

June 24, 1998

Mr. Ted C. Feigenbaum
Executive Vice President and
Chief Nuclear Officer
North Atlantic Energy Service Corporation
c/o Mr. Terry L. Harpster
P.O. Box 300
Seabrook, NH 03874

SUBJECT: ISSUANCE OF AMENDMENT NO. 58 TO FACILITY OPERATING LICENSE
NO. NPF-86, SEABROOK STATION, UNIT NO. 1 (TAC NO. MA1327)

Dear Mr. Feigenbaum:

The Commission has issued the enclosed Amendment No. 58 to Facility Operating License No. NPF-86 for the Seabrook Station, Unit No. 1, in response to your application dated March 2, 1998, as supplemented by letter dated April 21, 1998.

The amendment revises Technical Specification 4.5.2.b.1 for emergency core cooling system subsystems to delete the requirement to vent the operating chemical volume and control system centrifugal charging pump casing.

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

Sincerely,

Original signed by
John T. Harrison, Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosures: 1. Amendment No. 58 to NPF-86
2. Safety Evaluation

cc w/encs: See next page

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OFFICE	PDI-3/PM	PDI-3/LA	EMEB	OGC*	JTH 6/24/98 PDI-3/D
NAME	CSmith JTH	TClark JTH	RWessman	MYoung	CThomas JTH
DATE	6/24/98	6/24/98	5/8/98	5/5/98	6/24/98

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T. Feigenbaum
North Atlantic Energy Service Corporation

Seabrook Station, Unit No. 1

cc:

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DISTRIBUTION FOR AMENDMENT NO. 58

DATED June 24, 1998

Docket File

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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.58
License No. NPF-86

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the North Atlantic Energy Service Corporation, et al. (the licensee), dated March 2, 1998, as supplemented by letter dated April 21, 1998, 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 Corporation (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 & 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.

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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. 58, 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 effective as of its date of issuance, to be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Cecil O. Thomas, 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: June 24, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 58

FACILITY OPERATING LICENSE NO. NPF-86

DOCKET NO. 50-443

Replace the following page of the Appendix A, Technical Specifications, with the attached page as indicated. The revised page is identified by amendment number and contains vertical lines indicating the area of change. An overleaf page has been provided.*

Remove

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3/4 5-6*

Insert

3/4 5-5

3/4 5-6*

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

a. At least once per 24 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

<u>Valve Number</u>	<u>Valve Function</u>	<u>Valve Position</u>
SI-V-3	Accumulator Isolation	Open*
SI-V-17	Accumulator Isolation	Open*
SI-V-32	Accumulator Isolation	Open*
SI-V-47	Accumulator Isolation	Open*
SI-V-114	SI Pump to Cold-Leg Isolation	Open
RH-V-14	RHR Pump to Cold-Leg Isolation	Open
RH-V-26	RHR Pump to Cold-Leg Isolation	Open
RH-V-32	RHR to Hot-Leg Isolation	Closed
RH-V-70	RHR to Hot-Leg Isolation	Closed
SI-V-77	SI to Hot-Leg Isolation	Closed
SI-V-102	SI to Hot-Leg Isolation	Closed

b. At least once per 31 days by:

- 1) Verifying that the ECCS piping is full of water by venting the ECCS pump casings (excluding the operating centrifugal charging pump) and accessible discharge piping high points, and
- 2) 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.

c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suction during LOCA conditions. This visual inspection shall be performed:

- 1) For all accessible areas of the containment prior to establishing primary CONTAINMENT INTEGRITY, and
- 2) At least once daily of the areas affected within containment by containment entry and during the final entry when primary CONTAINMENT INTEGRITY is established.

*Pressurizer pressure above 1000 psig.

