



**CENTERIOR
ENERGY**

PERRY NUCLEAR POWER PLANT

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VICE PRESIDENT - NUCLEAR

March 12, 1993
PY-CEI/NRR-1624 L

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
LER 93-006

Dear Sir:

Enclosed is Licensee Event Report 93-006 for the Perry Nuclear Power Plant.

Sincerely,

Robert A. Stratman

RAS:TSH:ss

Enclosure: LER 93-006

cc: NRC Project Manager
NRC Resident Inspector
NRC Region III

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

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9303180160 930312
PDR ADOCK 05000440
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LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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 (MNBB 7714), U.S. NUCLEAR
REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO
THE PAPERWORK REDUCTION PROJECT (D-150-0104), OFFICE OF
MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Perry Nuclear Power Plant, Unit 1

DOCKET NUMBER (2)

05000440

PAGE (3)

1 OF 4

TITLE (4)

Annulus Exhaust Gas Treatment System Auto Start During Transfer of Operating Trains

| EVENT DATE (5) | | | LER NUMBER (6) | | | REPORT NUMBER (7) | | | OTHER FACILITIES INVOLVED (8) | |
|-----------------------|-----|------|---|----------------------|--------------------|-------------------|---|------|--|---------------|
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | MONTH | DAY | YEAR | FACILITY NAME | DOCKET NUMBER |
| 02 | 12 | 93 | 93 | 006 | 00 | 03 | 12 | 93 | | 05000 |
| OPERATING MODE (9) | | 5 | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 4: (Check one or more) (11) | | | | | | | |
| POWER LEVEL (10) | | 0 | 20.402(b) | | 20.405(c) | | <input checked="" type="checkbox"/> 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)(vi) | | OTHER | |
| | | | 20.405(a)(1)(iii) | | 50.73(a)(2)(i) | | 50.73(a)(2)(vii)(A) | | (Specify in Abstract below and in Text, NRC Form 365A) | |
| | | | 20.405(a)(1)(iv) | | 50.73(a)(2)(ii) | | 50.73(a)(2)(vii)(B) | | | |
| | | | 20.405(a)(1)(v) | | 50.73(a)(2)(iii) | | 50.73(a)(2)(x) | | | |

LICENSEE CONTACT FOR THIS LER (12)

NAME

Teresa S. Hogan, Compliance Engineer Extension 5283

TELEPHONE NUMBER (include Area Code)

(216) 259-3737

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

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NRCDS | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NRCDS |
|-------|--------|-----------|--------------|------------------------|-------|--------|-----------|--------------|------------------------|
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SUPPLEMENTAL REPORT EXPECTED (14)

| | | | | | |
|--|--|-------------------------------------|-------|-----|------|
| YES (If yes, complete EXPECTED SUBMISSION DATE) | <input checked="" type="checkbox"/> NO | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
| | | | | | |

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

On February 12, 1993, at 1314, while transferring the Annulus Exhaust Gas Treatment System (AEGTS) from the B train to the A train, the B train automatically restarted.

The cause of this event was determined to be personnel error, inattention to detail. Although the operator thought he had waited a sufficient amount of time to establish flow in the on-coming A train, the operator did not verify the proper time had elapsed prior to stopping the B fan. A contributing factor was a procedural weakness. The instruction did not caution the operator to wait until the Low Flow alarm cleared.

The operator has been involved with the event investigation and is aware of the importance of strictly adhering to the procedural time requirement. The operating instruction will be changed to provide additional guidance with respect to considering the status of the Low Flow alarm prior to placing one of the fans in STANDBY. This event will be reviewed with licensed and nonlicensed operators as part of routine operator requalification training.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
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| Perry Nuclear Power Plant, Unit 1 | 05000 440 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 2 OF 4 |
| | | 93 | - 006 - | 00 | |

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

I. Introduction

On February 12, 1993, at 1314, while transferring the Annulus Exhaust Gas Treatment System (AEGTS) [VC] from the B train to the A train, the B train automatically restarted. At the time of the event, the plant was in Operational Condition 5 in a mid-cycle maintenance outage. The reactor pressure vessel [RPV] was at atmospheric conditions with the reactor water temperature at 81 degrees Fahrenheit. On February 12, 1993, at 1456, the required non-emergency four-hour ENS notification was made to the NRC pursuant to the requirements of 10CFR50.72(b)(2)(ii). This event is being reported under the requirements of 10CFR50.73(a)(2)(iv).

