Northeast
Utilities System

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JUN 11 1996

Docket No. 50-336
B15742

Re: 10 CFR 50.73

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

This letter forwards Licensee Event Report (LER) 96-027-00 documenting an event that occurred at Millstone Nuclear Power Station, Unit No. 2 on March 8, 1996. On May 31, 1996, a discussion was held during which the NRC Staff was informed that this LER would be submitted late to allow for additional engineering analysis of this event. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(v).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

P. M. Richardson
Director - Millstone Unit No. 2

Attachment: LER 96-027-00

cc: T. T. Martin, Region I Administrator
P. D. Swetland, Senior Resident Inspector, Millstone Unit No. 2
D. G. McDonald, Jr., NRC Project Manager, Millstone Unit No. 2

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NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND 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.

LICENSEE EVENT REPORT (LER)

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

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TITLE (4)

NUREG 0612 Evaluation Omits Turbine Building Crane's Impact on Safety - Related Switchgear Room

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
04	26	96	96	027	00	06	11	96	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	0%	20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)	50.73(a)(2)(ii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)	50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)	X 50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
M. D. Ehredt, Nuclear Licensing Supervisor	(860)440-2142

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)		EXPECTED SUBMISSION	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X NO				

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

On March 8, 1996 at approximately 1530 hours, with the plant in mode 5 at 0% power, during an engineering review, it was discovered that the turbine building crane was not included in the Millstone Unit No. 2 NUREG 0612 evaluation for heavy loads. A reportability evaluation to address this concern was completed on April 25, 1996 and concluded that during Refueling Outage (RFO) 5, heavy loads (LP turbine exhaust hoods) were lifted above the Z1 facility 480 VAC switchgear room, while the Z2 facility redundant 480 VAC switchgear room was out of service. If an LP turbine exhaust hood had been dropped on the Z1 facility, then the safety-related load center could have been rendered inoperable and, therefore, have compromised the capability for residual heat removal. This report is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(v)(B).

The cause of this event was a failure to include the turbine building crane in the NUREG 0612 evaluations for control of heavy loads. The corrective action for this event is to revise the turbine building crane procedure in accordance with the guidance of NUREG 0612, so that heavy load lifts will not compromise the operation of safe shut down equipment.

No automatic or manually initiated safety systems were activated as a result of this event and no manual operator action was required.

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

I. Description of Event

On March 8, 1996, at approximately 1530 hours, with the plant in mode 5 at 0% power, during an engineering review, it was discovered that the turbine building crane had not been included in the Millstone Unit No. 2 NUREG 0612 evaluations for control of heavy loads. A reportability evaluation to address this concern was completed on April 25, 1996. This evaluation concluded that on June 4, 1983 (during RFO 5) the A and B LP exhaust hoods for the Millstone Unit No. 2 main turbine were lifted above the west 480 VAC switchgear room (Z1 facility), located below southeast corner of the turbine deck, while the redundant switchgear room (Z2 facility) was out of service. Safety-related load center 22E is located in the Z1 facility. Load center 22E controls vital equipment needed for residual heat removal, and is therefore required for the safe shutdown condition during an outage when the drop of the LP exhaust hood is postulated. If an LP exhaust hood had been dropped on load center 22E, it could have rendered the load center inoperable and compromised the capability for residual heat removal.

An immediate report was made on April 25, 1996 at 1459 hours, pursuant to the requirements of 10CFR50.72 (b)(2)(iii)(B), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat."

There were no immediate operator actions required in response to this event. Additionally, there were no automatic or manually initiated safety systems activated as a result of this event.

II. Cause of Event

The cause of this event was a failure to include the turbine building crane in the NUREG 0612 evaluations for control of heavy loads and, consequently, a failure to address the specific guidelines of Section 5.1.5 which are concerned with the control of turbine generator parts as potential drop loads over safe shutdown equipment.

III. Analysis of Event

This report is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(v)(B), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat."

