



**Northeast
Nuclear Energy**

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The Northeast Utilities System

~~008~~-14-2000

Docket No. 50-423
B18198

Re: 10 CFR 50.73(a)(2)(i)

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

Millstone Nuclear Power Station, Unit No. 3
Licensee Event Report 2000-002-00
Technical Specification 3.0.3 Entry With Both Hydrogen Recombiner Trains
Inoperable Due To a Radiation Monitor Failure

This letter forwards Licensee Event Report (LER) 2000-002-00, documenting an event that occurred at Millstone Nuclear Power Station, Unit No. 3, on July 18, 2000. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(i).

There are no regulatory commitments contained within this letter.

Should you have any questions regarding this submittal, please contact Mr. David W. Dodson at (860) 447-1791, ext. 2346.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY


C. J. Schwarz
Station Director

Attachment: LER 2000-002-00

cc: H. J. Miller, Region I Administrator
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3
A. C. Cerne, Senior Resident Inspector, Millstone Unit No. 3

IE22

Docket No. 50-423
B18198

Attachment 1

Millstone Nuclear Power Station, Unit No. 3

LER 2000-002-00

LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

| | | |
|---|---|--|
| FACILITY NAME (1) <p style="text-align: center;">Millstone Nuclear Power Station Unit 3</p> | DOCKET NUMBER (2) <p style="text-align: center;">05000423</p> | PAGE (3) <p style="text-align: center;">1 OF 3</p> |
|---|---|--|

TITLE (4)
 Technical Specification 3.0.3 entry with both Hydrogen Recombiner Trains Inoperable Due to a Radiation Monitor Failure

| 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 NAME | DOCKET NUMBER |
| 07 | 18 | 2000 | 2000 | -- 002 -- | 00 | 08 | 14 | 2000 | FACILITY NAME | DOCKET NUMBER |

| OPERATING MODE (9) | POWER LEVEL (10) | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11) | | | |
|--------------------|------------------|---|---|--|-------------------|
| | | 20.2201(b) | 20.2203(a)(2)(v) | <input checked="" type="checkbox"/> 50.73(a)(2)(i) | 50.73(a)(2)(viii) |
| 1 | 100 | 20.2203(a)(1) | 20.2203(a)(3)(i) | <input type="checkbox"/> 50.73(a)(2)(ii) | 50.73(a)(2)(x) |
| 20.2203(a)(2)(i) | | 20.2203(a)(3)(ii) | <input type="checkbox"/> 50.73(a)(2)(iii) | 73.71 | |
| 20.2203(a)(2)(ii) | | 20.2203(a)(4) | <input type="checkbox"/> 50.73(a)(2)(iv) | OTHER | |
| 20.2203(a)(2)(iii) | | 50.36(c)(1) | <input type="checkbox"/> 50.73(a)(2)(v) | Specify in Abstract below or in NRC Form 366A | |
| 20.2203(a)(2)(iv) | | 50.36(c)(2) | <input type="checkbox"/> 50.73(a)(2)(vii) | | |

LICENSEE CONTACT FOR THIS LER (12)

| | |
|--|--|
| NAME <p style="text-align: center;">D. Dodson, MP3 Regulatory Affairs Supervisor</p> | TELEPHONE NUMBER (Include Area Code) <p style="text-align: center;">(860) 440-2346</p> |
|--|--|

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

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX |
|-------|--------|-----------|--------------|--------------------|-------|--------|-----------|--------------|--------------------|
| | | | | | | | | | |
| | | | | | | | | | |

| SUPPLEMENTAL REPORT EXPECTED (14) | | | | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
|---|-------------------------------------|----|--|-------------------------------|-------|-----|------|
| YES (If yes, complete EXPECTED SUBMISSION DATE). | <input checked="" type="checkbox"/> | NO | | | | | |

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

On July 18, 2000, at 2003 hours with the plant in MODE 1 at 100 percent power and the A train Hydrogen Recombiner out of service for planned maintenance a trouble alarm indicated that the B train radiation monitor had gone offline. At 2030 hours the monitor was confirmed to be inoperable. As the monitor is interlocked with the Hydrogen Recombiner fan as well as the supply and exhaust dampers, the B train Recombiner was also declared inoperable. An inspection of the radiation monitor determined that the failure was caused by water intrusion. With both trains of the Hydrogen Recombiner out of service the Technical Specification Limiting Condition for Operation could not be met and Technical Specification 3.0.3 was entered. Therefore, this condition is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications.

The cause for the failure of the B train radiation monitor was water intrusion due to condensation leaking through the floor from an air conditioning unit on the floor above.