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

SURVEILLANCE REQUIREMENTS

4.5.2 (Continued)

- d. At least once per 18 months by:
- 1) Verifying automatic interlock action of the RHR system from the Reactor Coolant System to ensure that with a simulated or actual Reactor Coolant System pressure signal greater than or equal to 365 psig, the interlocks prevent the valves from being opened.
 - 2) A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion.
- e. 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 (Safety Injection actuation and Automatic Switchover to Containment Sump) test signals, and
 - 2) Verifying that each of the following pumps start automatically upon receipt of a Safety Injection actuation test signal:
 - a) Centrifugal charging pump,
 - b) Safety Injection pump, and
 - c) RHR pump.
- f. By verifying that each of the following pumps develops the indicated differential pressure on recirculation flow when tested pursuant to Specification 4.0.5:
- 1) Centrifugal charging pump, \geq 2480 psid;
 - 2) Safety Injection pump, \geq 1445 psid; and
 - 3) RHR pump, \geq 171 psid.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO58 TO FACILITY OPERATING LICENSE NO. NPF-86

NORTH ATLANTIC ENERGY SERVICE CORPORATION

SEABROOK STATION, UNIT NO. 1

DOCKET NO. 50-443

1.0 INTRODUCTION

By letter dated March 2, 1998, as supplemented by letter dated April 21, 1998, North Atlantic Energy Service Corporation (the licensee) submitted a request for a change to the Seabrook Station Technical Specifications (TSS). The requested change would revise TS 4.5.2.b.1 for the emergency core cooling system (ECCS) subsystems to delete the requirement to vent the operating chemical volume and control system (CVCS) centrifugal charging pump (CCP) casing. The supplemental letter provided clarifying information within the scope of the original application and did not change the staff's initial proposed no significant hazards determination.

2.0 BACKGROUND

TS 4.5.2 describes the surveillance requirements necessary to demonstrate the operability of each ECCS subsystem. TS 4.5.2.b.1 requires, in part, that the ECCS piping be verified full of water each 31 days by venting the ECCS pump casings. In the ECCS mode of operation the CCPs receive an automatic start signal and deliver flow to the reactor coolant system (RCS) at the prevailing RCS pressure. In licensee event report (LER) 98-001-00, the licensee reported that its previous practice of not venting the operating CCP was not in literal compliance with TS 4.5.2.b.1. The licensee has since revised its surveillance procedures to require venting of the operating CCP by aligning the CCP's minimum flow recirculation valve to the top of the volume control tank (VCT). Though this is the high point in the system, this method of venting the operating CCP does not allow visual confirmation of the presence of air or gas in the fluid stream. Therefore, the proposed change would eliminate the requirement to vent the operating CCP.

3.0 EVALUATION

The CCPs are described in the Seabrook Station updated final safety analysis report (UFSAR) as being high-head pumps of a multi-stage diffuser design with a barrel-type casing and vertical suction and discharge nozzles. The licensee stated in its submittal that the CCPs have no installed pump casing vents and that the design of the pump with top mounted suction and discharge nozzles make it unlikely that gasses of any significance would accumulate inside the pump casing while the pump is operating or when it is secured. Any gasses that may be introduced into the pump would not accumulate in the pump casing, but would be carried with the fluid flow into the system. The licensee stated that opening a vent valve on piping under the dynamic conditions present on an operating CCP is ineffective for venting gasses due to the high

system operating pressure and flow rate. In addition, venting of piping under high system pressures poses a risk to personnel safety. The licensee has concluded that routine venting of the operating CCP is unnecessary for verifying ECCS subsystem operability. Further, the licensee does not believe swapping the operating CCP every 31 days solely for the purpose of statically venting the CCP is justified based on the additional startup and shutdown cycles that would be imposed on the system.

The NRC staff has reviewed the licensee's submittal and the conclusions it has reached about eliminating the requirement for venting the operating CCP. The staff finds that the requirement is not necessary to ensure the quality of the ECCS system, facility operation within safety limits or to meet limiting conditions for operation. Therefore, the change is acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. 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 (63 FR 17225). 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.

6.0 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.

Principal Contributor: Craig W. Smith

Date: June 24, 1998