December 8, 1993

Docket No. 50-423

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Mr. John F. Opeka
Executive Vice President, Nuclear
Connecticut Yankee Atomic Power Company
Northeast Nuclear Energy Company
Post Office Box 270
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M87216)

The Commission has issued the enclosed Amendment No. 87 to Facility Operating License No. NPF-49 for Millstone Nuclear Power Station, Unit No. 3, in partial response to your application dated November 4, 1993, as supplemented November 4, 1993.

The amendment changes the Technical Specifications to increase the required supplementary leak collection and release system drawdown time from 60 seconds to 120 seconds and increases the required vacuum to 0.4 inches, based on compensating reductions in containment leak rate. You have also proposed to replace the halogenated hydrocarbon refrigerant test gas presently being used in testing charcoal adsorber banks with an "acceptable test gas" in TS 4.6.6.1 f, 4.7.7 g, and 4.7.9 f. This portion of your proposal is being deferred. Before the staff rules on this part of your proposal you must provide an acceptable justification, including the adequacy of the replacement test gas. Consequently, we have not included this proposed change in this amendment, but will consider it at a later time, if you provide acceptable justification.

A copy of the related Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by

Vernon L. Rooney, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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PDR ADOCK 05000423
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Enclosures:
1. Amendment No. 87 to NPF-49
2. Safety Evaluation

NRC FILE CENTER COPY

cc w/enclosures:
See next page

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OFFICE	LA:PDI-4	PM:PDI-4	D:PDI-4	OGC concur	
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DATE	/ /93	12/8/93	12/8/93	12/7/93	/ /

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 8, 1993

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Connecticut Yankee Atomic Power Company
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Vernon L. Rooney, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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1. Amendment No. 87 to NPF-49
2. Safety Evaluation

cc w/enclosures:
See next page

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Northeast Nuclear Energy Company

Millstone Nuclear Power Station
Unit 3

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

DOCKET NO. 50-423

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 87
License No. NPF-49

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Northeast Nuclear Energy Company, et al. (the licensee), dated November 4, 1993, as supplemented November 4, 1993, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-49 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 87 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance, to be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Ronald W. Hernan for

John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 8, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 87

FACILITY OPERATING LICENSE NO. NPF-49

DOCKET NO. 50-423

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove	Insert
i	i
viii	viii
ix	ix
1-3	1-3
3/4 6-2	3/4 6-2
3/4 6-4	3/4 6-4
3/4 6-38	3/4 6-38
3/4 6-39	3/4 6-39
3/4 6-40	3/4 6-40*
3/4 6-41	3/4 6-41
----	3/4 6-42
3/4 7-20	3/4 7-20
3/4 7-21	3/4 7-21*
----	B 3/4 6-4
----	B 3/4 6-5
----	B 3/4 6-6
----	B 3/4 6-7
----	B 3/4 6-8
B 3/4 7-5	B 3/4 7-5
----	B 3/4 7-5a

*No change, spillover page

DEFINITIONS

LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS

SECONDARY CONTAINMENT BOUNDARY

1.12 The SECONDARY CONTAINMENT BOUNDARY is comprised of the containment enclosure building and all contiguous buildings (main steam valve building [partially], engineering safety features building [partially], hydrogen recombiner building [partially], and auxiliary building). The SECONDARY CONTAINMENT BOUNDARY shall exist when:

a. Each door in each access opening is closed except when the access opening is being used for normal transit entry and exit,

b. The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

ENGINEERED SAFETY FEATURES RESPONSE TIME

1.13 The ENGINEERED SAFETY FEATURES (ESF) RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF Actuation Setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable.

1.14 Deleted

FREQUENCY NOTATION

1.15 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.1.

IDENTIFIED LEAKAGE

1.1 IDENTIFIED LEAKAGE shall be:

a. Leakage (except CONTROLLED LEAKAGE) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank, or

b. Leakage into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of Leakage Detection Systems or not to be PRESSURE BOUNDARY LEAKAGE, or

c. Reactor Coolant System leakage through a steam generator to the Secondary Coolant System.

MASTER RELAY TEST

1.17 A MASTER RELAY TEST shall be the energization of each master relay and verification of OPERABILITY of each relay. The MASTER RELAY TEST shall include a continuity check of each associated slave relay.

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of less than or equal to L_a, 0.3% by weight of the containment air per 24 hours at P_a, 53.27 psia (38.57 psig);

b. A combined leakage rate of less than 0.60 L_a for all penetrations and valves subject to Type B and C tests, when pressurized to P_a; and

c. A combined leakage rate of less than or equal to 0.042 L_a for all penetrations identified in Table 3.6-1 as SECONDARY CONTAINMENT BOUNDARY bypass leakage paths when pressurized to P_a.

