NORTHEAST UTILITIES
NU

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April 27, 1979

Docket No. 50-336

Director of Nuclear Reactor Regulation
Attn: Mr. R. Reid, Chief
Operating Reactors Branch #4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

References: (1) R. Reid letter to W. G. Counsil dated November 29, 1978.
(2) W. G. Counsil letter to R. Reid dated January 3, 1979.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2
Proposed Revisions to Technical Specifications

In Reference (1), the NRC Staff requested action of Northeast Nuclear Energy Company (NNECO) regarding containment purging during normal operation. In Reference (2), NNECO identified its intent to pursue Option 3 of Reference (1), namely to justify unlimited purging. Subsequently, NNECO has determined that the existing containment isolation valves are not sufficiently qualified to justify the unlimited purging option.

Therefore, pursuant to 10CFR50.90, NNECO hereby proposes to amend its operating license, DPR-65, by incorporating the revisions identified in Attachment 1 into the Millstone Unit No. 2 Technical Specifications.

As indicated on attached Page 3/4 6-11a, NNECO is conservatively proposing to maintain the containment purge supply and exhaust isolation valves in a locked closed position in Modes 1 through 4. For this reason, the attached Technical Specifications delete all reference to Functional Unit 7 of the Engineered Safety Feature Actuation System, the Containment Purge Valves Isolation function. These changes reflect the fact that there is no longer any automatic action required of these valves in Modes 1 through 4. Accordingly, Table 3.3-6 has also been modified to reflect the fact that the Process Monitors no longer cause any automatic action in Modes 1 through 4.

The operability requirements for the containment airborne radioactivity monitors and the containment purge valve isolation system are fully contained on revised Pages 3/4 9-9 and 3/4 9-10. These specifications are conservative, in that the isolation system must be demonstrated operable within 72 hours of the start of core alterations. The isolation time originally specified in Table 3.6-2 is now provided in Surveillance Requirement 4.9.10. The revised maximum isolation time of one minute is adequate to ensure that the radiological consequences of a postulated fuel handling accident remain a small fraction of 10CFR Part 100 limits.

The revised specifications and bases are consistent with the model specifications provided in Reference (1).

The above proposed changes have been reviewed pursuant to 10CFR50.59 and have not been found to constitute an unreviewed safety question.

The Millstone Unit No. 2 Nuclear Review Board has reviewed and approved the above proposed changes and concurred in the above determination.

NNECO has reviewed the above proposed changes pursuant to the requirements of 10CFR170, and has determined that the proposal constitutes a Class III amendment. Accordingly, enclosed herewith is payment in the amount of $4,000 (four thousand dollars). The basis for this determination is that the proposal involves a single safety issue, responding to a written request of the Commission, and does not involve a significant hazards consideration.

Please be advised that in the event the NRC Staff does not disposition this request prior to the start of Cycle 3 operation, the isolation valves will be maintained in the locked closed position in Modes 1 through 4 as indicated in Attachment 1.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

W. G. Counsil
Vice President

By: W. F. Fee
W. F. Fee
Vice President

Attachment

STATE OF CONNECTICUT)
) ss. Berlin April 27, 1979
COUNTY OF HARTFORD)

Then personaliy appeared before me W. F. Fee, who being duly sworn, did state that he is Vice President of Northeast Nuclear Energy Company, a Licensee herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Licensees herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

Sheila M. Oates
Notary Public

My Commission Expires March 31, 1981

DOCKET NO. 50-336

ATTACHMENT 1

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

PROPOSED REVISIONS TO TECHNICAL SPECIFICATIONS

CONTAINMENT PURGING

APRIL, 1979

SURVEILLANCE REQUIREMENTS (Continued)

4.3.2.1.3 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESF function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific ESF function as shown in the "Total No. of Channels" Column of Table 3.3-3.

38

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. SAFETY INJECTION (SIAS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	6
b. Containment Pressure - High	4	2	3	1, 2, 3	7
c. Pressurizer Pressure - Low	4	2	3	1, 2(d), 3(a)	7
2. CONTAINMENT SPRAY (CSAS)					
a. Manual (Trip Buttons)	2	1	2	1, 2, 3, 4	6
b. Containment Pressure -- High - High	4	2(b)	3	1, 2, 3	7
3. CONTAINMENT ISOLATION (CIAS)					
a. Manual CIAS (Trip Buttons)	2	1	2	1, 2, 3, 4	6
b. Manual SIAS (Trip Buttons)	2	1	2	1, 2, 3, 4	6
c. Containment Pressure - High	4	2	3	1, 2, 3	7
d. Pressurizer Pressure - Low	4	2	3	1, 2(d), 3(a)	7

August 1, 1975

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. LOSS OF POWER					
a. 4.16kv Emergency Bus Undervoltage (Undervoltage relays) - level one	4/Bus	2/Bus	3/Bus	1, 2, 3	7
b. 4.16kv Emergency Bus Undervoltage (Undervoltage relays) - level two	4/Bus	2/Bus	3/Bus	1, 2, 3	7

13

August 30, 1976

TABLE 3.3-3 (Continued)

TABLE NOTATION

(a) Trip function may be bypassed when pressurizer pressure is < 1750 psia; bypass shall be automatically removed when pressurizer pressure is ≥ 1750 psia.

