

NORTHEAST UTILITIES



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

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

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

September 23, 1992

MP-92-1032

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 92-020-00

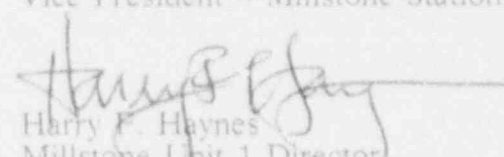
Gentlemen:

This letter forwards Licensee Event Report 92-020-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(v) and 10CFR50.73(a)(2)(i).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

FOR: Stephen E. Seace
Vice President - Millstone Station

BY: 
Harry F. Haynes
Millstone Unit 1 Director

SES/JSY:djs

Attachment: LER 92-020-00

cc: T. T. Martin, Region I Administrator
P. D. Swetland, Senior Resident Inspector, Millstone Unit Nos. 1, 2 and 3
V. L. Rooney, NRC Project Manager, Millstone Unit No. 3

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LICENSEE EVENT REPORT (LER)

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.

FACILITY NAME (1) Millstone Nuclear Power Station Unit 3	DOCKET NUMBER (2) 0501042392	LER NUMBER (6)			PAGE (3) 02 OF 07
		YEAR 92	SEQUENTIAL NUMBER 020	REVISION NUMBER 00	

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

I. Description of Event

On August 24, 1992, at 1347 with the plant in Mode 1 at 100% power (2250 psia and 586 degrees Fahrenheit), an IST was being performed on the Auxiliary Building Filter System to determine the operability of the system with the VIVs set at 100%. Each of the Auxiliary Building Filter System fans (3HVR*FN6A and 3HVR*FN6B) tripped on low suction pressure immediately after being started. The Control Room staff declared both trains inoperable.

As an immediate corrective action, the VIVs on each train were incrementally adjusted to determine a position which would allow the fans to run. At 1537, the "A" train was made operable by setting the VIVs at 50%. The "B" train was later made operable with the VIVs set at 20%. Subsequently, a secondary enclosure draw down test for each train was successfully performed with the VIVs at these settings. Since the suction pressure of the filter fans is directly impacted by the position of the temperature control dampers for the Charging Pump and Component Cooling Water Pump and Heat Exchanger Area, these dampers were manually set at the full exhaust position. (See attached drawing.) This will ensure that the VIV settings will maintain filter system operability as the outside temperature decreases.

On August 31, 1992, at 1645 with the plant in Mode 1 at 100% power (2250 psia and 586 degrees Fahrenheit), the monthly flow rate surveillance was being performed on the Auxiliary Building Filter System. As directed in the procedure, an operator placed the VIVs in both trains in automatic. He immediately realized that this caused both trains to be inoperable and restored the "B" train to service.

As an immediate corrective action, the "B" train VIVs were restored to manual mode at 20% open. The surveillance was continued with the "A" train in automatic, and thus considered inoperable.

In the event of a Safety Injection Signal (SIS), the system is required to

- filter the air in the Auxiliary Building before discharge to the atmosphere. This is accomplished by passing the discharge of the Charging Pump and Component Cooling Water Area Ventilation exhaust fans (see attached drawing) through the filters.
- assist the Supplemental Leak Collection and Release System (SLCRS) in maintaining a negative pressure in the Auxiliary Building. This is accomplished by exhausting more air than is brought into the building by the Charging Pump and Component Cooling Water Area Ventilation supply fans (see attached drawing).

No automatic or manually initiated safety response was required or initiated in either event.

II. Cause of Event

The root cause of the August 24 event was inadequate technical evaluation of a proposed change to position of the VIVs.

The oversight made during the technical evaluation was not detected in the independent review and no testing was performed to determine the actual impact of making the change.

On May 19, 1992, an IST was performed to determine the impact of a 2.9 square foot breach in the SLCRS boundary on the ability to achieve the required negative .25 inch water gage pressure in the secondary enclosure. Review of this test caused the Engineering Department to question the validity of setting the VIVs at 20% with the filter system in the standby mode during the summer months. The VIVs had been set at 20% since 1986 based on testing performed during plant start up.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (4)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
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If more is required, use additional NRC Form 366A (6-89) (12)

