North Atlantic

North Atlantic Energy Service Corporation
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The Northeast Utilities System

February 21, 2002

Docket No. 50-443

NYN-02021

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Seabrook Station
License Amendment Request 02-01,
"Relocation of Certain Engineered Safety Features Pump Values From
Technical Specifications To The Technical Requirements Manual – Request 1"

North Atlantic Energy Service Corporation (North Atlantic) has enclosed herein (Enclosure 1) License Amendment Request (LAR) 02-01. LAR 02-01 is submitted pursuant to the requirements of 10CFR50.90 and 10CFR50.4.

LAR 02-01 proposes administrative changes to the Seabrook Station Technical Specification (TS) Surveillance Requirements (SR) 4.1.2.3.1, "Boration Systems Charging Pump – Shutdown;" 4.1.2.4, "Boration Systems Charging Pump – Operating" and 4.5.2; "ECCS Subsystems – T_{avg} Greater Than or Equal To 350°F;" and associated Bases 3/4.5.2 and 3/4.5.3, "ECCS Subsystems."

The proposed changes would relocate specific pressure, differential pressure and flow values, as well as specific test methods, associated with certain Engineered Safety Features (ESF) pumps from the Technical Specifications to the Seabrook Station Technical Requirements (SSTR) Manual. The SSTR is referenced in the Seabrook Station Updated Final Safety Analysis Report and is the implementing manual for the Technical Specifications Improvement Program. Relocation of the specific criteria to the SSTR would afford North Atlantic operational flexibility to revise the criteria, if required (e.g., because of changes in hydraulic resistance due to new fuel design or as a result of power uprate or testing to newer versions of the ASME Code), without need for requesting an amendment to the operating license.

The Seabrook Station Technical Requirements Manual (SSTR) is a licensee-controlled document which contains certain technical requirements and is the implementing manual for the Technical Specification Improvement Program. Changes to these requirements are reviewed and approved in accordance with Seabrook Station Technical Specifications, Section 6.7.1.i, and as outlined in the SSTR. Specifically, all changes to the SSTR require an evaluation pursuant to 10 CFR 50.59 and review and approval by the Station Operation Review Committee (SORC) prior to implementation.

A001

The proposed changes are based on the improved Standard Technical Specifications (ITS), NUREG-1431, Revision 2, "Standard Technical Specifications – Westinghouse Plants," which itself is based on the NRC's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 FR 39312), issued in July 1993.

Enclosure 2 contains a copy of the pending Technical Requirement.

The Station Operation Review Committee and the Nuclear Safety Audit Review Committee have reviewed LAR 02-01.

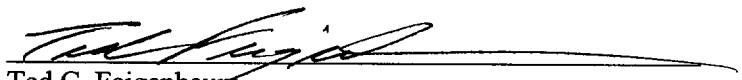
North Atlantic has determined that LAR 02-01 meets the criteria of 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an Environmental Impact Statement (see Section VI of Enclosure 1). As discussed in LAR Section IV of Enclosure 1, the proposed change does not involve a significant hazard consideration pursuant to 10CFR50.92. A copy of this letter and the enclosed LAR has been forwarded to the New Hampshire State Liaison Officer pursuant to 10CFR50.91(b).

North Atlantic requests NRC Staff review of License Amendment Request 02-01 and issuance of a license amendment by May 1, 2002, becoming effective immediately and implemented within 60 days thereafter.

Should you have any questions regarding this letter, please contact Mr. James M. Peschel, Manager - Regulatory Programs, at (603) 773-7194.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.



Ted C. Feigenbaum
Executive Vice President
and Chief Nuclear Officer

cc: H. J. Miller, NRC Regional Administrator
G. Wunder, NRC Project Manager, Project Directorate I-2
G. Dentel, NRC Senior Resident Inspector

Mr. Donald Bliss, Director
New Hampshire Office of Emergency Management
State Office Park South
107 Pleasant Street
Concord, NH 03301

ENCLOSURE 1 TO NYN-02021

North Atlantic

SEABROOK STATION UNIT 1

Facility Operating License NPF-86
Docket No. 50-443

License Amendment Request No. 02-01
"Relocation of Certain Engineered Safety Features Pump Values From Technical Specifications To The Technical Requirements Manual" Request 12

North Atlantic Energy Service Corporation pursuant to 10 CFR 50.90 submits License Amendment Request 02-01. The following information is enclosed in support of this License Amendment Request:

- Section I - Introduction and Safety Assessment for Proposed Change
- Section II - Markup of Proposed Change
- Section III - Retype of Proposed Change
- Section IV - Determination of Significant Hazards for Proposed Change
- Section V - Proposed Schedule for License Amendment Issuance and Effectiveness
- Section VI - Environmental Impact Assessment

I, Ted C. Feigenbaum, Executive Vice President and Chief Nuclear Officer of North Atlantic Energy Service Corporation hereby affirm that the information and statements contained within this License Amendment Request are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Sworn and Subscribed
before me this
22nd day of February, 2002

Susan L. Allen
Notary Public

Ted C. Feigenbaum
Executive Vice President
and Chief Nuclear Officer

Section I

Introduction and Safety Assessment for the Proposed Change

I. INTRODUCTION AND SAFETY ASSESSMENT OF THE PROPOSED CHANGE

A. Introduction

License Amendment Request (LAR) 02-01 proposes administrative changes to the Seabrook Station Technical Specification (TS) Surveillance Requirements (SR) 4.1.2.3.1, "Boration Systems Charging Pump – Shutdown;" 4.1.2.4, "Boration Systems Charging Pump – Operating" and 4.5.2; "ECCS Subsystems – T_{avg} Greater Than or Equal To 350°F;" and associated Bases 3/4.5.2 and 3/4.5.3, "ECCS Subsystems."