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

ACTION:

With the measured overall integrated containment leakage rate exceeding 0.75 L_a, or the measured combined leakage rate for all penetrations and valves subject to Type B and C tests exceeding 0.60 L_a, or the combined bypass leakage rate exceeding 0.042 L_a, restore the overall integrated leakage rate to less than 0.75 L_a, the combined leakage rate for all penetrations subject to Type B and C tests to less than 0.60 L_a, and the combined bypass leakage rate to less than 0.042 L_a prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50 using methods and provisions of ANSI N45.4-1972 (Total Time Method) and/or ANSI/ANS 56.8-1981 (Mass Point Method):

a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during shutdown at a pressure not less than P_a, 53.27 psia (38.57 psig) during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection;

b. If any periodic Type A test fails to meet 0.75 L_a, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet 0.75 L_a, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet 0.75 L_a at which time the above test schedule may be resumed;

TABLE 3.6-1

SECONDARY CONTAINMENT BOUNDARY BYPASS LEAKAGE PATHS

PENETRATION	DESCRIPTION	RELEASE LOCATION
14	N_2 to Safety Injection Tanks	Ground Release
15	Primary Water to Pressurizer Relief Tanks	Ground Release
35	Vacuum Pump Suction	Plant Vent
36	Vacuum Pump Suction	Plant Vent
37	Air Ejector Suction	Plant Vent
38	Chilled Water Supply	Plant Vent
45	Chilled Water Return	Plant Vent
52	Service Air	Turbine Building Roof Exhaust
54	Instrument Air	Turbine Building Roof Exhaust
56	Fire Protection	Ground Release
59	Fuel Pool Purification	Ground Release
60	Fuel Pool Purification	Ground Release
70	Demineralized Water	Ground Release
72	Chilled Water Supply	Plant Vent
85	Containment Purge	Ground Release
86	Containment Purge	Plant Vent
116	Chilled Water Return	Plant Vent
124	Nitrogen to Containment	Plant Vent

CONTAINMENT SYSTEMS

3/4.6.6 SECONDARY CONTAINMENT

SUPPLEMENTARY LEAK COLLECTION AND RELEASE SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two independent Supplementary Leak Collection and Release Systems shall be OPERABLE with each system comprised of:

a. one OPERABLE filter and fan, and

b. one OPERABLE Auxiliary Building Filter System as defined in Specification 3.7.9.

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

ACTION:

With one Supplementary Leak Collection and Release System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.6.1 Each Supplementary Leak Collection and Release System shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 7600 cfm to 9800 cfm and that the system operates for at least 10 continuous hours with the heaters operating.

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

1) Verifying that the system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978,* and the system flow rate is 7600 cfm to 9800 cfm;

SURVEILLANCE REQUIREMENTS (Continued)

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,* meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978,* for a methyl iodide penetration of less than 0.175%; and

3) Verifying a system flow rate of 7600 cfm to 9800 cfm during system operation when tested in accordance with ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,* meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978,* for a methyl iodide penetration of less than 0.175%:

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.25 inches Water Gauge while operating the system at a flow rate of 7600 cfm to 9800 cfm,

2) Verifying that the system starts on a Safety Injection test signal,

3) Verifying that each system produces a negative pressure of greater than or equal to 0.4 inch Water Gauge in the Auxiliary Building at 24'6" elevation within 120 seconds after a start signal, and

4) Verifying that the heaters dissipate 50 ±5 kW when tested in accordance with ANSI N510-1980.

*ANSI N510-1980 shall be used in place of ANSI N510-1975 referenced in Regulatory Guide 1.52, Revision 2, March 1978.

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 7600 cfm to 9800 cfm; and

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 7600 cfm to 9800 cfm.

SECONDARY CONTAINMENT BOUNDARY

LIMITING CONDITION FOR OPERATION

3.6.6.2 SECONDARY CONTAINMENT BOUNDARY shall be maintained.

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

ACTION:

Without SECONDARY CONTAINMENT BOUNDARY, restore SECONDARY CONTAINMENT BOUNDARY within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENT

4.6.6.2 SECONDARY CONTAINMENT BOUNDARY shall be demonstrated at least once per 31 days by verifying that each door in each access opening is closed except when the access opening is being used for normal transit entry and exit.

CONTAINMENT SYSTEMS

SECONDARY CONTAINMENT BOUNDARY STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.6.3 The structural integrity of the SECONDARY CONTAINMENT BOUNDARY shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.6.3.

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

ACTION:

With the structural integrity of the SECONDARY CONTAINMENT BOUNDARY not conforming to the above requirements, restore the structural integrity to within the limits within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENT

4.6.6.3 The structural integrity of the SECONDARY CONTAINMENT BOUNDARY shall be determined during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2) by a visual inspection of the exposed accessible interior and exterior surfaces of the SECONDARY CONTAINMENT BOUNDARY and verifying no apparent changes in appearance of the concrete surfaces or other abnormal degradation. Any abnormal degradation of the SECONDARY CONTAINMENT BOUNDARY detected during the above required inspections shall be reported to the Commission in a Special Report pursuant to Specification 6.9.2 within 15 days.

3/4.7.9 AUXILIARY BUILDING FILTER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.9 Two independent Auxiliary Building Filter Systems shall be OPERABLE with each system comprised of:

a. one OPERABLE filter and fan, and

b. one OPERATIONAL Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation System.

