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

January 29, 1992
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 a condition prohibited by Technical Specifications (TS) in that TS Limiting Condition of Operation and Surveillance temperature and time requirements were not satisfied prior to the startup of the reactor recirculation pumps as a result of a personnel error.

| | |
|---|---|
| Reference: | Docket No. 50-352 |
| Report Number: | 1-91-030 |
| Revision Number: | 00 |
| Event Date: | December 30, 1991 |
| Report Date: | January 29, 1992 |
| Facility: | Limerick Generating Station<br>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,

DMS:cah

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

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NRC Form 366
(9-83)

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

# LICENSEE EVENT REPORT (LER)

| FACILITY NAME (1) | DOCKET NUMBER (2) | PAGE (3) |
|---|---|---|
| Limerick Generating Station, Unit 1 | 0 5 0 0 0 3 5 2 | 1 OF 0 4 |

TITLE (4) Technical Specification Limiting Condition for Operation and Surveillance Requirement for temperature and time exceeded during reactor recirculation pump start.

| 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 5 0 0 0 |
| 1 2 | 3 0 | 9 1 | 9 1 | — | 0 3 0 | — 0 0 | 0 1 | 2 9 | 9 2 | | 0 5 0 0 0 |

| OPERATING MODE (9) | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11) | | | |
|---|---|---|---|---|---|
| 4 | | 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) |
| 0 0 0 | | 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 |
|---|---|
| | AREA CODE |
| G. J. Madsen, Regulatory Engineer, Limerick Generating Station | 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 | MANUFAC TURER | REPORTABLE TO NPRDS | | CAUSE | SYSTEM | COMPONENT | MANUFAC TURER | 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 December 30, 1991, at 1023 hours, operations personnel started the '1A' reactor recirculation pump in conjunction with the performance of Surveillance Test (ST) procedure ST-6-043-390-1, "Reactor Recirculation Pump Idle Loop Startup Temperature and Flow Check." ST-6-043-390-1 satisfies Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.4.1.4 and TS Surveillance Requirement (SR) 4.4.1.4. On December 30, 1991, at approximately 1300 hours plant personnel discovered that inaccurate temperature and time readings were recorded into the ST, causing the 50 degrees Fahrenheit (F) temperature differential limit of TS LCO 3.4.1.4 and the 15 minute time limit of TS SR 4.4.1.4 to be exceeded by 2 degrees F and 4 minutes respectively; conditions prohibited by TS. The '1A' recirculation pump was left in operation since these TS violations were discovered approximately 3 hours after the pump was placed in service, and it was determined that securing the pump and a subsequent restart would only result in further unnecessary thermal transients. The primary cause of this event was personnel error. The actual consequences of this event were minimal. The individual involved in this event was counseled, and specific plant procedures and the Licensed Operator Training Program will be evaluated to prevent recurrence of a similar event.

report,

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
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Unit Conditions Prior to the Event:

Unit 1 was in Operational Condition 4 (Cold Shutdown) at 0% power level. Reactor startup was in progress in accordance with General Plant procedure GP-2, "Normal Plant Startup."

Description of the Event:

On December 30, 1991, at 1004 hours, the '1A' Residual Heat Removal (RHR) system (EIIS:BO) pump was secured from the shutdown cooling mode of operation in accordance with System procedure S51.8.B, "Shutdown Cooling Operation (Startup and Shutdown)," by a licensed reactor operator. A second licensed reactor operator was performing Surveillance Test procedure ST-6-043-390-1, "Reactor Recirculation Pump Idle Loop Startup Temperature and Flow Check," in preparation for starting the '1A' recirculation pump (EIIS:AD) to establish forced reactor coolant circulation. At 1023 hours, on December 30, 1991, operations personnel placed the '1A' recirculation pump in operation in accordance with the System procedure S43.1.A, "Startup of Recirculation System".