The water draining from the floor above was diverted and the radiation monitor cabinet was dried out. The power supply was replaced and the circuit boards were tested satisfactorily. In addition, other corrective actions are being addressed via the Millstone Corrective Action Program. These corrective actions include sealing the cracks in the floor above the monitor and installing new conduit fittings with gaskets on top of the monitor enclosure to prevent water from entering.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

| FACILITY NAME (1) | DOCKET | LER NUMBER (6) | | | PAGE (3) |
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| Millstone Nuclear Power Station Unit 3 | 05000423 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 2 OF 3 |
| | | 2000 | -- 002 -- | 00 | |

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

I. Description of Event

At 2003 hours on July 18, 2000, with the plant operating in MODE 1 at 100 percent power, the B train Hydrogen Recombiner (3HCS*RBNR1B) [RCB] [BB] became inoperable while the A train Hydrogen Recombiner (3HCS*RBNR1A) was out of service for planned maintenance. Unit 3 Technical Specification (TS) 3.6.4.2 states that two independent Hydrogen Recombiner Systems shall be OPERABLE when in MODES 1 and 2. With one system inoperable that system must be restored to an OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours. As a result of the B train Hydrogen Recombiner becoming inoperable TS 3.0.3 was entered. Therefore, this condition is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications.

On July 18, 2000, at 2003 hours with the A train Hydrogen Recombiner out of service for planned maintenance a trouble alarm [ALM] indicated that the B train radiation monitor (3HVZ*RE09B) [MON] [IL] had gone offline and could not be returned to service remotely from the control room. At 2030 hours the monitor was confirmed to be out of service and was declared inoperable. The radiation monitor is interlocked with the Hydrogen Recombiner fan via the supply and exhaust dampers. The failed radiation monitor resulted in the supply and exhaust dampers failing in the closed position. The Hydrogen Recombiner fan will not start with either of these dampers less than full open, therefore the B train Recombiner was declared inoperable. An inspection of the radiation monitor determined that the failure was caused by water intrusion. An air conditioning unit one floor above the radiation monitor in the hydrogen recombinder building, had pooled condensation on the floor and it had flowed through a crack in the floor onto the monitor enclosure below. The monitor enclosure is not designed to be waterproof so the water flowed from the top of the enclosure onto the monitor within. The power supply shorted and the monitor de-energized becoming inoperable.

Plant shutdown within one hour following the inoperability of the B train Hydrogen Recombiner was not initiated, based on the conclusion that the corrective actions would be completed well in advance of the expiration of the time limit imposed by TS 3.0.3 to complete the plant shutdown. Immediate corrective actions were taken, the monitor was returned to an OPERABLE status and TS 3.0.3 was exited at 2125 hours.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), as any operation or condition prohibited by the plant's Technical Specifications.

II. Cause of Event

The cause for the failure of the B train radiation monitor was water intrusion due to condensation leaking through the floor from an air conditioning unit on the floor above.

III. Analysis of Event

The Hydrogen Recombiner System maintains the post-accident hydrogen concentration below the flammability limits within containment. As hydrogen is generated the Hydrogen Recombiner System draws it out of the top of containment, mixes it with oxygen, and heats it to a temperature where it combines with the oxygen to form water vapor which is exhausted back into containment. The system consists of two redundant independent trains either of which is capable of maintaining the hydrogen concentration at a safe level.

Hydrogen generation at the greatest rate would occur following a LOCA, the FSAR credits either train of the Hydrogen Recombiner System with being able to start up to 24 hours following such an event and still be able to maintain the concentration at safe levels. With the B train Hydrogen Recombiner being recovered in the time that it was accompanied by the fact that the radiation monitor would have been accessible for repairs under accident conditions, the function of hydrogen control was not lost. Therefore, this event does not represent the loss of a safety function as the hydrogen levels would not have been able to rise to an unsafe level prior to the B train of the Hydrogen Recombiner System being placed back into service.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

| FACILITY NAME (1) | DOCKET | LER NUMBER (6) | | | PAGE (3) |
|--|----------|----------------|-------------------|-----------------|----------|
| Millstone Nuclear Power Station Unit 3 | 05000423 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 3 OF 3 |
| | | 2000 | -- 002 | -- 00 | |

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

No need for the Hydrogen Recombiners to function occurred during the time the B train was inoperable and there were no safety consequences resulting from this condition. This event is of low safety significance as the Hydrogen Recombiners are not required for accident prevention or mitigation and were returned to an OPERABLE status well within the 24 hours stated in the FSAR.

IV. Corrective Action

A corrective action plan was developed and implemented to correct the condition in a timely manner. The water draining from the floor above was diverted and the rad monitor cabinet was dried out. The power supply was replaced and the circuit boards were tested satisfactorily. The monitor was restored to OPERABLE and Technical Specification 3.0.3 was exited at 2125 hours.

In addition, other corrective actions are being addressed via the Millstone Corrective Action Program. These corrective actions include sealing the cracks in the floor above the monitor and installing new conduit fittings with gaskets on top of the rad monitor enclosure to prevent water from entering.

V. Additional Information

Similar Events

No previous similar conditions involving a loss of both hydrogen recombiners were identified.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].