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

ACTION:

With one Auxiliary Building Filter System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. In addition, comply with the ACTION requirements of Specification 3.6.6.1.

SURVEILLANCE REQUIREMENTS

4.7.9 Each Auxiliary Building Filter System shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 30,000 cfm ±10% and that the system operates for at least 10 continuous hours with the heaters operating;

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

   1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978,* and the system flow rate is 30,000 cfm ±10%;

   2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,* meets the laboratory

testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978,* for a methyl iodide penetration of less than 0.175%; and

3) Verifying a system flow rate of 30,000 cfm ±10% during system operation when tested in accordance with ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,* meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978*, for a methyl iodide penetration of less than 0.175%;

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.8 inches Water Gauge while operating the system at a flow rate of 30,000 cfm ±10%,

2) Verifying that the system starts on a Safety Injection test signal, and

3) Verifying that the heaters dissipate 180 ±18 kW when tested in accordance with ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 30,000 cfm ±10%; and

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 30,000 cfm ±10%.

---

* ANSI N510-180 shall be used in place of ANSI N510-1975 referenced in Regulatory Guide 1.52, Revision 2, March 1978.

3/4.6.6 SECONDARY CONTAINMENT

3/4.6.6.1 SUPPLEMENTARY LEAK COLLECTION AND RELEASE SYSTEM

Background

The OPERABILITY of the Supplementary Leak Collection and Release System (SLCRS) ensures that radioactive materials that leak from the primary containment into the secondary containment following a Design Basis Accident (DBA) are filtered out and adsorbed prior to any release to the environment. The design of the SLCRS is to achieve a negative pressure within the secondary containment boundary within 120 seconds of a DBA.

In order to ensure a negative pressure in all areas within the secondary containment boundary under most meteorological conditions, the negative pressure acceptance criteria at the measured location (i.e., 24'6" elevation in the auxiliary building) is 0.4 inches water gauge.

The secondary containment boundary is comprised of the containment enclosure building and all contiguous buildings (main steam valve building (partially), engineered safety features building (partially), hydrogen recombiner building (partially) and auxiliary building). To accomplish this, the SLCRS works in conjunction with the Auxiliary Building Filter (ABF) system (see Section 3/4.7.9). The SLCRS and the ABF fans and filtration units are located in the auxiliary building. The SLCRS is described in the Millstone Unit No. 3 FSAR, Section 6.2.3.

Applicable Safety Analyses

The SLCRS design basis is established by the consequences of the limiting DBA, which is a LOCA. The accident analysis assumes that only one train of the SLCRS and one train of the auxiliary building filter system is functional due to a single failure that disables the other train. The accident analysis accounts for the reduction of the airborne radioactive material provided by the remaining one train of this filtration system. The amount of fission products available for release from the containment is determined for a LOCA.

The SLCRS is not normally in operation. The SLCRS starts on a SIS signal. The modeled SLCRS actuation in the safety analysis (the Millstone 3 FSAR Chapter 15, Section 15.6) is based upon a worst-case response time following an SI initiated at the limiting setpoint. One train of the SLCRS in conjunction with the ABF system is capable of drawing a negative pressure (0.4 inches water gauge at the auxiliary building 24'6" elevation) within 120 seconds after a LOCA. This time includes diesel generator startup and sequencing time, system startup time, and time for the system to attain the required negative pressure after starting.

3/4.6.6.1 SUPPLEMENTARY LEAK COLLECTION AND RELEASE SYSTEM (Continued)

LCO

In the event of a DBA, one SLCRS is required to provide the minimum postulated iodine removal assumed in the safety analysis. Two trains of the SLCRS must be OPERABLE to ensure that at least one train will operate, assuming that the other train is disabled by a single-active failure. The SLCRS works in conjunction with the ABF system. Inoperability of one train of the ABF system also results in inoperability of the corresponding train of the SLCRS. Therefore, whenever LCO 3.7.9 is entered due to the ABF train A (B) being inoperable, LCO 3.6.6.1 must be entered due to the SLCRS train A (B) being inoperable.

Applicability

In MODES 1, 2, 3, and 4, a DBA could lead to a fission product release to containment that leaks to the secondary containment boundary. The large break LOCA, on which this system's design is based, is a full-power event. Less severe LOCAs and leakage still require the system to be OPERABLE throughout these MODES. The probability and severity of a LOCA decrease as core power and reactor coolant system pressure decrease. With the reactor shut down, the probability of release of radioactivity resulting from such an accident is low.

In MODES 5 and 6, the probability and consequences of a DBA are low due to the pressure and temperature limitations in these MODES. Under these conditions, the SLCRS is not required to be OPERABLE.

ACTIONS

With one SLCRS train inoperable, the inoperable train must be restored to OPERABLE status within 7 days. The operable train is capable of providing 100 percent of the iodine removal needs for a DBA. The 7-day Completion Time is based on consideration of such factors as the reliability of the OPERABLE redundant SLCRS train and the low probability of a DBA occurring during this period. The Completion Time is adequate to make most repairs. If the SLCRS cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and MODE 5 within the following 30 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full-power conditions in an orderly manner and without challenging plant systems.

