 and 2. The ST procedure was satisfactorily performed on June 3, 1991, at 0455 hours. On June 5, 1991, at 0525 hours, the Reactor Mode Switch was placed in RUN (OPCON 1, Power Operation). The ST was performed again at 2200 hours on June 5, 1991, and at least once per 24 hours thereafter. However, the ST procedure was not performed on June 4, 1991. Since the ST procedure was not performed within the applicable surveillance interval, the APRM flow units were not in surveillance when the Reactor Mode Switch was placed in RUN at 0525 hours on June 5, 1991.

This event resulted in a condition prohibited by TS SR 4.0.4. Therefore, this report is being submitted in accordance with the requirements of 10CFR50.73(a)(2)(i)(B).

Analysis of the Event:

The actual consequences of this event were minimal, and there was no radioactive material released to the environment as a result of this event. The intent of the SR for the APRM flow units is to verify that the core flow input for the APRM flow biased SCRAM setpoints is conservative. This occurs when the flow unit outputs are lower than the actual core flow. Procedure ST-6-107-590-2, "Daily Surveillance Log/OPCONs 1,2,3," records total core flow and APRM flow unit readings. Readings obtained from the June 4, 1991, Daily Surveillance Log ST procedure indicated that total core flow was 40% and the APRM flow unit readings ranged from 26% to 27%. Additionally, no core flow changes were made on June 4, 1991, as verified by the Reactor Engineer Group Log Book. Data from procedure ST-6-107-590-2 was subsequently reviewed, and plant personnel determined that the total core flow was greater than the APRM percent flow on June 4, 1991, and the intent of the TS SR for Table 4.3.1.1-1.2.b subnote g was satisfied. Therefore, the APRM flow biased SCRAM setpoints were conservative providing adequate reactor protection in the event that an operational transient had occurred.

## 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 (6)			PAGE (3)		
Limerick Generating Station, Unit 2		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		05000353	91-0111	-000	03	OF	03

TEXT (if more space is required, use additional NRC Form 365A's) (17)

Cause of the Event:

The cause of this event was personnel error resulting in procedural non-compliance. Contributing factors to the cause were procedural ambiguity and a lack of attention of detail.

The MCR Shift Supervisor, a licensed operator, failed to identify that procedure ST-6-043-320-2 was not performed per the requirements of procedure ST-6-107-590-2. In addition, neither the reactor operator nor the MCR Shift Supervisor identified the procedure ambiguities that existed between the ST procedure and the TS SRs due to a lack of attention to detail.

Procedures ST-6-043-320-2 and ST-6-107-590-2 direct performance of Jet Pump and APRM flow unit operability checks in both OPCONs 1 and 2. However, TS SRs 4.4.1.2 and Table 4.3.1.1-1 only require performance of the SR in OPCON 1. In addition, ST-6-043-320-2 contains two unrelated TS SRs (Jet Pump Operability & APRM flow unit) with two distinct and different surveillance condition requirements (OPCON 1 >25% power and OPCON 1 respectively). These procedural ambiguity factors contributed to the inappropriate decision made by the MCR shift supervisor not to perform this ST procedure on June 4, 1991 while in OPCON 2.

Additionally, General Plant procedure GP-2, "Plant Start-up", does not address verification of operability of the APRM flow units prior to entering OPCON 1.

Corrective Actions:

Procedures ST-6-043-320-2, ST-6-107-590-2, and the corresponding Unit 1 procedures will be revised by August 31, 1991 to remove the identified ambiguities. Additionally, procedure GP-2 will be revised prior to its next performance to include a step to ensure performance of the APRM flow unit SR prior to entering OPCON 1. A review of other ST procedures is being performed to identify and correct any similar procedural ambiguities.

During a recent NRC Combined Inspection (Nos. 50-352/91-81 and 50-353/91-81), instances of lack of attention to detail similar to this event were identified. A comprehensive review of this apparent weakness is ongoing and additional corrective actions as a result of this review will be addressed in conjunction with the response to this inspection report.

Previous Similar Occurrences:

Previous LERs have described missed TS SRs due to personnel error, but none as a result of this type of procedural ambiguity.

Tracking Codes: A2 - Failure to follow implementing procedures  
D99 - Other procedural deficiency