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

NORTHEAST NUCLEAR ENERGY COMPANY

THE CONNECTICUT LIGHT AND POWER COMPANY

THE WESTERN MASSACHUSETTS ELECTRIC COMPANY

DOCKET NO. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 153
License No. DPR-65

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 October 9, 1991, as supplemented by letter of November 26, 1991, 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. DPR-65 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 153, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

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: February 14, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 153

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

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
II	II
IV	IV
VI	VI
VII	VII
IX	IX
X	X
XII	XII
XIV	XIV
XVI	XVI
XVIII	XVIII
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ADMINISTRATIVE CONTROLS

REGULATING CEA INSERTION LIMITS

LIMITING CONDITION FOR OPERATION

3.1.3.6 The regulating CEA groups shall be limited to the withdrawal sequence and to the insertion limits provided in the CORE OPERATING LIMITS REPORT. Regulating CEAs are considered to be fully withdrawn when withdrawn to at least 176 steps. CEA insertion between the Long Term Steady State Insertion Limits and the Transient Insertion Limits restricted to the limits provided in the CORE OPERATING LIMITS REPORT.

APPLICABILITY: MODES 1* and 2*#.

ACTION:

a. With the regulating CEA groups inserted beyond the Transient Insertion Limits provided in the CORE OPERATING LIMITS REPORT, except for surveillance testing pursuant to Specification 4 1.3.1.2, within two hours either:

   1. Restore the regulating CEA groups to within the limits, or

   2. Reduce THERMAL POWER to that fraction of RATED THERMAL POWER which is allowed by the CEA group position using the above figures.

b. With the regulating CEA groups inserted between the Long Term Steady State Insertion Limits and the Transient Insertion Limits specified in the CORE OPERATING LIMITS REPORT for intervals > 4 hours per 24 hour interval, except during operation pursuant to the provisions of ACTION items c. and d. of Specification 3.1.3.1, operation may proceed provided either:

   1. The Short Term Steady State Insertion Limits specified in the CORE OPERATING LIMITS REPORT are not exceeded, or

   2. Any subsequent increase in THERMAL POWER is restricted to ≤ 5% of RATED THERMAL POWER per hour.

*See Special Test Exception 3.10.2 and 3.10.5.
#With $K_{eff} \geq 1.0$.

REGULATING CEA INSERTION LIMITS (Continued)

LIMITING CONDITION FOR OPERATION

c. With the regulating CEA groups inserted between the Long Term Steady State Insertion Limits and the Transient Insertion Limits specified in the CORE OPERATING LIMITS REPORT for intervals > 5 EFPD per 30 EFPD interval or > 14 EFPD per calendar year, except during operations pursuant to the provisions of ACTION items c. and d. of Specification 3.1.3.1, either:

1. Restore the regulating groups to within the Long Term Steady State Insertion Limits provided in the CORE OPERATING LIMITS REPORT within two hours, or

2. Be in HOT STANDBY within 4 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.6 The position of each regulating CEA group shall be determined to be within the Transient Insertion Limits provided in the CORE OPERATING LIMITS REPORT at least once per 12 hours except during time intervals when the PDIL Auctioneer Alarm Circuit is inoperable, then verify the individual CEA positions at least once per 4 hours. The accumulated times during which the regulatory CEA groups are inserted between the Long Term Steady State Insertion Limits and the Transient Insertion Limits specified in the CORE OPERATING LIMITS REPORT shall be determined at least once per 24 hours specified .