(b) An SIAS signal is first necessary to enable CSAS logic.

(c) Trip function may be bypassed below 600 psia; bypass shall be automatically removed at or above 600 psia.

(d) Trip may be bypassed during testing pursuant to Special Test Exception 3.10.3.

ACTION STATEMENTS

ACTION 6 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in COLD SHUTDOWN within the next 36 hours.

ACTION 7 - With the number of OPERABLE channels one less than the Total Number of Channels and with the pressurizer pressure:

a. < 1750 psia; immediately place the inoperable channel in the bypassed condition; restore the inoperable channel to OPERABLE status prior to increasing the pressurizer pressure above 1750 psia.

b. ≥ 1750 psia, operation may continue with the inoperable channel in the bypassed condition, provided the following conditions are satisfied:

1. All functional units receiving an input from the bypassed channel are also placed in the bypassed condition.

2. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be removed from service for up to 2 hours for surveillance testing per Specification 4.3.2.1 provided one of the inoperable channels is placed in the tripped condition.

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TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
5. ENCLOSURE BUILDING FILTRATION (EBFAS)		
a. Manual EBFAS (Trip Buttons)	Not Applicable	Not Applicable
b. Manual SIAS (Trip Buttons)	Not Applicable	Not Applicable
c. Containment Pressure - High	$\leq$ 5 psig	$\leq$ 5 psig
d. Pressurizer Pressure - Low	$\geq$ 1600 psia	$\geq$ 1600 psia
6. CONTAINMENT SUMP RECIRCULATION (SRAS)		
a. Manual SRAS (Trip Buttons)	Not Applicable	Not Applicable.
b. Refueling Water Storage Tank - Low	48 + 18 inches above tank bottom	48 + 18 inches above tank bottom

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
7. LOSS OF POWER		
a. 4.16 kv Emergency Bus Undervoltage (Undervoltage relays) - level one	≥ 2912 volts	≥ 2912 volts
b. 4.16 kv Emergency Bus Undervoltage (Undervoltage relays) - level two	≥ 3700 volts with an 8.0 + 2.0 second time delay	≥ 3700 volts with an 8.0 + 2.0 second time delay

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED	
6. CONTAINMENT SUMP RECIRCULATION (SRAS)					
a. Manual SRAS (Trip Buttons)	N.A.	N.A.	R	N.A.	
b. Refueling Water Storage Tank - Low	S	R	M	1, 2, 3	
c. Automatic Actuation Logic	N.A.	N.A.	M(1)	1, 2, 3	
7. LOSS OF POWER					
a. 4.16 kv Emergency Bus Undervoltage (Undervoltage relays) - level one	S	R	M	1, 2, 3	13
b. 4.16 kv Emergency Bus Undervoltage(Undervoltage relays) - level two	S	R	M	1,2, 3	12

August 30, 1976

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Spent Fuel Storage Criticality Monitor and Ventilation System Isolation	2	*	$\leq$ 100 mR/hr	10^{-1} - 10^{+4} mR/hr	13 and 15
2. PROCESS MONITORS					
a. Containment Atmosphere-Particulate	1	MODE 6	$\leq$ the value determined in accordance with specification 4.9.9.3	10 - 10^{+6} cpm	14 and (a)
b. Containment Atmosphere-Gaseous	1	MODE 6	$\leq$ the value determined in accordance with Specification 4.9.9.3	10 - 10^{+6} cpm	14 and (a)

38

*With fuel in storage building.

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 The containment purge supply and exhaust isolation valves shall be locked closed.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one containment purge supply and/or one exhaust isolation valve open, close the open valve(s) within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.7 The containment purge supply and exhaust isolation valves shall be determined locked closed at least once per 31 days.

TABLE 3.6-2 (Continued)