On July 11, 1992, the VIVs on both trains were set to what was considered to be a conservative setting for summer of 100% open with the system in standby. The primary basis for this decision was 6 years of satisfactory completion of the monthly filter system flow rate surveillance with the VIVs going to 100% open in automatic control. The technical evaluation of the change did not recognize that a ventilation fan which would not run during an accident was supplying air to the filter system plenum during the monthly surveillance. The independent review did not detect this oversight. Once this oversight was discovered about August 12, the need to verify system operation by performing an IST was recognized by the Engineering Department. A reasonable assurance that the system would still run with the VIVs set at 100% was based on VIV position observed during drawdown tests performed in the summer conditions. In these tests the VIVs remained at the 100% position for approximately 15 seconds before closing to their steady state position with only the accident condition fans running. Additionally, initial review indicated that 100% could have been an operable setting. Preparation of the IST began immediately but, because reasonable assurance existed that the system was actually operable, it was not performed until August 24.

The root cause of the August 31 event was inadequate review of procedures affected by changes resulting from the August 24 event.

As a result of the IST performed on August 24, it was determined that the Auxiliary Building Filter System could positively be demonstrated to be operable only if the temperature control dampers for the Charging Pump and Component Cooling Water Pump and Heat Exchanger Area were manually set at full exhaust position. Additionally, the "A" train VIVs were manually set at 50% open and the "B" train VIVs set at 20% open. Operating and surveillance procedures to implement these positions were reviewed and approved by plant management on August 27. On August 31, the administrative control document establishing these positions was modified to allow one train to be inoperable in order to perform surveillance testing but no review of procedures was conducted. As a result, the step which was no longer correct for the new configuration was not corrected.

III. Analysis of Event

The August 24 event was the subject of an immediate report in accordance with 10CFR50.72(b)(2)(iii). This report is being submitted in accordance with 10CFR50.73(a)(2)(v), as a condition which would have prevented the fulfillment of the safety function of this system that is needed to control the release of radioactive material and 10CFR50.73(a)(2)(i)(B), as a condition prohibited by Technical Specifications (TS).

TS 3.7.9 requires both trains of the Auxiliary Building Filter System to be operable. The results of the IST on August 24 showed that the system had been incapable of starting in the accident environment without operator action to change the damper position since July 11. The August 31 event was a momentary testing misalignment under the direct control of an operator and would not have prevented the fulfillment of the accident function; however, it did result in entry into LCO 3.0.3. Prompt operator recognition that both trains had been rendered inoperable allowed the "B" train to be restored within 1 minute. The August 31 event is being reported in accordance with 10CFR50.73(a)(2)(i)(B), as a condition prohibited by Technical Specifications.

The Auxiliary Building Filter System is designed to control the release of radioactive material from the area of the Charging Pump and Plant Component Cooling Water Pumps and Heat Exchangers in Auxiliary Building during an accident by directing releases through a filtered path and assisting the SLCRS in maintaining a negative pressure within the secondary enclosure around containment.

The two systems, Auxiliary Building Filter System and SLCRS, work together to establish the negative pressure. A simplified drawing of the secondary enclosure is included in this report. The two systems were tested together to demonstrate the ability to achieve the negative 2.2 inches water gage pressure within 1 minute inside the secondary enclosure during the 18 month secondary enclosure draw down surveillance.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Millstone Nuclear Power Station Unit 3	0 5 0 0 0 4 2 3 9 2	-	0 2 0	-	0 0	0 4 OF 0 7

TEXT: If more space is required, use additional NRC Form 37 (Rev. 11/79) (17)

e Charging Pump and Plant Component Cooling Water Pump and Heat Exchanger area ventilation fans would have continued to run if the filter fans had tripped. Since this air would no longer be exhausted through the Auxiliary Building Filter System, the secondary enclosure would have eventually been pressurized resulting in ground level unfiltered releases in the event of an accident.

IV. Corrective Action

As immediate corrective action for the August 24 event, testing showed that the "A" train fan ran with the VIVs set at 30% and the "B" train fan ran with the VIVs set at 20%. A secondary enclosure draw down test on each train was performed to ensure that these settings also fulfilled the draw down requirement. To eliminate the variation of filter system suction pressure due to changes in the positions of the temperature control dampers for the Charging Pump and Component Cooling Water Pump and Heat Exchanger Area, these dampers were manually set at their full exhaust positions. The VIVs and temperature control dampers are administratively required to remain at current settings except for performance of surveillance testing. Then only one train at a time can be changed and it is declared inoperable until it is returned to the specified settings.

