



Northeast
Nuclear Energy

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The Northeast Utilities System

Donald B. Miller Jr.,
Senior Vice President - Millstone

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

August 28, 1995
MP-95-269

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

Reference: Facility Operating License No. DPR-65
Docket No. 50-336
Licensee Event Report 95-029-00

This letter forwards Licensee Event Report 95-029-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(v).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Donald B. Miller, Jr.
Senior Vice President - Millstone Station

DBM/MP:lfg

Attachment: LER 95-029-00

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

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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 (MINBB 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) Millstone Nuclear Power Station, Unit 2	DOCKET NUMBER (2) 05000336	PAGE (3) 1 OF 3
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TITLE (4) Potential Inadequate Cooling Water Flow to Engineered Safety Features Rooms

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	28	95	95	029	00	08	28	95		
									FACILITY NAME	DOCKET NUMBER
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	4	THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
		20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)
POWER LEVEL (10)	0	20.405(a)(1)(i)			50.36(c)(1)			X 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 366A)
		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 Philip J. Lutz, Nuclear Licensing	TELEPHONE NUMBER (Include Area Code) (203) 440-2072
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On July 28, 1995, at 1600 hours, with the plant in Mode 4 operation, it was determined that insufficient Reactor Building Closed Cooling Water (RBCCW) flow would be provided to each Engineered Safety Features (ESF) room ventilation system heat exchanger (two total) following a Sump Recirculation Actuation Signal (SRAS). This potential deficiency of RBCCW flow to the ventilation system heat exchangers could cause the design basis room temperature of 140 degrees Fahrenheit to be exceeded. Exceeding this temperature for an extended period of time would shorten the service life of the HPSI, LPSI and containment spray pump motors.

Sufficient RBCCW flow to the ESF Room Heat Exchangers has been established by repositioning the appropriate throttle valves and revising the required procedures.

This event is reportable under the criteria of 10CFR50.73(a)(2)(v), "Any event or condition that above could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident."

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 90.0 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.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		95	029	00	

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

I. Description of Event

On July 28, 1995, at 1600 hours, with the plant in Mode 4, it was determined that insufficient RBCCW flow would be provided to each Engineered Safety Features (ESF) room ventilation system heat exchanger (two total) following a Sump Recirculation Actuation Signal (SRAS).

During an Engineering Investigation into both a high temperature alarm in the "B" ESF Room and an operations concern about an offscale RBCCW flow indication to the "B" ESF Room cooler, it was determined that the throttle setting of discharge valve 2-RB-69B would not have provided sufficient RBCCW flow to the "B" ESF Room Heat Exchanger following a SRAS. The required flow to the "A" & "B" ESF room heat exchangers during a SRAS is 60 gpm each, based on the process flow diagram for the RBCCW system and NUSCO calculation 93-FFP-1083ES. Based on the results from performance of Inservice Test IST 94-054, the valve throttle setting would have provided only 48 gpm to X-36B following a SRAS. Results of IST 94-054 also indicated that only 53 gpm would be provided to X-36A ('A' ESF Heat Exchanger) following a SRAS. It was also determined that the original plant architect, Bechtel, assumed that during a SRAS condition there would be a reduced room heat load in each ESF room (LPSI and Containment Spray Pumps would be off with only a HPSI pump operating), so the full 60 gpm to each ESF Heat Exchanger would not be required during a SRAS. However, Emergency Operating Procedure (EOP) 2532, Rev. 13, "Loss of Primary Coolant", does not preclude the possibility of restarting the LPSI and Containment Spray Pumps while in sump recirculation operation. This would raise the ESF room temperatures, requiring the full 60 gpm cooling to the ESF Heat Exchangers from the RBCCW system.

Based upon the above, Technical Support Engineering asked Operations to open the respective discharge throttle valves on X-36A and X-36B, an additional full turn to ensure adequate RBCCW flow to the ESF Room Heat Exchangers following a SRAS. Operations personnel made the appropriate procedure changes and the heat exchanger discharge throttle valves were repositioned accordingly.

There were no automatic or manually initiated safety systems actuated as a result of the event.

II. Cause of Event

Original design assumptions concerning required RBCCW flow to ESF room heat exchangers and safety injection pump operation following a SRAS were not adequately evaluated.

III. Analysis of Event

Based on event investigation, this event is reportable under the criteria of 10CFR50.73(a)(2)(v), "Any event or condition that above could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident."

The existing reduced RBCCW flow to the ESF room heat exchangers following a SRAS would not have caused an immediate failure of any of the pump motors. How high the temperature increase was and for how long it existed would determine how much, if any, the service life of the motors would have been shortened. Based on the as-found flow values, the ESF room temperature would only have been challenged if there were a need for containment spray pump operation during sump recirculation and LPSI pump operation for boron precipitation control. The duration of pump operation for these purposes is expected to be of limited time.

**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 20585-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		95	029	00	

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

The previously mentioned Engineering Investigation would have set the RBCCW flow to the "B" ESF room cooler at 66 gpm under normal operating conditions. Based on RBCCW system testing performed per IST-94-054 in June, 1995, 66 gpm at normal operating conditions would have corresponded to approximately 48 gpm under sump recirculation operation. The normal operating setting for the "A" ESF room cooler would have provided approximately 53 gpm to the 'A' cooler under sump recirculation operation. Both are unacceptable based on the current design basis calculation 93-FFP-1083ES. An engineering evaluation of the test results obtained per IST-94-054 determined that the X-36A and X-36B discharge valves should be set to provide greater than 80 gpm under normal RBCCW lineup in order to provide a minimum of 60 gpm under sump recirculation operation. The cooler discharge valves have been positioned accordingly.

IV. Corrective Action

Immediate corrective action was to reposition coolers X-36A and X-36B discharge valves so that they would provide the proper RBCCW flow following a SRAS.

This reportable condition is a result of decisions made over 20 years ago. Creation of System Design Basis Documentation Packages and implementation of a system engineering program has established a mechanism to document, find and correct other historical system design problems.

V. Additional Information

Similar LERS - 95-003-00

EIS Codes

Containment Spray System	BE
Residual Heat Removal/Low Pressure Safety Injection System	BP
High Pressure Safety Injection System	BQ
Closed/Component Cooling Water System	CC