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	TESTABLE DURING PLANT OPERATION	MAXIMUM ISOLATION TIME
A. CONTAINMENT ISOLATION VALVES			
2-AC-12	Containment Air Sample	Yes	5 seconds
2-AC-15	Containment Air Sample	Yes	5 seconds
2-AC-20	Containment Air Sample	Yes	5 seconds
2-AC-47	Containment Air Sample	Yes	5 seconds
HV-8150	Containment Air Sample	Yes	5 seconds
HV-8151	Containment Air Sample	Yes	5 seconds
2-MS-191A	Steam Generator Sample	Yes	5 seconds
2-MS-191B	Steam Generator Sample	Yes	5 seconds
2-EB-91	Hydrogen Purge	Yes	5 seconds
2-EB-92	Hydrogen Purge	Yes	5 seconds
2-EB-99	Hydrogen Purge	Yes	5 seconds
2-EB-100	Hydrogen Purge	Yes	5 seconds
B. CONTAINMENT PURGE			
2-AC-4	Purge Air	No	N/A
2-AC-5	Purge Air	No	N/A
2-AC-6	Purge Air	No	N/A
2-AC-7	Purge Air	No	N/A
C. MANUAL			
2-SI-709*	Shutdown Cooling	Yes	Not Applicable
2-SI-463*	Safety Injection Tank Test Line	Yes	Not Applicable
2-SA-19*	Station Air	Yes	Not Applicable
2-RW-21*	Refueling Water Purification	Yes	Not Applicable
2-RW-63*	Refueling Water Purification	Yes	Not Applicable
2-RW-154*	Refueling Water Purification	Yes	Not Applicable
2-RW-232*	Refueling Water Purification	Yes	Not Applicable

REFUELING OPERATIONS

CONTAINMENT RADIATION MONITORING

LIMITING CONDITION FOR OPERATION

3.9.9 The containment airborne radioactivity monitors which initiate containment purge valve isolation shall be OPERABLE.

APPLICABILITY: MODE 6.

ACTION:

With less than the above required instrumentation systems OPERABLE, either suspend all operations involving CORE ALTERATIONS and movement of fuel within the containment building or close all penetrations providing direct access from the containment atmosphere to the outside atmosphere, then CORE ALTERATIONS and/or fuel movement within the containment building may proceed for up to 7 days subject to ACTION requirements of Specification 3.3.3.1, as applicable.

SURVEILLANCE REQUIREMENTS

4.9.9.1 The specified instrumentation shall be demonstrated OPERABLE by performance of the surveillance requirements of Specification 4.3.3.1.

4.9.9.2 All penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be verified closed at least once per 12 hours during CORE ALTERATIONS or fuel movement within the containment building when less than the above required instrumentation systems are OPERABLE.

4.9.9.3 The trip value shall be such that the containment purge effluent shall not result in calculated concentrations of radioactivity offsite in excess of 10CFR Part 20, Appendix B, Table II. For the purposes of calculating this trip value, a $x/Q = 5.8 \times 10^{-6}$ sec/m^3 shall be used when the system is aligned to purge through the building vent and a $X/Q = 7.5 \times 10^{-8}$ sec/m^3 shall be used when the system is aligned to purge through the Unit 1 stack; the gaseous and particulate (Half Lives greater than 8 days) radioactivity shall be assumed to be xenon-133 and cesium-137, respectively. However, the setpoints shall be no greater than 5×10^5 cpm.

REFUELING OPERATIONS

CONTAINMENT PURGE VALVE ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.10 The containment purge valve isolation system shall be OPERABLE.

APPLICABILITY: MODE 6.

ACTION:

With the containment purge valve isolation system inoperable, either close each of the penetrations providing direct access from the containment atmosphere to the outside atmosphere or suspend all operations involving CORE ALTERATIONS or fuel movement within the containment building.

SURVEILLANCE REQUIREMENTS

4.9.10 The containment purge valve isolation system shall be demonstrated OPERABLE within 72 hours prior to the start of CORE ALTERATIONS by verifying that containment building isolation occurs on a high radiation signal from each of the containment radiation monitoring instrumentation channels required OPERABLE by Specification 3.9.9. The maximum isolation time of the containment purge isolation valves is one minute.

BASES

3/4.6.1.4 INTERNAL PRESSURE

The limitations on containment internal pressure ensure that the containment peak pressure does not exceed the design pressure of 54 psig during LOCA conditions.

The maximum peak pressure obtained from a LOCA event is 51.2 psig. The limit of 2.1 psig for initial positive containment pressure will limit the total pressure to less than the design pressure and is consistent with the accident analyses.

3/4.6.1.5 AIR TEMPERATURE

The limitation on containment air temperature ensures that the containment peak air temperature does not exceed the design temperature of 288°F during LOCA conditions. The containment temperature limit is consistent with the accident analyses.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment vessel will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the vessel will withstand the maximum pressure of 51.2 psig in the event of a LOCA. The measurement of containment tendon lift off force, the visual and metallurgical examination of tendons, anchorages and liner and the Type A leakage tests are sufficient to demonstrate this capability. 20

The surveillance requirements for demonstrating the containment's strucutral integrity are in compliance with the recommendations of Regulatory Guide 1.35 "Inservice Surveillance of Ungrouted Tendons in Prestressed Concrete Containment Strucutres".

3/4.6.1.7 CONTAINMENT VENTILATION SYSTEM

The containment purge supply and exhaust isolation valves are required to be closed during plant operation since these valves have not been demonstrated capable of closing during a (LOCA or steam line break accident). Maintaining these valves closed during plant operations ensures that excessive quantities of radioactive materials will not be released via the containment purge system.