

September 30, 1992

Docket No. 50-443

Mr. Ted C. Feigenbaum, Senior Vice President
and Chief Nuclear Officer
North Atlantic Energy Service Corporation
Post Office Box 300
Seabrook, New Hampshire 03874

Dear Mr. Feigenbaum:

SUBJECT: ISSUANCE OF AMENDMENT NO. 17 TO FACILITY OPERATING LICENSE
NO. NPF-86 - SEABROOK STATION, UNIT NO. 1 (TAC NO. M84166)

The Commission has issued the enclosed Amendment No.17 to Facility
Operating License No. NPF-86 for the Seabrook Station, Unit No. 1. This
amendment is in response to your application dated August 3, 1992.

This amendment allows for complete verification of operability of the reactor
trip breaker shunt trip circuitry prior to startup from the first planned or
unplanned shutdown, to Mode 3 or lower, occurring after July 30, 1992.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be
included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by
Gordon Edison, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 17 to License No. NPF-86
- 2. Safety Evaluation

cc w/enclosures:
See next page

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TJ Park	G Edison	<i>Bochmann</i>	W Butler <i>[Signature]</i>		
9/17/92	9/16/92	9/21/92	9/30/92	1/1	1/1

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

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Post Office Box 300
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Sincerely,

A handwritten signature in cursive script that reads "Gordon Edison".

Gordon Edison, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

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License No. NPF-86
2. Safety Evaluation

cc w/enclosures:
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Mr. Ted C. Feigenbaum

Seabrook Station

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Seabrook Station

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AMENDMENT NO. 17

TO NPF-86 SEABROOK STATION DATED September 30, 1992

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Docket File 50-443

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

NORTH ATLANTIC ENERGY SERVICE CORPORATION, ET AL.*

DOCKET NO. 50-443

SEABROOK STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 17
License No. NPF-86

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the North Atlantic Energy Service Corporation (the licensee), acting for itself and as agent and representative of the 11 other utilities listed below and hereafter referred to as licensees, dated August 3, 1992 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 set forth in 10 CFR Chapter I;
 - 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 Corporation is authorized to act as agent for the North Atlantic Energy Corporation, the Canal Electric Company, The Connecticut Light and Power Company, EUA Power Corporation, Hudson Light & Power Department, Massachusetts Municipal Wholesale Electric Company, Montaup Electric Company, New England Power Company, New Hampshire Electric Cooperative, Inc., Taunton Municipal Light Plant, The United Illuminating Company, and Vermont Electric Generation and Transmission Cooperative, Inc., and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

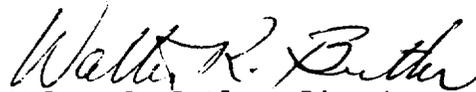
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-86 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 17 , and the Environmental Protection Plan contained in Appendix B are incorporated into Facility License No. NPF-86. PSNH shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented prior to startup from the first planned or unplanned shutdown, to Mode 3 or lower, occurring after July 30, 1992.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 30, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 17

FACILITY OPERATING LICENSE NO. NPF-86

DOCKET NO. 50-443

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change.

Remove

3/4 3-13

Insert

3/4 3-13

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The Engineered Safety Features Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their Trip Setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

- a. With an ESFAS Instrumentation or Interlock Trip Setpoint trip less conservative than the value shown in the Trip Setpoint column but more conservative than the value shown in the Allowable Value column of Table 3.3-4, adjust the Setpoint consistent with the Trip Setpoint value.
- b. With an ESFAS Instrumentation or Interlock Trip Setpoint less conservative than the value shown in the Allowable Value column of Table 3.3-4, either:
 1. Adjust the Setpoint consistent with the Trip Setpoint value of Table 3.3-4, and determine within 12 hours that Equation 2.2-1 was satisfied for the affected channel, or
 2. Declare the channel inoperable and apply the applicable ACTION statement requirements of Table 3.3-3 until the channel is restored to OPERABLE status with its Setpoint adjusted consistent with the Trip Setpoint value.

Equation 2.2-1

$$Z + R + S \leq TA$$

Where:

Z = The value from Column Z of Table 3.3-4 for the affected channel,

R = The "as measured" value (in percent span) of rack error for the affected channel,

S = Either the "as measured" value (in percent span) of the sensor error, or the value from Column S (Sensor Error) of Table 3.3-4 for the affected channel, and

TA = The value from Column TA (Total Allowance) of Table 3.3-4 for the affected channel.

- c. With an ESFAS instrumentation channel or interlock inoperable, take the ACTION shown in Table 3.3-3.

TABLE 4.3-1 (Continued)

TABLE NOTATIONS (Continued)

- (12) Number not used.
- *(13) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).
- (14) Local manual shunt trip prior to placing breaker in service.
- (15) Automatic undervoltage trip.
- (16) Each channel shall be tested at least every 92 days on a STAGGERED TEST BASIS.
- (17) These channels also provide inputs to ESFAS. Comply with the applicable MODES and surveillance frequencies of Specification 4.3.2.1 for any portion of the channel required to be OPERABLE by Specification 3.3.2.

