

NORTHEAST UTILITIES



The Connecticut Light And Power Company
Western Massachusetts Electric Company
Holyoke Water Power Company
Northeast Utilities Service Company
Northeast Nuclear Energy Company

General Offices - Selden Street, Berlin Connecticut

P. O. BOX 270
HARTFORD, CONNECTICUT 06414-0270
(203)665-5000

Re: 10CFR50.73(a)(2)(i)

December 29, 1989
MP-13904

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

Reference: Facility Operating License No. NPF-49
Docket No. 50-423
Licensee Event Report 89-032-00


Gentlemen:

This letter forwards Licensee Event Report 89-032-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(i), any operation or condition prohibited by the plant's Technical Specifications.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

FOR: Stephen E. Scace
Station Superintendent
Millstone Nuclear Power Station

BY: 
Carl H. Clement
Unit 3 Superintendent
Millstone Nuclear Power Station

SES/JAL:tp

Attachment: LER 89-032-00

cc: W. T. Russell, Region I Administrator
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2 and 3
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 3

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LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this information collection request: 50.0 hrs. Forward comments regarding burden estimate to the Records and Reports Management Branch (p-630), U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503

| | | |
|---|--|----------------------------|
| FACILITY NAME (1) Millstone Nuclear Power Station Unit 3 | DOCKET NUMBER (2) 0 5 0 0 0 4 2 3 | PAGE (3) 1 OF 0 3 |
|---|--|----------------------------|

TITLE (4)
Two Channels of Hi Flux at Shutdown Inoperable Due to Personnel Error

| 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 | | | | | |
| 1 | 2 | 0 | 3 | 8 | 9 | 0 | 3 | 2 | 0 | 0 | 0 | | | |
| 1 | 2 | 0 | 3 | 8 | 9 | 1 | 2 | 2 | 9 | 8 | 9 | | | |

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|-------------------------------|---|--|------------------|--|--|----------------|----------------------|--|--|--|--|--|
| OPERATING MODE (9) 5 | THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11) | | | | | | | | | | | |
| POWER LEVEL (10) 0 0 0 | 20.402(b) | | | 20.402(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) | | | 50.73(a)(2)(i) <input checked="" type="checkbox"/> | | | 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)(iv) | | | 50.73(a)(2)(iii) | | | 50.73(a)(2)(k) | | | | | | |

LICENSEE CONTACT FOR THIS LER (12)

| | |
|--------------------------------------|--|
| NAME Jeffrey A. Langan, Ext. 5544 | TELEPHONE NUMBER AREA CODE 2 0 3 4 4 7 - 1 7 9 1 |
|--------------------------------------|--|

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 |
|-------|--------|-----------|--------------|-------------------|-------|--------|-----------|--------------|-------------------|
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SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

| | | | |
|-------------------------------|-------|-----|------|
| EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
| | | | |

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

On December 3, 1989, at 0320 hours, with the plant in Mode 5, 132 degrees Fahrenheit and 65 psia, both channels of Source Range Hi Flux at Shutdown alarm were found blocked. Operations personnel immediately unblocked both channels and verified a dilution accident was not in progress as required by plant Technical Specifications.

The root cause of this event was personnel error. To prevent this from recurring, the Modes 1 - 4 and Modes 5-6 control room log sheets have been revised to include verification that the Hi Flux at Shutdown is unblocked if source range counts are below the alarm setpoint. In addition, this LER was routed to all licensed operators, and will be included in the operator requalification program. The operator involved in incorrectly signing off the step has been counseled.

**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 Records and Reports Management Branch (p-530), U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503.