3/4.6.6.1 SUPPLEMENTARY LEAK COLLECTION AND RELEASE SYSTEM (Continued)

Surveillance Requirements

a

Cumulative operation of the SLCRS with heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The 31-day frequency was developed in consideration of the known reliability of fan motors and controls. This test is performed on a STAGGERED TEST BASIS once per 31-days.

b, c, e, and f

These surveillances verify that the required SLCRS filter testing is performed in accordance with Regulatory Guide 1.52, Revision 2. ANSI N510-1980 shall be used in place of ANSI N510-1975 referenced in Regulatory Guide 1.52, Revision 2. The surveillances include testing HEPA filter performance, charcoal adsorber efficiency, system flow rate, and the physical properties of the activated charcoal (general use and following specific operations).

d

The automatic startup ensures that each SLCRS train responds properly. The 18-month frequency is based on the need to perform this surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the surveillance was performed with the reactor at power. The surveillance verifies that the SLCRS starts on a SIS test signal. It also includes the automatic functions to isolate the other ventilation systems that are not part of the safety-related postaccident operating configuration and to start up and to align the ventilation systems that flow through the secondary containment to the accident condition.

- The main steam valve building ventilation system isolates.
- Auxiliary building ventilation (normal) system isolates.
- Charging pump/reactor plant component cooling water pump area cooling subsystem aligns and discharges to the auxiliary building filters and a filter fan starts.
- Hydrogen recombiner ventilation system aligns to the postaccident configuration.
- The engineered safety features building ventilation system aligns to the postaccident configuration.

3/4.6.6.1 SUPPLEMENTARY LEAK COLLECTION AND RELEASE SYSTEM (Continued)

With the SLCRS in postaccident configuration, the required negative pressure in the secondary containment boundary is achieved in 110 seconds from the time of simulated emergency diesel generator breaker closure. Time delays of dampers and logic delays must be accounted for in this surveillance. The time to achieve the required negative pressure is 120 seconds, with a loss-of-offsite power coincident with a SIS. The surveillance verifies that one train of SLCRS in conjunction with the ABF system will produce a negative pressure of 0.4 inches water gauge at the auxiliary building 24'6" elevation relative to the outside atmosphere in the secondary containment boundary. For the purpose of this surveillance, pressure measurements will be made at the 24'6" elevation in the auxiliary building. This single location is considered to be adequate and representative of the entire secondary containment due to the large cross-section of the air passages which interconnect the various buildings within the boundary. In order to ensure a negative pressure in all areas inside the secondary containment boundary under most meteorological conditions, the negative pressure acceptance criteria at the measured location is 0.4 inches water gauge. It is recognized that there will be an occasional meteorological condition under which slightly positive pressure may exist at some localized portions of the boundary (e.g., the upper elevations on the down wind side of a building). For example, a very low outside temperature combined with a moderate wind speed could cause a slightly positive pressure at the upper elevations of the containment enclosure building on the leeward face. The probability of occurrence of meteorological conditions which could result in such a positive differential pressure condition in the upper levels of the enclosure building has been estimated to be less than 2% of the time.

The probability of wind speed within the necessary moderate band, combined with the probability of extreme low temperature, combined with the small portion of the boundary affected, combined with the low probability of airborne radioactive material migrating to the upper levels ensure that the overall effect on the design basis dose calculations is insignificant.

3/4.6.6.2 SECONDARY CONTAINMENT BOUNDARY

SECONDARY CONTAINMENT BOUNDARY ensures that the release of radioactive materials from the primary containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with operation of the Supplementary Leak Collection and Release System, and Auxiliary Building Filter System will limit the SITE BOUNDARY radiation doses to within the dose guideline values of 10 CFR Part 100 during accident conditions.

3/4.6.6.3 SECONDARY CONTAINMENT BOUNDARY STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the SECONDARY CONTAINMENT BOUNDARY will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to provide a secondary boundary surrounding the primary containment that can be maintained at a negative pressure during accident conditions. A visual inspection is sufficient to demonstrate this capability.

3/4.7.9 AUXILIARY BUILDING FILTER SYSTEM (Continued)

component cooling water pump and heat exchanger areas following a LOCA are filtered prior to reaching the environment. The charging pump/reactor plant component cooling water pump ventilation system must be operational to ensure operability of the auxiliary building filter system and the supplementary leak collection and release system. Operation of the system with the heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

3/4.7.10 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant System and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. For the purpose of declaring the affected system OPERABLE with the inoperable snubber(s), an engineering evaluation may be performed, in accordance with Section 50.59 of 10 CFR Part 50.

Snubbers are classified and grouped by design and manufacturer but not by size. Snubbers of the same manufacturer but having different internal mechanisms are classified as different types. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip and 100-kip capacity manufactured by Company "A" are of the same type. The same design mechanical snubbers manufactured by Company "B" for the purposes of this Technical Specification would be of a different type, as would hydraulic snubbers from either manufacturer.