With these settings, continued safe operation is based on maintaining Charging Pump and Component Cooling Water Pump and Heat Exchanger Area temperature above 32 degrees Fahrenheit. The following information shows that this is achievable through October 31, 1992.

- Historical meteorological data contained in section 2.3 of the FSAR shows that the lowest minimum temperature during October over the an 80 year period was 20 degrees Fahrenheit.
- based on a worst case outside temperature of 20 degrees Fahrenheit, the heat generated in the charging pump and component cooling water pump and heat exchanger area will raise temperature above the required 32 degrees Fahrenheit.
- outside air temperature will be monitored every 8 hours. If outside air temperature drops below 20 degrees Fahrenheit, one train of the Auxiliary Building Filter System will have its VIVs and temperature control dampers placed in automatic and the other train will be placed in pull to lock and declared inoperable. Previous surveillance testing has shown that this configuration operates satisfactorily.

As immediate corrective action for the August 31 event, the "B" train VIVs were restored to manual mode at 20% to provide one operable train. The surveillance continued with the "A" train in automatic.

To prevent recurrence of the August 24 event,

- the event will be reviewed with all plant engineers responsible for performing technical and safety evaluations and independent reviews. This review will stress the need to verify that proposed changes to system configuration will not adversely impact accident configuration.
- this event will be incorporated in training for individuals performing technical and safety evaluations.
- the need to test safety related systems after making physical changes will be reinforced.

To prevent recurrence of the August 31 event, the need to identify affected procedures and determine the impact on them will be reinforced to plant engineers evaluating modifications.

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 20585, 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) 01500004	LER NUMBER			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		392	020	00	05	OF 67

TEXT (if more space is required, use additional NRC Form 360A & (17)

V. Additional Information

Licensee Event Reports (LER) submitted which discuss events where both trains of either Auxiliary Building Filter System or SLCRS were out of service are as follows:

LER Number	Title
92-016	Both Trains of Auxiliary Building Filter System Inoperable
91-018	Both Supplemental Leak Collection and Release System Trains Inoperable Due to Design Deficiency
91-017	Both Supplemental Leak Collection and Release System Trains Inoperable Due to Design Deficiency
91-015	Both Supplemental Leak Collection and Release System Trains Inoperable Due to Deficient Procedure
90-010	Auxiliary Building Ventilators, Filters Inoperable Due to Equipment Failure
89-020	Inadvertent Supplemental Leak Collection and Release System Breach Due to Deficient Procedure

LER 92-016 discusses an event where both trains of the Auxiliary Building Filter System were inoperable due to an open access door on the system's common intake plenum. The root cause was design deficiency which allowed the door to vibrate open. The corrective action was to have the access door lock wired shut.

LER 91-018 discusses an event where both trains of the SLCRS were unknowingly inoperable when the fusible link for a fire damper in each train was subject to high temperature during a loss of non-vital power. The root cause was design deficiency which allowed the fusible links to be exposed to steam during a loss of non-vital power.

LER 91-017 discusses a planned event where both trains of the SLCRS were intentionally rendered inoperable in order to repair a fire damper which had failed shut. This decision was made by management because there was no way to isolate the two SLCRS trains on the discharge header.

LER 91-015 discusses an event where both trains of the SLCRS were inadvertently made inoperable while troubleshooting a fire damper that had failed shut. The root cause was procedural deficiency which did not indicate the impact of removing an access panel on the common discharge plenum of the SLCRS.

LER 90-010 discusses an event where both trains of the Auxiliary Building Filter System were inoperable due to an equipment failure of the "B" train while the "A" train was out of service for maintenance.

LER 89-020 discusses an event where the SLCRS boundary was inadvertently breached when maintenance was performed on a steam relief valve. The root cause was an administrative deficiency which failed to identify the impact of the maintenance on the SLCRS boundary.

Each of the listed LERs is included because either the Auxiliary Building Filter System or SLCRS were rendered inoperable. However, none of them were caused by inadequate technical and safety evaluation of a safety related change, and therefore the corrective action would not have prevented the August event. Corrective action for LERs 89-020 and 91-015 involved strengthening the program to identify boundaries for work planning. Since the August 31 event was not related to performing maintenance, the corrective action for these LERs would not have prevented this event.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

Millstone Nuclear Power Station
Unit 3

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EHS codes

Systems

Component

Auxiliary Building
Environmental Control
System - VF

Control Dampers CDMP

