



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

NORTH ATLANTIC ENERGY SERVICE CORPORATION, ET AL*

DOCKET NO. 50-443

SEABROOK STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 29
License No. NPF-86

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by North Atlantic Energy Service Corporation, et al. (the licensee), dated May 7, 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.

*North Atlantic Energy Service Company (NAESCO) is authorized to act as agent for the: North Atlantic Energy Corporation, Canal Electric Company, The Connecticut Light and Power Company, Great Bay Power Corporation, Hudson Light and Power Department, Massachusetts Municipal Wholesale Electric Company, Montaup Electric Company, New England Power Company, New Hampshire Electric Cooperative, Inc., Taunton Municipal Light Plant, and The United Illuminating Company, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

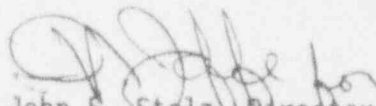
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-86 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 29, and the Environmental Protection Plan contained in Appendix B are incorporated into Facility License No. NPF-86. NAESCO shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is not effective until operational MODE 5 is entered when commencing the third refueling outage, and is to be implemented prior to reentering operational MODE 4.

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: March 7, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 29

FACILITY OPERATING LICENSE NO. NPF-86

DOCKET NO. 50-443

Replace the following pages of Appendix A, Technical Specifications, with the attached pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change. Overleaf pages have been provided.

Remove

3/4 6-3*

3/4 6-4

3/4 6-11*

3/4 6-12

3/4 6-13

3/4 6-14*

B 3/4 6-1*

B 3/4 6-2

Insert

3/4 6.3*

3/4 6-4

3/4 6.11*

3/4 6-12

3/4 6.13

3/4 6-14*

B 3/4 6-1*

B 3/4 6-2

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT LEAKAGE

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:

- 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 , 49.6 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;
- c. The accuracy of each Type A test shall be verified by a supplemental test which:

- 1) Confirms the accuracy of the test by verifying that the supplemental test result, L_c , is in accordance with the following equation:

$$|L_c - (L_{am} + L_o)| \leq 0.25 L_a$$

where L_{am} is the measured Type A test leakage and L_o is the superimposed leak;

- 2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test; and
- 3) Requires that the rate at which gas is injected into the containment or bled from the containment during the supplemental test is between $0.75 L_a$ and $1.25 L_a$.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT LEAKAGE

SURVEILLANCE REQUIREMENTS

4.6.1.2 (Continued)

- d. Type B and C tests shall be conducted with gas at a pressure not less than P_0 , 49.6 psig, at intervals no greater than 24 months except for tests involving:
 - 1) Air locks, and
 - 2) Purge supply and exhaust isolation valves with resilient material seals.
- e. The combined bypass leakage rate shall be determined to be less than or equal to $0.60 L_0$ by applicable Type B and C tests at least once per 24 months.
- f. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE by the requirements of Specification 4.6.1.7.1.
- g. Air locks shall be tested and demonstrated OPERABLE by the requirements of Specification 4.6.1.3; and
- h. The provisions of Specifications 4.0.2 are not applicable.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VESSEL STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment vessel shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.

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

ACTION:

With the structural integrity of the containment vessel not conforming to the above requirements, restore the structural integrity to within the limits prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.6 The structural integrity of the containment vessel 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 vessel. This inspection shall be performed prior to the Type A containment leakage rate test to verify no apparent changes in appearance of the surfaces or other abnormal degradation. Any abnormal degradation of the containment vessel detected during the above required inspections shall be reported to the Commission in a Special Report pursuant to Specification 6.8.2 within 15 days.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 Each 8-inch containment purge supply and exhaust isolation valve shall be OPERABLE and sealed closed except when open for purge system operation for pressure control; for ALARA, respirable, and air quality considerations to facilitate personnel entry; and for surveillance tests that require the valve(s) to be open.

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

ACTION:

- a. With one or more of the 8-inch containment purge supply or exhaust isolation valves open for reasons other than given in Specification 3.6.1.7 above, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.
- b. With one or more containment purge supply or exhaust isolation valves having a measured leakage rate in excess of the limits of Specification 4.6.1.7.1, restore the inoperable valve(s) to OPERABLE status or isolate the affected penetration(s) so that the measured leakage rate does not exceed the limits of Specification 4.6.1.7.1 within 24 hours and close the purge supply if the affected penetration is the exhaust penetration, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VENTILATION SYSTEM

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 At least once per 92 days each 8-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to $0.01 L_a$ when pressurized to P_a .