II. Event Description

On February 12, 1993, at 1310 an operator was transferring operation of the Annulus Exhaust Gas Treatment Systems from the B train to the A train, to allow a surveillance to be performed on the A train. The operator secured the B heater and after approximately five minutes started the A fan [FAN]. At approximately 1315, the operator stopped the B fan by placing the control switch momentarily in the OFF position. When the operator released the switch, allowing it to return to the STANDBY position as designed, the B fan unexpectedly restarted. The operator immediately again stopped the B fan by placing the control switch in the OFF position, and again the fan automatically restarted when the switch was released. The fan was allowed to run for approximately 5 to 6 minutes and then was successfully shut down. Because the AEGTS is considered an Engineered Safety Feature, at 1456, the required four-hour ENS notification was made. At 1650 the B train was secured and at 1652 the A train was also secured.

III. Cause Analysis

The cause of this event was determined to be personnel error, inattention to detail. The operator performing the shifting operation had reviewed System Operating Instruction (SOI-M15), "Annulus Exhaust Gas Treatment System (Unit 1)" prior to performing the operation. Step 4 of Section 5.1, Shifting Operating Trains from A(B) to B(A), states: "Allow 1 to 2 minutes for the Train B(A) dampers to reposition. Check ANNULUS DIFF PRESSURE RECORDERS, 1M15-R016A and 1M15-R016B, for proper annulus pressure." Due to the annulus being open, the annulus differential pressure recorder was indicating atmospheric pressure and would not indicate any change in annulus pressure with a change in fan operation. In accordance with plant procedure, a deviation from the instruction to check this recorder for proper fan operation was approved by the Shift Supervisor prior to commencing this activity. Although the instruction did not

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

specify damper indicating lights as a criterion for securing the off going fan, the operator assumed that damper indication would indicate adequate system flow and did not verify that the proper time had elapsed prior to stopping the B fan. Because rated system flow had not been established, the B fan restarted when the switch spring returned to the STANDBY position.

Troubleshooting after the event found the low differential pressure switch contact for the A fan to be in calibration. The Low Flow alarm was found to come in after approximately 11 seconds, and the system flow reached the alarm cutoff flow rate after approximately 30 seconds. The follow-up troubleshooting indicates the B fan would not have restarted had the proper amount of time elapsed prior to placing the B train in standby.

A contributing factor was a procedural weakness. As written, the instruction implies that damper position would assure adequate system flow, leading the operator to rely on damper position as a cue for securing the off-going fan. Additionally, the instruction could have cautioned the operator to wait until the Low Flow alarm cleared, instead of specifying an approximate time to wait.

IV. Corrective Action

The operator has been involved with the event investigation and is aware of the importance of strictly adhering to the procedural time requirement. SOI-M15 will be changed to provide additional guidance with respect to considering the status of the Low Flow alarm prior to placing one of the fans in STANDBY. Additionally, this event will be reviewed with licensed and nonlicensed operators as part of routine operator requalification training.

V. Safety Analysis

The AEGTS is designed to continuously discharge filtered air from the reactor building [NG] annulus. This system maintains negative pressure in the annulus with respect to the shield building and containment [NH]. The negative pressure in the annulus causes all leakage through the shield building and containment to flow into the annulus, ensuring that any leakage from the containment vessel will be filtered through the AEGTS. The AEGTS consists of two identical trains, one normally in standby. The exhaust fan of the standby train automatically starts if the operating train air flow is low, as sensed by a low or high differential pressure signal. The AEGTS operated as designed during this event in response to the low differential pressure signal. Spurious actuation of the standby AEGTS train has no adverse safety consequences. Therefore, this event is not considered safety significant.

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TEXT CONTINUATION

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A previous similar event occurred on September 30, 1987, as documented by LER 87-069. Although the root cause was never determined, the event was attributed to either a sticking contact or damper or an operator shutting down the B train before the A train had stabilized. Although changes were made to SOL-M15 to require the operator to wait until the trains had stabilized, it did not account for performing this operation without the aid of the annulus differential pressure recorder.

Energy Industry Identification System Codes are identified in the test as [XX].