In a letter dated December 22, 1980 the NRC Staff requested that Northeast Nuclear Energy Company (NNECO) review their controls for handling heavy loads to determine the extent to which the controls satisfy the requirements of NUREG 0612. This request was later supplemented by Generic Letter 81-07, "Control of Heavy Loads," issued on February 3, 1981. The letter dated December 22, 1980 requested a review of the controls on heavy loads against the guidelines of NUREG 0612 and identification of changes required to fully satisfy these guidelines. The request was made in two phases: Phase I , which addressed Section 5.1.1 of NUREG 0612, for general guidelines for handling of heavy loads; and Phase II, which addressed Sections 5.1.2 to 5.1.6 of the NUREG, for specific guidelines in different areas of the plant. NNECO responded to both phases in a letter dated July 20, 1981.[1]

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[1] W. G. Counsil letter to U. S. Nuclear Regulatory Commission, "Control of Heavy Loads," dated July 20, 1981.

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

During the initial phase of the design basis configuration review for Millstone Unit No. 2, it was discovered that the 195 ton turbine building crane was not included in the NUREG 0612 evaluations for control of heavy loads. It was also shown that, in accordance with existing plant procedures, the 159,000 pound LP exhaust hood for Millstone Unit No. 2 and the 124,600 pound LP exhaust hood for Millstone Unit No. 1 can traverse above the Z1 facility with no restrictions relative to the status or service schedule of the redundant Z2 facility.

A structural evaluation of the potential consequences of dropping the 159, 000 pound LP exhaust hood on the turbine deck concluded that the turbine deck cannot sustain such a drop without substantial damage to the floor. The postulated event could, therefore, jeopardize the Z1 facility switchgear located in the 480 VAC switchgear room located below the turbine deck at that location. This condition will not however, affect the Z2 facility, since its switchgear, which provides redundancy, is located in the auxiliary building where it would not be affected by any postulated heavy load drops on the turbine deck.

During past outages, operability of the Z2 facility has not been ensured during operation of the turbine building crane. It has been determined that the use of the turbine building crane has not been coordinated with the service schedule for the two power facilities. Additionally, revision 2 of the turbine generator laydown procedure (MP2703H5) indicates that the area of interest on the turbine deck is used as the laydown area for the LP exhaust hood. Currently, there is no procedure that controls the lifting of heavy loads over the Z1 facility while the Z2 facility is out of service. Therefore, the Z1 facility could be in service and the Z2 facility could be out of service when the crane is being used to carry the LP exhaust hood over the area of concern. The postulated load drop is not a concern while Millstone Unit No. 2 is operating, since both electrical facilities are required to be operable, therefore, the Z2 facility would be operable if the Millstone Unit No. 1 hood had been transported through the Millstone Unit No. 2 turbine building for laydown.

A system evaluation was performed to assess the affect of the postulated heavy load drop on load center 22E. The evaluation concluded that, although equipment necessary to provide the safety functions to remain in a Cold Shutdown (mode 5) or Refueling (mode 6) condition could be returned to service, the number and type of compensatory measures required to ensure continued availability of the equipment would require manual operator action.

The actual safety significance of this event is low, since an event has not occurred that has resulted in a heavy load drop on the Z1 power facility. The potential safety significance of the event is high, since if the postulated event were to occur, and it was assumed that operator action could not restore vital equipment, then the postulated heavy load drop could compromise residual heat removal capability.

IV. Corrective Action

An engineering evaluation of the Millstone Unit No. 2 response to NUREG 0612 and associated crane operating procedures was completed as part of the initial phase of the ongoing design basis configuration review effort. From this evaluation, this event was identified.

The corrective action will be to revise the turbine building crane procedure so that a heavy load lift will not compromise the operation of safe shut down equipment. The procedure will be revised prior to the use of the turbine building crane for heavy load lifts over the Z1 power facility.

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

V. Additional Information

Similar Events

None

Manufacturer Data

None