

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
NEW YORK WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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November 20, 1992

Docket No. 5: 136
B14294

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

Gentlemen:

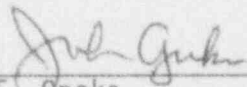
Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Main Steam Line Break Design Limits
Response to Request for Additional Information

In a letter dated October 28, 1992,⁽¹⁾ Northeast Nuclear Energy Company proposed to amend Operating License DPR-65 for Millstone Unit No. 2. In response to NRC Staff review questions, telephone conferences were held on November 6, 1992, and November 9, 1992, during which additional information was requested. Attachment 1 provides numerous information which was transmitted to the Staff via facsimile shortly following the November 6, 1992, telephone conference. Attachment 2 provides responses which were developed in response to questions raised during the November 9, 1992, telephone conference.

We appreciate the opportunity to respond to the Staff's technical review questions in an efficient manner. We hope the Staff finds this additional information appropriate toward completing their technical review to allow issuance of the License Amendment on or before December 9, 1992, as requested in the October 28, 1992, letter. If you have further questions, please contact my Staff.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



J. F. Opeka
Executive Vice President

(1) J. F. Opeka letter to U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2 Proposed Revisions to Technical Specifications Main Steam Line Break Design Limits," dated October 28, 1992.

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ADD

U.S. Nuclear Regulatory Commission
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November 20, 1992

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

Attachment 1
Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Main Steam Line Break Design Limits
Response to Request for Additional Information
Previously Transmitted Information

November 1992

Summary of Previously Transmitted Information

1. Engineered Safety Features Response Times related to containment spray system.
2. Excerpt from Operating Procedure 2346A regarding measures to be taken in the event that the emergency diesel generator has been operated under no load or lightly loaded conditions.
3. Telephone memorandum documenting discussion between NNECO personnel and emergency diesel generator representatives regarding operation under unloaded conditions.
4. 1981 letter from emergency diesel generator manufacturer regarding actions recommended if the engines were run unloaded.
5. Integrated Safety Evaluation for Plant Design Change Record 2-114-92.
6. Integrated Safety Evaluation for Proposed Technical Specification Request 2-13-92.

Table 3.3-5 ESF Response Times - Containment Pressure High High

Delay times for the containment spray actuation setpoint (CSAS) are being changed from 35.6 seconds to 16 seconds for the case with no loss of power (LOP). This change is being made to reduce the calculated peak containment pressure from a main steamline break (MSLB) without an LOP by a faster initiation of spray flow. Actual as-tested delay times have shown that the equipment is much faster than the 35.6 seconds previously assumed and can also ~~exceed~~ the proposed 16 seconds without modifications.

function sooner than

A time line is as shown below:

NO LOP

Containment
Spray
Timeline (Sec)

Action

0	CSAS setpoint reached 11.08 psig
1	CSAS signal generated
7	CS pumps at speed
16	Valves open, CS operational per Technical Specification
30.3	Flow starts out spray header, safety analysis input (<i>cont press ≤ 54 psi</i>)

Containment spray delay time with a coincident LOP occurs in accordance with the following timeline:

LOP

Containment
Spray
Timeline (Sec)

Action

0	LOP
1	Diesel start signal generated
6	CSAS setpoint reached
16	Diesels at speed, breaker closes
30.6	Sequencer starts CS pumps
36.6	CS pumps at speed, valves open, CS operational per Technical Specifications
→ 50.9	Flow starts out spray header safety analysis input (<i>cont press ≤ 54 psi</i>)

The surveillance procedure generates the LOP and CSAS simultaneously at $t = 0$ which is acceptable because the timeline is bounded by diesel functions rather than CSAS functions.

No change is being proposed for the containment spray delay time with an LOP, although from the given timeline, an increase from 35.6 to 36.6 could be justified.