Performance of procedure ST-6-043-390-1 satisfies the Technical Specifi ations (TS) Limiting Condition for Operation (LCO) 3.4.1.4 and the TS Surveillance Requirement (SR) 4.4.1.4 for the Reactor Coolant System. TS LCO 3.4.1.4 requires that the temperature differential between the reactor coolant within the idle loop to be started and the reactor coolant within the reactor pressure vessel to be less than or equal to 50 degrees Fahrenheit (F). TS SR 4.4.1.4 requires that this temperature differential be determined within 15 minutes prior to starting a pump in the idle recirculation loop.

On December 30, 1991, at approximately 1300 hours, plant personnel discovered that inaccurate temperature and time readings were logged into procedure ST-6-043-390-1, resulting in violations of the TS LCO 3.4.1.4 and the TS SR 4.4.1.4. As a result of the inaccurate temperature and time readings, the 50 degrees F temperature differential limit and the 15 minute time limit were exceeded by 2 degrees F and 4 minutes respectively. The '1A' recirculation pump was left in operation since these TS violations were discovered approximately 3 hours after the '1A' recirculation pump was placed in service, and plant personnel determined that securing the '1A' recirculation pump and a subsequent restart would only result in further unnecessary thermal transients. Since this event resulted in a condition prohibited by TS, this LER 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 in that there was no release of radioactive material to the environment. Engineering is presently evaluating this event and any significant findings will be reported in a supplement to this report.

Cause of the Event:

The primary cause of this event was due to personnel error. The licensed operator performing the ST procedure incorrectly read and recorded the '1A' recirculation pump suction temperature from the chart of Temperature Recorder TR-43-1R650 as 95 degrees F, rather than the correct reading of 90 degrees F. This resulted in the 50 degrees F temperature differential limit to be exceeded by 2 degrees F. The licensed reactor operator also incorrectly logged the time in which he completed taking the data. This resulted in the 15 minute time limit to be exceeded by 4 minutes.

Contributing factors to this event are as follows:

- Operations Shift supervision of this task was less than adequate in that the Shift Supervisor did not conduct a pre-job briefing for the transition from shutdown cooling to recirculation pump operation. Additionally, the Shift Supervisor did not adequately monitor the licensed operators during the performance of this evolution.

- Shutdown cooling licensed operator simulator training was not adequate in that it did not stress the TS time requirements associated with securing shutdown cooling and starting a reactor recirculation pump.

- As a minor contributing factor, the plant procedures governing this evolution (GP-2, S51.8.B, ST-6-043-390-1, and S43.1.A) did not adequately integrate all of the various individual activities and requirements.

Corrective Actions:

1. The licensed operator involved in this event was counseled on the need for attention to detail, and on his responsibility of ensuring readings are correctly taken and recorded.

2. Operations Management reaffirmed the importance of the following issues with Shift Supervision:

   - the importance of performing pre-job briefings for especially for infrequently performed tasks,

   - the role of a supervisor to provide the necessary guidance to ensure tasks are correctly carried out in a safe and competent manner, and

   - the need to recognize and assess the experience level of their direct reports when assigning tasks.

3. The Licensed Operator Training Program will be revised to ensure that the TS time requirements associated with this event are stressed during simulator exercises.

4. The applicable plant procedures (GP-2, S51.8.B, ST-6-043-390-1, S43.1.A) will be evaluated and enhancements will be made as necessary to better integrate all required actions.

Previous Similar Occurrences:

LER 1-84-016 reported an event where operations personnel failed to perform procedure ST-6-043-390-1 prior to the startup of a recirculation pump due to personnel error.

LER 1-87-049 reported an event where a procedural deficiency was identified in procedure ST-6-043-390-1 causing the calculated temperature differential value recorded into the ST to inaccurately reflect the reactor temperature conditions.

Although the two previous events described above are similar to this event, the corrective actions implemented for these two previous events would not have prevented this event from occurring.

Tracking Codes: A - Personnel Error