*Complete verification of OPERABILITY of the shunt trip circuitry shall be implemented prior to startup from the first planned or unplanned shutdown, to MODE 3 or lower, occurring after July 30, 1992.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 17 TO FACILITY OPERATING LICENSE NO. NPF-86
NORTH ATLANTIC ENERGY SERVICE CORPORATION
SEABROOK STATION, UNIT NO. 1
DOCKET NO. 50-443

1.0 INTRODUCTION

On July 29, 1992, North Atlantic Energy Service Corporation informed NRC that the 18-month surveillance testing program for the reactor trip breakers and bypass breakers may not have adequately tested the operability of the shunt trip circuitry for the manual reactor trip function of the reactor trip breakers pursuant to Surveillance Requirement 4.3.1.1. The NRC orally granted the licensee's request to temporarily waive compliance with the Technical Specification 4.3.1.1, Table 4.3-1, pertaining to the verification of the operability of the shunt trip circuitry for the manual reactor trip function. By letter dated August 4, 1992, NRC confirmed granting of the waiver request to allow operation without performance of the Trip Actuating Device Operation Test (TADOT) of the shunt trip circuitry for the manual reactor trip function until startup from the first planned or unplanned shutdown, to Mode 3 or lower, occurring after July 30, 1992. By letter dated August 3, 1992, the licensee submitted a request for an exigent Technical Specification change. The proposed exigent Technical Specification (TS) change adds a one time footnote to the Technical Specification Surveillance Requirement 4.3.1.1, Table 4.3-1, Table Notation 13, which defines the schedule for complete verification of operability of the shunt trip circuitry for the manual reactor trip function.

2.0 EVALUATION

The current TS Surveillance Requirement 4.3.1.1, Table 4.3-1, Functional Unit 1 (Manual Reactor Trip) requires that a TADOT on manual reactor trip function be performed each refueling outage. The current surveillance procedure (OX1410.04) utilized by the licensee for testing the manual trip function does not adequately verify that the reactor trip breakers and reactor trip bypass breakers have electric continuity between the shunt trip coil and manual reactor trip switches located on the main control board. This procedure requires verification that the proper voltage is applied to the shunt trip coils when the main control board manual reactor trip and manual safety injection switches are actuated; however, the procedure does not consider that the proper voltage may be present due to the existence of a voltage path through the main control board indicating lights to the shunt trip coil. This

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procedure is inconsistent with the intent of Surveillance Requirement 4.3.1.1, Table 4.3-1, Functional Unit 1. This procedure, however, fully and independently tests the undervoltage trip feature of the reactor trip breakers and reactor trip bypass breakers from the main control board manual reactor trip switches.

The licensee is revising procedure OX1410.04 to require independent testing of the shunt trip feature of the reactor trip breakers and reactor trip bypass breakers to ensure a full test of the shunt trip circuit from the main control board manual reactor trip switch and manual safety injection switch to the shunt trip coil. This will require removal of the indicating lights during performance of the shunt trip coil voltage measurement to ensure proper test of the shunt trip circuitry.

Due to the complexity of this new testing, the licensee feels that it would not be prudent to conduct such a test during power operation. The licensee has proposed to perform the Surveillance Requirement 4.3.1.1 during the upcoming refueling outage which begins on September 7, 1992, or the next time the plant enters Mode 3 or lower, whichever comes first. The proposed exigent one time TS change adds a footnote to Surveillance Requirement 4.3.1.1, Table 4.3-1, Table Notation 13, stating the following:

"Complete verification of OPERABILITY of the shunt trip circuitry shall be implemented prior to startup from the first planned or unplanned shutdown, to MODE 3 or lower, occurring after July 30, 1992."

In the interim, the licensee would take the following compensatory action if the reactor trip breakers do not open on manual reactor trip actuation.

1. Initiate manual rod insertion
2. Initiate emergency boration, and
3. Open the reactor trip breakers locally and de-energize the motor generator sets.

Based on the above, the staff concludes that the one-time exception that delays performance of the testing requirement would have a minimal effect on plant safety. The staff noted that the only feature which has not been adequately tested is an independent test of the shunt trip circuitry from the main control board manual reactor trip switch and manual safety injection switch to the shunt trip coil. The ability of the reactor solid state protection system to initiate a reactor trip via the undervoltage coil and indirectly energize the shunt trip coil has properly been verified. In the unlikely event that a manual trip is required, the de-energization of the undervoltage relay would cause the reactor trip breakers to open. Therefore, the proposed TS revision to perform Surveillance Requirement 4.3.1.1 pertaining to the TADOT of the shunt circuitry for the manual reactor trip function the next time the plant enters Mode 3 or lower, is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations and past practice, the New Hampshire and Massachusetts State officials were notified of the proposed issuance of the amendment. The State officials had no comments.

4.0 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 and changes surveillance requirements. 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 (57 FR 37848). 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.

5.0 CONCLUSION

The staff has reviewed the licensee's evaluation of the impact of the proposed TS change to TS 4.3.1.1. The evaluation concluded that the one-time exception that delays performance of the testing requirement would have a minimal effect on plant safety. The staff finds the evaluation and conclusions acceptable.

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.

Principal Contributor: O. Chopra

Date: September 30, 1992