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Plant Operations Review Committee. The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location, etc.), and the recommendations of Regulatory Guides 8.8 and 8.10. The addition or deletion of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to each safety-related system during an earthquake or severe transient. Therefore, the required inspection interval varies inversely with the observed snubber failures on a given system and is determined by the number of inoperable snubbers found during an inspection of each system. In order to establish the inspection frequency for each type of snubber on a

3/4.7.10 SNUBBERS (Continued)

safety-related system, it was assumed that the frequency of snubber failures and initiating events is constant with time and that the failure of any snubber on that system could cause the system to be unprotected and to result in failure during an assumed initiating event. Inspections performed before that interval

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 87

TO FACILITY OPERATING LICENSE NO. NPF-49

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

DOCKET NO. 50-423

1.0 INTRODUCTION

By letter dated November 4, 1993, as supplemented November 4, 1993, the Northeast Nuclear Energy Company (NNECO), the licensee for the Millstone Nuclear Power Station, Unit No. 3 requested NRC's approval to implement amendments to Facility Operating License NPF-49 by incorporating changes to the Technical Specifications (TS). The proposed TS changes extend the required drawdown time of the secondary containment boundary to 120 seconds and increase the required vacuum to 0.4 inches as measured at the 24 ft. 6 inch elevation in the Auxiliary Building, based on a compensating reduction in containment leakage rate to 0.3% per day from 0.65% per day.

2.0 BACKGROUND AND DISCUSSION

During testing in September 1993, near the end of a refueling outage, NNECO determined that the supplementary leak collection and release system (SLCRS) could not meet its TS requirements for operability. SLCRS and the auxiliary building filtration system (ABFS), are required to work in unison to allow SLCRS to draw down to 0.25 inches of vacuum on the secondary containment boundary within 1 minute following a design basis accident. Timing delays in the ABFS fan circuitry caused actual drawdown times in the secondary containment in excess of 60 seconds in certain system alignments. NNECO undertook extensive investigations and tests to characterize the SLCRS and ABFS systems. Three single failure vulnerabilities were identified and subsequently corrected by modifications. Adjustments in control circuitry timing, and subsequent tests have shown that TS required drawdown times cannot be achieved.

Based on NNECO showing minimal accident consequences from low power operation for short periods of time, the staff granted enforcement discretion on October 25, 1993, to allow Millstone Unit 3 to proceed to 5% power for a period not to exceed 7 days.

NNECO, by letter dated November 4, 1993, proposed a revision to the TS which consolidated submittals dated October 27, 29, and November 3, 1993. The proposed revision extends the required drawdown time of the secondary containment boundary to 120 seconds and increases the required vacuum to 0.4

inches as measured at the 24 ft. 6 inch elevation in the Auxiliary Building, based on a compensating reduction in containment leakage rate to 0.3% per day from 0.65% per day. In addition, the November 4, 1993 letter justified that resulting vacuums at all locations within the secondary boundary are acceptable, when taking into account the effects of low outside air temperature, as discussed in Information Notice No. 88-76. The November 4, 1993, letter, also requested that the NRC exercise its enforcement discretion not to enforce compliance with Millstone 3 Technical Specifications 3.6.6.6.1 and 3.7.9 during the time the proposed TS change was being processed. The staff granted the requested enforcement discretion November 5, 1993.

3.0 EVALUATION

3.1 Accident and Dose Consequences

To offset the increase from 60 seconds to 120 seconds in the allowable time to bring the secondary containment to a negative pressure of 0.4 inches water gauge (w.g.), the licensee chose to decrease the allowable leak rate associated with primary containment from 0.65%/day to 0.3% per day. Recent containment leak rate measurements, including measurements during the 1993 refueling outage, were a fraction of the proposed leak rate. In support of its request to increase the allowable drawdown time the licensee presented the results of a revised evaluation of a loss of coolant accident (LOCA) at Millstone 3. The licensee calculated Exclusion Area Boundary (EAB) and the Low Population Zone (LPZ) thyroid doses of 141 rem and 29.8 rem, respectively. The whole body doses at the EAB and LPZ were calculated to be 9.4 rem and 3.5 rem, respectively.

The staff independently calculated the whole body and thyroid doses at the EAB and LPZ for a LOCA. The results of the staff's calculations showed thyroid doses of approximately 103 rem and 25 rem at the EAB and LPZ, respectively. The whole body doses were calculated to be approximately 8 rem and 1 rem at the EAB and LPZ, respectively. The staff also calculated the control room operator doses resulting from this change in operations. As a result of these calculations, the staff calculated a thyroid dose of approximately 25 rem and a whole body dose of 4.6 rem. The information which was utilized in the staff's calculations is presented in Table 1.