REACTOR COOLANT SYSTEM VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one reactor coolant system vent path consisting of at least two valves in series capable of being powered from emergency buses shall be OPERABLE and closed at each of the following locations:

a. Reactor Vessel head

b. Pressurizer steam space

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

ACTION:

a. With the Pressurizer vent path inoperable, STARTUP and/or POWER OPERATION may continue provided that i) the inoperable vent path is maintained closed with power removed from the valve actuator of all the valves in the inoperable vent path and ii) one power operated relief valve (PORV) and its associated block valve is OPERABLE; otherwise, restore either the inoperable vent path or one PORV and its associated block valve to OPERABLE status within 30 days, or submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the path to OPERABLE status.

b. With the Reactor Vessel Head vent path inoperable, STARTUP and/or POWER OPERATION may continue provided that the inoperable vent path is maintained closed with power removed from the valve actuator of all the valves in the inoperable vent path; restore the Reactor Vessel Head vent path to OPERABLE status within 30 days or submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the path to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.4.11 Each reactor coolant system vent path shall be demonstrated OPERABLE at least once per 18 months by:

1. Verifying all manual isolation valves in each vent path are locked in the open position.

2. Cycling each valve in the vent path through at least once complete cycle of full travel from the control room during COLD SHUTDOWN or REFUELING.

3. Verifying flow through the reactor coolant vent system vent paths during venting during COLD SHUTDOWN or REFUELING.

REFUELING OPERATIONS

SPENT FUEL POOL - REACTIVITY CONDITION

LIMITING CONDITION FOR OPERATION

3.9.18 The Reactivity Con ition of the spent fuel pool shall be such that K_{eff} is less than or equal to 0.95 at all times.

APPLICABILITY: Whenever fuel is in the spent fuel pool.

ACTION:

Borate until a $K_{eff} \leq .95$ is reached.

SURVEILLANCE REQUIREMENT

4.9.18.1 Ensure that all fuel assemblies to be placed in Region II (as shown in Figure 3.9-2) of the spent fuel pool are within the enrichment and burn-up limits of Figure 3.9.1 by checking the assembly's design and burn-up documentation.

4.9.18.2 Ensure that the contents of each consolidated fuel storage box to be placed in Region II (as shown in Figure 3.9-2) of the spent fuel pool are within the enrichment and burn-up limits of Figure 3.9-3 by checking the design and burn-up documentation for storage box contents.

REFUELING OPERATIONS

SPENT FUEL POOL - STORAGE PATTERN

LIMITING CONDITION FOR OPERATION

3.9.19 Each STORAGE PATTERN of the Region II spent fuel pool racks shall require either that:

(1) A cell blocking device is installed in those cell locations shown in Figure 3.9-2; or

(2) If a cell blocking device has been removed, all cells of the STORAGE PATTERN must have consolidated fuel in them, including the formerly blocked location; or

(3) Meet both (a) and (b):

(a) If a cell blocking device has been removed, all cells of the STORAGE PATTERN must have consolidated fuel in them except the formerly blocked location.

(b) The formerly blocked location is vacant and a consolidated fuel box or cell blocking device is immediately being placed into the formerly blocked cell.

APPLICABILITY: Fuel in the Spent Fuel Pool

ACTION:

Take immediate action to comply with either 3.9.19(1), (2), or (3).

SURVEILLANCE REQUIREMENTS

4.9.19 Verify that 3.9.19 is satisfied at the following times.

(1) Prior to removing a cell blocking device

(2) Prior to removing a consolidated fuel storage box from its Region II storage location.

REFUELING OPERATIONS

SPENT FUEL POOL - CONSOLIDATION

LIMITING CONDITION FOR OPERATION

3.9.20 Prior to consolidation of spent fuel assemblies, the candidate fuel assemblies must have decayed for at least 5 years.

APPLICABILITY: During all consolidation operations.

ACTION:

With the requirements of the above specification not satisfied, replace candidate assembly with an appropriate substitute or suspend all consolidation activities.

SURVEILLANCE REQUIREMENTS

4.9.20 The decay time of all candidate fuel assemblies for consolidation shall be determined to be greater than or equal to five years within 7 days prior to moving the fuel assembly into the consolidation work station.

3/4.9.13 STORAGE POOL RADIATION MONITORING

The OPERABILITY of the storage pool radiation monitors ensures that sufficient radiation monitoring capability is available to detect excessive radiation levels resulting from 1) the inadvertent lowering of the storage pool water level or 2) the release of activity from an irradiated fuel assembly.