4.6.1.7.2 Each 8-inch containment purge supply and exhaust isolation valve shall be verified to be sealed closed or open in accordance with Specification 3.6.1.7 at least once per 31 days.

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST* and automatically transferring suction to the containment sump.

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

ACTION:

With one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position;
- b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 262 psi when tested pursuant to Specification 4.0.5;
- c. At least once per 18 months during shutdown, by:
 - 1) Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure-Hi-3 test signal, and
 - 2) Verifying that each spray pump starts automatically on a Containment Pressure-Hi-3 test signal.
- d. At least once per 5 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

*In MODE 4, when the Residual Heat Removal System is in operation, an OPERABLE flow path is one that is capable of taking suction from the refueling water storage tank upon being manually realigned.

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the SITE BOUNDARY radiation doses to within the dose guidelines of 10 CFR Part 100 during accident conditions.

3/4.6.1.2 CONTAINMENT LEAKAGE

The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the safety analyses at the peak accident pressure, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix J of 10 CFR Part 50.

3/4.6.1.3 CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on CONTAINMENT INTEGRITY and containment leak rate. Surveillance testing of the air lock seals provides assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.

3/4.6.1.4 INTERNAL PRESSURE

The limitations on containment internal pressure ensure that: (1) the containment structure is prevented from exceeding its design negative pressure differential with respect to the annulus atmosphere of 3.5 psi and (2) the containment peak pressure does not exceed the design pressure of 52 psig during LOCA conditions.

The maximum peak pressure expected to be obtained from a LOCA event is 49.6 psig. The limit of 16.2 psia for initial positive containment pressure will limit the total pressure to 49.6 psia which is less than the design pressure and is consistent with the safety analyses.

CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT (Continued)

3/4.6.1.5 AIR TEMPERATURE

The limitation in containment average air temperature ensures that the containment average air temperature does not exceed the initial temperature condition assumed in the overall safety analysis for a steam line break accident. Measurements shall be made at all listed locations, whether by fixed or portable instruments, prior to determining the average air temperature.

3/4.6.1.6 CONTAINMENT VESSEL STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment steel 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 52 psig in the event of a LOCA. A visual inspection in conjunction with Type A leakage tests is sufficient to demonstrate this capability.

3/4.6.1.7 CONTAINMENT VENTILATION SYSTEM

The 36-inch containment purge supply and exhaust isolation valves are required to be sealed 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. To provide assurance that these containment valves cannot be inadvertently opened, the 36-inch containment shutdown purge supply and exhaust isolation valves are not utilized during operation on MODES 1-4, and a blind flange is installed establishing a Type "B" penetration. The penetration is surveilled in accordance with Surveillance Requirement 4.6.1.1a in MODES 1, 2, 3, and 4. Surveillance Requirement 4.6.1.2d is also applicable to this penetration.

The use of the containment purge lines is restricted to the 8-inch purge supply and exhaust isolation valves since, unlike the 36-inch valves, the 8-inch valves are capable of closing during a LOCA or steam line break accident. Therefore, the SITE BOUNDARY dose guideline values of 10 CFR Part 100 would not be exceeded in the event of an accident during containment PURGING operation. The total time the containment purge (vent) system isolation valves may be open during MODES 1, 2, 3, and 4 in a calendar year is determined by the actual need for opening the valves for safety-related reasons; e.g., containment pressure control or the reduction of airborne radioactivity to facilitate personnel access for surveillance and maintenance activities.

Leakage integrity tests with a maximum allowable leakage rate for containment purge supply and exhaust supply valves will provide early indication of resilient material seal degradation and will allow opportunity for repair before gross leakage failures could develop. The 0.60 L_a leakage limit of Specification 3.6.1.2b. shall not be exceeded when the leakage rates determined by the leakage integrity tests of these valves are added to the previously determined total for all valves and penetrations subject to Type B and C tests.