It should be noted that the staff utilized the same X/Q values in its calculations of the control room operator doses as those which were used by the licensee in support of Amendment 59. In the staff's Safety Evaluation (SE) for Amendment 59, the staff presented their evaluations of the EAB and LPZ doses. However, in the SE for Amendment 59, the staff did not calculate the control room operator doses nor did they make an independent assessment of the licensee's X/Q values. The licensee's X/Q values for the control room operator doses appear to be reasonable. Based upon the results of the staff's calculations, the staff has concluded that the proposed changes would not result in doses which would exceed the dose limitations of 10 CFR Part 100 or General Design Criterion 19 of 10 CFR Part 50.

Table 1	
Input Data Utilized by the Staff to Calculate LOCA Doses	
Containment Leak Rate	0.3%/day (first 24 hours) 0.15%/day (after first day)
Containment Bypass Leakage	0.0126%/day (first 24 hours) 0.0063%/day (after first day)
Spray Removal Coefficients	28.1 (elemental iodine) 2.16 (particulate iodine)
Elemental Iodine DF	12
Time of Spray Initiation	t=0
Duration of Spray Operation	1 hour (elemental iodine) 720 hours (particulate iodine)
Adsorber Removal Efficiencies (Supplemental Leak Collection Release System/Auxiliary Building Filter System)	95% (all forms of iodine)
Time to Achieve 0.4 inch w.g.	120 seconds
Time of Bypass of Supplemental Leak Collection and Release System/Auxiliary Building Filter System	120 seconds
Atmospheric Dispersion (sec/m^3) 0-2 hours - EAB 0-8 hours - LPZ 8-24 hours - LPZ 24-96 hours - LPZ 96-720 hours- LPZ	 5.3×10^{-4} 2.7×10^{-5} 1.9×10^{-5} 8.4×10^{-6} 2.7×10^{-6}
	Containment X/Q — Turbine Building Vent X/Q
0-8 hours - CONTROL ROOM	8.1×10^{-4} — 2.2×10^{-3}
8-24 hours - CONTROL ROOM	5.5×10^{-4} — 1.4×10^{-3}
24-96 hours - CONTROL ROOM	2.0×10^{-4} — 5.1×10^{-4}
96-720 hours - CONTROL ROOM	2.8×10^{-5} — 9.7×10^{-5}
ECCS Leakage Rate	10 l/hr.

3.2 Iodine Removal

The staff has reviewed the licensee's calculations of the effect of the proposed change on the post accident iodine removal from the containment atmosphere by the containment sprays. Information on iodine removal rates was needed for post accident dose assessment.

The licensee's calculations of iodine removal from the containment atmosphere were based on the methodology presented in revision 1 to section 6.5.2 of the standard review plan (SRP). This methodology requires that for elemental iodine removal the pH of spray solution should have the highest possible value. This is because elemental iodine removal coefficient (λ_s) is a very strong function of pH and it decreases with decreasing pH. Also, maximum elemental iodine decontamination factor (DF) is a function of the pH of sump water. This parameter is a function of equilibrium concentration of iodine in the sump water and is used for determining scrubbing time of sprays.

In the Final Safety Analysis Report (FSAR) the licensee specified the range of pH for the containment quench spray (spray water coming from the borated water storage tank and containing no dissolved iodine) as 7.0 to 8.7 and for sump water as 7.0 to 7.25. The licensee calculated the following values for iodine removal coefficients:

elemental iodine: λ_s = 28.1/Hr
particulate iodine: λ_p = 2.16/Hr
plateout of iodine: λ_w = 0.176/Hr

The removal coefficient for elemental iodine (λ_s) was based on pH value of 8.1. The licensee also calculated a decontamination factor of DF=12 based on the value of sump water pH of 7.0. Using these values the licensee was able to determine amounts of iodine left in the containment atmosphere at different times after beginning of the accident. In making the determination of the amount of iodine left in the containment atmosphere after equilibrium conditions were reached and sprays became ineffective in iodine removal (M_f), the licensee used the following expression:

$$DF = M_r/M_f$$

where: M_r is the amount of I-131 in the containment atmosphere at the beginning of spray recirculation phase, Ci

M_f is the amount of I-131 in the containment atmosphere at equilibrium condition, Ci

The staff found this expression to be non-conservative.

After several telephone conversations and a meeting with the NRC staff, the licensee provided corrections and clarifications to the information contained in the FSAR and in the subsequent documents related to the subject. In a letter dated November 4, 1993, the licensee provided the following information:

(1) the pH of quench spray is 8.1. It is achieved by adding pH controlling agent into the low pH water from the borated water storage tank. The value of λ_s was, therefore, correctly calculated.

(2) The value of DF=12, determined for recirculation spray, is conservative because it is based on iodine partition coefficient of pc=150 which corresponds to pH=7.0. Although re-evolution of elemental iodine from the sump water was not explicitly considered, credit for elemental iodine removal was taken only by quench sprays and these sprays used iodine free water.