3/4.9.14 & 3/4.9.15 STORAGE POOL AREA VENTILATION SYSTEM

The limitations on the storage pool area ventilation system ensures that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the accident analyses.

3/4.9.16 SHIELDED CASK

The limitations of this specification ensure that in an event of a cask tilt accident 1) the doses from ruptured fuel assemblies will be within the assumptions of the safety analyses, 2) K_{eff} will remain $\leq$ .95.

3/4.9.17 MOVEMENT OF FUEL OVER REGION II RACKS

The limitations of this specification ensure that, in the event of a fuel assembly or a consolidated fuel storage box drop accident into a Region II rack location completing a 4-out-of-4 fuel assembly geometry, K_{eff} will remain $\leq$ 0.95.

3/4.9.18 SPENT FUEL POOL - REACTIVITY CONDITION

The limitations described by Figure 3.9-1 ensure that the reactivity of fuel assemblies and consolidated fuel storage boxes, introduced into the Region II spent fuel racks, are conservatively within the assumptions of the safety analysis.

3/4.9.19 SPENT FUEL POOL - STORAGE PATTERN

The limitations of this specification ensure that the reactivity conditions of the Region II storage racks and spent fuel pool K_{eff} will remain less than or equal to 0.95.

The Cell Blocking Devices in the 4th location of the Region II storage racks are designed to prevent inadvertent placement and/or storage of fuel assemblies in the blocked locations. The blocked location remains empty to provide the flux trap to maintain reactivity control for fuel assembly storage in any adjacent locations. Only loaded consolidated fuel storage boxes may be placed and/or stored in the 4th location, completing the STORAGE PATTERN, after all adjacent, and diagonal, locations are occupied by loaded consolidated fuel storage boxes.

3/4.9.20 SPENT FUEL POOL - CONSOLIDATION

The limitations of these specifications ensure that the decay heat rates and radioactive inventory of the candidate fuel assemblies for consolidation are conservatively within the assumptions of the safety analysis.

Thermal Margin/Low Pressure (Continued)

The trip is initiated whenever the reactor coolant system pressure signal drops below either 1850 psia or a computed value as described below, whichever is higher. The computed value is a function of the higher of ΔT power or neutron power, reactor inlet temperature, the number of reactor coolant pumps operating and the AXIAL SHAPE INDEX. The minimum value of reactor coolant flow rate, the maximum AZIMUTHAL POWER TILT and the maximum CEA deviation permitted for continuous operation are assumed in the generation of this trip function. In addition, CEA group sequencing in accordance with Specifications 3.1.3.5 and 3.1.3.6 is assumed. Finally, the maximum insertion of CEA banks which can occur during any anticipated operational occurrence prior to a Power Level-High trip is assumed.

Thermal Margin/Low Pressure trip setpoints are derived from the core safety limits through application of appropriate allowances for equipment response time measurement uncertainties and processing error. A safety margin is provided which includes: an allowance of 5% of RATED THERMAL POWER to compensate for potential power measurement error; an allowance of 2°F to compensate for potential temperature measurement uncertainty; and a further allowance of 74 psi to compensate for pressure measurement error, trip system processing error, and time delay associated with providing effective termination of the occurrence that exhibits the most rapid decrease in margin to the safety limit. The 74 psi allowance is made up of a 5 psi bias, a 19 psi pressure measurement allowance and a 50 psi time delay allowance.

Loss of Turbine

A Loss of Turbine trip causes a direct reactor trip when operating above 15% of RATED THERMAL POWER. This trip provides turbine protection, reduces the severity of the ensuring transient and helps avoid the lifting of the main steam line safety valves during the ensuing transient, thus extending the service life of these values. No credit was taken in the accident analyses for operation of this trip. Its functional capability at the specified trip setting is required to enhance the overall reliability of the Reactor Protection System.