- 4.6 If any abnormal Diesel Engine operation is performed or observed (such as paralleling out of phase or improper relay actuation), a Plant Incident Report must be submitted regardless of the apparent affect or lack of affect on the Diesel Engine. This will ensure an investigation of the situation is conducted to identify latent problems.
- 4.7 If a Loss of Normal Power condition exists and the Diesel Engine has been shutdown by an emergency trip, the engine can be restarted by depressing the master reset push button on the Diesel Engine skid mounted gage board.
- 4.8 During restoration per "Electrical Emergency", EOP 2528, following a LNP initiation, the under voltage relays at the ESAS Cabinet(s) must NOT be reset until immediately prior to paralleling the Diesel Generator with the RSST.
- 4.9 If any of the following condition exist which would allow fuel or lube oil to accumulate in the exhaust:
- a. Accumulation of extended run time greater than or equal to eight hours at low loads (less than 1375 KW)
 - b. Accumulation of numerous consecutive short starts or Diesel operation under no-load or light load conditions,
- Then the Diesel Generator shall be run at greater than or equal to 75% load (2076 KW) for at least two hours before shutdown. This will prevent possible damage to the engine due to an exhaust system fire resulting in the subsequent loss of Diesel Engine operability. (CR 4232, Serial 36-81)
- 4.10 Operation with less than 1000 KW will be limited to the time required to load or unload the Diesel Generator. This will prevent possible damage to the diesel scavenging air blower.
- 4.11 The Diesel Generator(s) must NOT be paralleled to their respective emergency buses during severe weather or other potential loss of power situations.
- 4.12 If "A" ("B") Diesel Generator is to be operated at greater than or equal to 2334 KW and Service Water inlet temperature is greater than 60°F, Then, to minimize the effects of coolant cross-flow, Standby Coolant Heater to Air Cooler, 2-DG-9A (2-DG-9B), must be closed. (SE-92-922)

CH.
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TELEPHONE MEMORANDUM

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MP2 Main Steam Line Break, PA 91-073				ROUTING	
CALL DATE		TIME	<input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	NAME	INITIALS
Sept. 9, 1992		10:55	<input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING	XXXXXXXXXX	
TELEPHONE CONVERSATION PARTICIPANTS					
NAME			COMPANY NAME		
XXXXXXXXXX			NUSCo		
XXXXXXXXXX			Fairbanks-Morse		
XXXXXXXXXX			XXXXXXXXXX		

CALL REPORTER'S NAME

DATE

Sept. 9, 1992

cc Chronological File, ~~XXXXXXXXXX~~, SUMMARY

I called ~~XXXXXXXXXX~~ of Fairbanks-Morse to discuss unloaded Diesel Generator operation.

I confirmed that Attachment 1 (~~XXXXXXXXXX~~ Fairbanks-Morse to ~~XXXXXXXXXX~~ NUSCo dated

July 27, 1981) provides the latest guidelines for such operation. Specifically, unloaded diesel operation is acceptable for periods up to eight hours.

~~He~~ further explained the concern to be lube oil build-up in the exhaust which wouldn't be burned off during no-load operation due to low exhaust temperatures (250°F). Loaded operation results in 1000°F exhaust temperature.

Colt Industries



RECEIVED
JUL 30 1981

Fairbanks Morse
Engine Division
701 Lawton Avenue
Beloit, Wisconsin 53511
608/364-4411

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July 27, 1981

NUCLEAR OPERATIONS
ANALYSIS

Northeast Utilities
P. O. Box 270
Hartford, Connecticut 06101

Attention: Mr. G. Reardon

Subject: Millstone II Nuclear Power Station
Emergency Diesel Generators
Low Load Operations

Reference: (a) Telecon on G. Reardon with C. Ankrum on 7/16/81

Gentlemen:

During referenced telecon, you advised there was an NRC requirement to start the diesels and adjust voltage once per shift when the other diesel is not available for operation. Colt advised that with this type of operation, there could be lube oil and fuel oil accumulation in the exhaust system. Our engineering recommends that with this type of operation, the units be loaded 50 to 75% minimum load for a period of one hour every fourth day during this type of operation. This means the engine should be run under load at least once every 12th start.

We had previously advised that when the units are run at idle or less than 50% load, they should be loaded to at least 75% load for a minimum of 1 hour, during each 8 hours of this type of operation.

If we can be of any further service, please advise.

Yours very truly,

COLT INDUSTRIES OPERATING CORP
FAIRBANKS MORSE ENGINE DIVISION

G. W. Olson
Supervisor, Contract Administration

GWO:gp