(3) There is an inaccuracy in the expression used for determining M_f. The correct expression is as follows:

$DF = M_o/M_f$

where: M_o is the initial amount of I-131 in the containment atmosphere, Ci

With these clarifications and the above correction, the methodology used by the licensee for iodine removal from the containment atmosphere is conservative. Especially, since the dependency of λ_s and re-evolution of dissolved elemental iodine on pH, stated in Revision 1 to Section 6.5.2 of the SRP, was found to be overly conservative. Recent findings indicate that λ_s is practically independent of pH and elemental iodine re-evolution does not occur for pH$\geq$7. This new information was incorporated in Revision 2 to the SRP.

Based on these considerations the staff finds that the methodology used by the licensee for determining iodine removal by containment sprays is acceptable.

3.3 SLCRS Operability

3.3.1 TS 1.12 Definition, "Enclosure Building Integrity"

The licensee proposes to redefine the areas in which the SLCRS operates to provide a vacuum as "Secondary Containment Boundary" and to include the containment enclosure building and all contiguous buildings, i.e. main steam valve building (partially), engineering safety features building (partially), hydrogen recombiner building (partially), and auxiliary building in that definition.

The staff finds the redefinition acceptable since the proposed definition is more appropriate than is the present one.

In addition, the licensee proposes to remove TS 1.12 b from this definition. At present TS 1.12 b states "The Supplementary Leak Detection and Release System is operable, and".

Heretofore, the operability of the enclosure building (now secondary containment), depended upon the operability of the SLCRS system; if one train were to become inoperable the enclosure building or secondary containment would become inoperable, thus requiring the plant to initiate plant shutdown immediately upon knowledge of SLCRS train inoperability. The removal of this specification permits acceptance of the SLCRS as a "normal" emergency safety feature (ESF) allowing some latitude in repair, as is permitted for other ESFs, in lieu of immediately proceeding to shutdown. TS 1.12 c would now be renumbered 1.12 b as a consequence of the removal of the present TS 1.12.b. The removal of TS 1.12 b is therefore acceptable.

3.3.2 <u>TS 3/4.6.1.2, "Containment Leakage"</u>

The licensee has proposed to reduce the allowable leakage markedly in order to allow for an increase in the time required to have SLCRS reduce the pressure in the secondary containment to an acceptable value (see Section 3.3.3, below, for discussion of SLCRS operability). The change is acceptable as discussed in Section 3.1.

3.3.3 <u>TS 3/4.6.6, "Secondary Containment, Supplementary Leak Collection and Release System."</u>

These proposed changes acknowledge the need to have the SLCRS and ABFS work together in reducing the pressure in the secondary containment, although the operation of the ABFS is confined to the auxiliary building portion of secondary containment. Proper cooling of ESF equipment requires use of the ABFS while operation of both the ABFS and SLCRS is necessary to achieve a suitable subatmospheric pressure in the buildings constituting "secondary containment." Because the revised wording is more consistent with the functioning of the equipment, the staff finds these changes to be acceptable.

3.3.4 <u>TS 4.6.6.1 d.3</u>

The licensee proposes to change this TS by requiring that the operation of the newly defined SLCRS, when tested to determine operability at least once every 18 months, attain a subatmospheric pressure of 0.40 inch WG (in lieu of 0.25 inch) within 120 seconds (in lieu of 60 seconds) upon initiation of a Safety Injection test signal. The licensee proposes, further, for that value to be produced and measured in the Auxiliary Building, at the 24 ft. 6 inch level. These changes are found to be acceptable, as follows:

The increase in required subatmospheric pressure level (0.4 inch WG) responds to an issue initiated by Information Notice 88-76 which is entitled "Recent Discovery of a Phenomenon not Previously Considered in the Design of Secondary Pressure Control."

Information Notice 88-76 addresses the fact that in a tall building with outside air colder than that inside the building, the pressure outside is reduced more rapidly than that inside, merely due to the difference in air densities as one rises. The licensee now notes, in the "Bases" for TS 3.4.6.6.1 d that this change is made "In order to ensure a negative pressure in all areas inside the secondary containment boundary under most meteorological conditions, the negative pressure acceptance criteria at the measured location is 0.4 inches water gauge (WG)." The licensee goes on to state, "It is recognized that there will be an occasional meteorological condition under which slightly positive pressure may exist at some localized portions of the boundary (e.g., the upper elevations on the down wind side of a building). For example, a very low outside temperature combined with a moderate wind speed could cause a slightly positive pressure at the upper elevations of the containment enclosure building on the leeward face. The probability of occurrence of meteorological conditions which could result in such a positive differential pressure condition in the upper levels of the enclosure building has been estimated to be less than 2% of the time."

The staff concludes that the licensee has adjusted the test requirements so as to respond to the concern raised by Information Notice No. 88-76 in a satisfactory manner.

The change in time, from 60 seconds to the proposed 120 seconds reflects the inability of the present system to attain the 0.25-inch WG subatmospheric pressure in that time interval. The licensee has made changes, mainly in instrumentation and control, to assure the capability of the SLCRS to attain the proposed 120 second response time. In order to assure radioactive dose limitations in accordance with specified criteria in the event of accidents, with the 120 second response time, the licensee has also proposed to limit primary containment leakage and has proposed changes in specifications dealing with those changes. The acceptability of these changes is discussed in Section 3.1.