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| FACILITY NAME (1) Millstone Nuclear Power Station Unit 3 | DOCKET NUMBER (2) 0 5 0 0 0 4 2 3 | LER NUMBER (6) | | | PAGE (3) | |
| | | YEAR 8 9 | SEQUENTIAL NUMBER - 0 3 2 | REVISION NUMBER - 0 0 | 0 2 | OF 0 3 |

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

I. Description of Event

On December 3, 1989, at 0320 hours, with the plant in Mode 5 (Cold Shutdown), 132 degrees Fahrenheit and 65 psia, both channels of Source Range Hi Flux at Shutdown (HFSD) alarm were found blocked. The condition of the HFSD alarm was discovered by the Supervising Control Operator (SCO) during a review of the Main Control Board 4 annunciator panel. Operators immediately unblocked both channels of Source Range Hi Flux at Shutdown, and verified a dilution accident was not in progress as required by plant Technical Specifications.

II. Cause of Event

The root cause of this event was personnel error. Operator procedure OP 3207, Reactor Shutdown, directs operations to unblock the HFSD alarm when source range counts drop below the alarm setpoint as indicated by the HFSD bistable status light on the nuclear instrumentation cabinet extinguishing.

When the plant was shutdown on November 28, 1989, there was approximately a one hour and twenty five minute delay between the time when the plant entered Mode 3 (Hot Standby) and source range counts dropped below the HFSD setpoint. Normally, the procedure step should have remained open and flagged as an open item to be completed when plant conditions permit. However, when proceeding through OP 3207, the operator inadvertently initialed the step as completed. Further, the requirement for the HFSD alarm to be unblocked when in Modes 3, 4, and 5 was not included in the control room log sheets. As a result of these inadequacies, the HFSD alarm remained blocked from approximately 2020 hours on November 28, 1989, until 0320 on December 3, 1989.

III. Analysis of Event

This event is reportable under 10CFR50.73(a)(2)(i), as an operation prohibited by the plant's Technical Specifications. In Modes 3, 4, and 5, plant Technical Specifications require one channel of source range instrumentation be operable (or two channels if the reactor trip breakers are closed). The function of the source range instrumentation is to monitor the reactivity of the core, alert operators in the event of an unexpected addition of positive reactivity to the core, and provide a reactor trip signal if a preset count level is reached. Had a dilution accident occurred while the HFSD alarm was blocked, operators may not have detected it until the Source Range Hi Flux reactor trip setpoint was reached. (Even with the reactor trip breakers open, the first out annunciator on the reactor trip annunciator panel would sound). This scenario is extremely unlikely, however, since operators have indication of source range counts at both Main Control Board 4 and the Nuclear Instrumentation panel. Source range counts are also recorded on a strip chart recorder on Main Control Board 4, and an audible count rate signal is maintained in the Control Room. With all these indicators available to the operators, coupled with the very slow rate at which a dilution accident would progress, it is reasonable to expect that an inadvertent dilution would be detected and corrected before shutdown margin requirements were violated. Therefore, this event had no significant impact on plant safety.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

Estimated burden per response to comply with this information collection request: 60.0 hrs. Forward comments regarding burden estimate to the Records and Reports Management Branch (p-530), U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503.

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| FACILITY NAME (1) Millstone Nuclear Power Station Unit 3 | DOCKET NUMBER (2) 0 5 0 0 0 4 2 3 8 9 - | LER NUMBER (6) | | PAGE (3) 0 3 OF 0 3 |
| | | YEAR | REVISION NUMBER | |
| | | 0 3 2 - | 0 0 | |

TEXT: (If more space is required, use additional NRC Form 366A-3) (17)

IV. Corrective Action

Both channels of Source Range Hi Flux at Shutdown were immediately unblocked, and the operators verified a dilution accident was not in progress as required by plant Technical Specifications. In addition, the plant process computer was queried to verify that the HFSD had been blocked since the shutdown on November 28, 1989. To preclude this event from recurring, a change has been made to the Mode 1 - 4 and Mode 5 - 6 control room log sheets to ensure the HFSD alarm is unblocked in Mode 3 and below, when source range counts are below the setpoint. In addition, this LER was routed to all licensed operators, and will be included in the operator requalification program. The operator involved in incorrectly signing off the step has been counseled.

V. Additional Information

There have been no other LER's with the same root cause and sequence of events.

EHS Codes

Systems

IG - Incore/Excore Monitoring System

Components

JA - Alarm, Power