The licensee has conducted four tests with the new equipment setup to simulate winter (2 tests) and summer (2 tests). The staff reviewed these tests and determined that the subatmospheric pressure in all areas controlled by SLCRS was reduced to a value below that desired (-0.4 inch WG) within the 120 second period. These tests also indicated that the value attained at the 24 ft. 6 inch level in the auxiliary building was higher (less negative) than or approximately equivalent to that in the other buildings. The staff concludes that SLCRS (with ABFS) is now capable of attaining a subatmospheric pressure of 0.4 inch WG within 120 seconds and that utilizing the single measurement location in the auxiliary building at the 24 ft. 6 inch level is suitable. The staff finds the three concomitant conditions of attaining a subatmospheric pressure (-0.4 inch WG) within the period selected (120 seconds) as measured in the auxiliary building (at the 24 ft. 6 inch level) to be acceptable.

3.3.5 TS 4.6.6.1 f, TS 4.7.7 g, and TS 4.7.9f

The licensee proposed to change this TS by substituting the words, "an acceptable test gas" in lieu of a "halogenated hydrocarbon refrigerant test gas" when testing a charcoal adsorber bank after complete or partial replacement. This portion of the proposal is being deferred. Before the staff rules on this part of this proposal, the licensee must provide an acceptable justification, including the adequacy of the replacement test gas. Consequently the staff has not included this proposed change in this amendment, but will consider it at a later time, if the licensee provides acceptable justification.

3.3.6 TS 3/4.6.6.2, and TS 3/4.6.6.3

The licensee proposes to substitute the words "Secondary Containment Boundary" in all places (including the title) where this TS contains the words "Enclosure Building Integrity, leaving the TS otherwise untouched. The staff finds this proposed change to be acceptable.

3.3.7 TS 3/4.7.9, "Auxiliary Building Filter System"

The licensee has added the specificity of requiring that the ventilation systems cooling the charging pumps and CCW pumps need to be operable in order to make the ABFS system operable. The licensee has also eliminated the independence of the SLCRS and ABFS, recognizing that both systems must work together properly in order to evacuate the auxiliary building. The revised wording better describes the functioning of the systems, due to the recognition that these systems must work together, therefore the staff finds these changes acceptable.

3.3.8 Bases

The staff has reviewed the bases for the proposed TS and finds them acceptable.

4.0 EXIGENT CIRCUMSTANCES

During testing in September 1993, near the end of a refueling outage, NNECO determined that SLCRS could not meet its TS requirements for operability. Timing delays in the ABFS fan circuitry caused actual drawdown times in the secondary containment in excess of 60 seconds in certain system alignments. To resolve this issue, a team of engineers was assembled to address the cause of the deficiencies in the system. The matter was pursued 7 days per week, on an extended-hour basis.

On November 5, 1993, the NRC granted NNECO's request for enforcement discretion in order to permit Millstone Nuclear Power Station, Unit No. 3 to operate at full power during the time this proposed TS change was being processed. The enforcement discretion pertained to the TS applicable to the SLCRS and the ABFS operability requirements, and required compensating reductions in containment leakage rate.

The NRC staff does not believe that the licensee has abused the exigency provisions of 10 CFR 50.91 in this instance. Accordingly, the Commission has determined that exigent circumstances existed warranting prompt action, the situation could not have been avoided, and the amendment, as discussed in Section 5.0, does not involve a significant hazards consideration.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission has made a final determination that the amendment involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92(c), this means that the operation of the facility in accordance with the proposed amendment would not (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) Involve a significant reduction in a margin of safety.

The Commission has evaluated the proposed changes against the above standards as required by 10 CFR 50.91(a) and has concluded that:

1. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated (10 CFR 50.92(c)(1) because they do not involve a change in the design or operation of the facility, nor do they adversely affect the response of the facility to an accident.

   NNECO has determined that the overall effect of increasing the time to draw a negative pressure of 0.4 inches water gauge as measured at the 24 ft. 6 inch elevation of the auxiliary building from 60 seconds to 120 seconds and reducing the containment integrated leakage rates at the design basis pressure of 0.65 wt.%/day to 0.3 wt.%/day was to reduce the calculated post-accident doses. The staff reviewed NNECO's dose calculation parameters and determined that they were reasonable and appropriate. The staff independently calculated LOCA doses and came up with results comparable to those of NNECO.

2. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed changes do not compromise the ability of the SLCRS and ABFS to mitigate the consequences of an accident. A failure modes and effects analysis (FMEA) confirmed that the design changes implemented do not introduce any new single failure vulnerabilities. The proposed changes do not introduce any new or unique operational modes or accident precursors. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed changes do not involve a significant reduction in a margin of safety.

   As discussed under 1 above, calculations have shown that the calculated post-accident doses are reduced. On the contrary, the proposed changes would slightly increase the margin of safety as gauged by the reduction in the calculated doses.

6.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Connecticut State official was notified of the proposed issuance of the amendment. The State official had no comments.

7.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (58 FR 60072). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

8.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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