The proposed changes would relocate specific pressure, differential pressure and flow values, as well as specific test methods, associated with certain Engineered Safety Features (ESF) pumps from the Technical Specifications to the Seabrook Station Technical Requirements (SSTR) Manual. The SSTR is referenced in the Seabrook Station Updated Final Safety Analysis Report and is the implementing manual for the Technical Specifications Improvement Program. Relocation of the specific criteria to the SSTR would afford North Atlantic operational flexibility to revise the criteria, if required (e.g., because of changes in hydraulic resistance due to new fuel design or as a result of power uprate or testing to newer versions of the ASME Code), without need for requesting an amendment to the operating license.

The Seabrook Station Technical Requirements Manual (SSTR) is a licensee-controlled document which contains certain technical requirements and is the implementing manual for the Technical Specification Improvement Program. Changes to these requirements are reviewed and approved in accordance with Seabrook Station Technical Specifications, Section 6.7.1.i, and as outlined in the SSTR. Specifically, all changes to the SSTR require an evaluation pursuant to 10 CFR 50.59 and review and approval by the Station Operation Review Committee (SORC) prior to implementation.

B. Safety Assessment

Currently TS SR 4.1.2.3.1, 4.1.2.4, and 4.5.2.f provide details describing ESF pump acceptance criteria and test methods (e.g., testing on recirculation flow) associated with the performance surveillance test. It is proposed that these details be relocated to the SSTR. These details are not necessary to ensure the Operability of the Emergency Core Cooling System (ECCS). The requirements of the applicable Limiting Condition for Operation (LCO) and the associated Surveillance Requirements for these systems, as well as the definition of OPERABILITY, are adequate to ensure the ECCS subsystems are maintained Operable. As a result, these details are not necessary to ensure the ECCS subsystems can perform their intended safety function and are not required to be in the TS to provide adequate protection of the public health and safety. The relocation of these details maintains the consistency with NUREG-1431. Any change to these details will be made in accordance with 10 CFR 50.59, as specified in North Atlantic's programs and procedures governing changes to the SSTR.

Current TS SR 4.5.2.h requires the performance of a flow balance test to the ECCS subsystems following the completion of modifications that alter the subsystem flow characteristics. Plant procedures governing the restoration of equipment after maintenance specify the appropriate post maintenance testing. It is proposed that this requirement be relocated to the SSTR. Any time the operability of a system or component has been affected by repair, maintenance, or replacement of a component, post maintenance testing is required to demonstrate OPERABILITY of the system or component. As such, the requirement to perform a flow balance test after modifications that alter flow characteristics is not required to be in the TS to provide adequate protection of the public health and safety. The relocation of this requirement maintains the consistency with NUREG-1431. Any change to this requirement will be made in

accordance with 10 CFR 50.59, as specified in North Atlantic's programs and procedures governing changes to the SSTR.

The proposed changes are based on the improved Standard Technical Specifications (ITS), NUREG-1431, Revision 2, "Standard Technical Specifications – Westinghouse Plants," which itself is based on the NRC's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 FR 39312), issued in July 1993.

The NRC's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" provided a specific set of four (4) objective criteria to determine which of the design conditions and associated surveillances should be located in the TSs as limiting conditions for operation. The Final Policy Statement noted that implementation of these additional criteria, as amended to 10 CFR 50.36, may cause some requirements presently in TSs to no longer merit inclusion in TSs.

The specific pump performance verification criteria currently within the Technical Specifications may be removed from TS because they do not meet the four specific criteria in 10 CFR 50.36. Specifically:

- Pump performance verification criteria is not considered installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. Thus, the specific pump performance verification criteria do not satisfy Criterion 1 (as amended in 10 CFR 50.36) for retention;

- Pump performance verification criteria is not a process variable that is an initial condition of a Design Basis Accident (DBA) or Transient Analysis that assumes either the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, the specific pump performance verification criteria do not satisfy Criterion 2 (as amended in 10 CFR 50.36) for retention;

- Pump performance verification criteria is not a structure, system or component (SSC) that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, the specific pump performance verification criteria do not satisfy Criterion 3 (as amended in 10 CFR 50.36) for retention;

- Pump performance verification criteria is not considered as a significant risk contributor. Therefore, the specific pump performance verification criteria do not satisfy Criterion 4 (as amended in 10 CFR 50.36) for retention in the Technical Specifications.

Though it is recognized that proper ESF pump performance is necessary to ensure the safety analysis assumptions remain valid, the specific values for determining proper ESF pump performance need not be contained within the Technical Specification Surveillance Requirement itself. Simply stating within the Surveillance Requirement that pump OPERABILITY must be verified in accordance with a certain Specification (i.e., 4.0.5) and/or criteria contained within a certain Technical Requirement (containing criteria based on the safety analysis) is sufficient to ensure verification of proper ESF pump performance.

In conclusion, the specific details controlled by the subject specifications do not need to be included within the scope of the Technical Specifications. The subject details will be adequately controlled in the Seabrook Station Technical Requirements Manual. The inclusion of the subject details in Technical Specifications is not specifically required by 10 CFR 50.36, or other regulations. Additionally, the activities controlled by the subject specification do not pose a threat to the public health and safety. Therefore, the proposed changes to the subject Technical Specifications Surveillance Requirements do not affect plant safety.

Section II

Markup Of Proposed Change

The attached markup reflects the currently issued revision of the Technical Specifications and Bases listed below. Pending Technical Specifications or Technical Specification changes issued subsequent to this submittal are not reflected in the enclosed markup

The following Technical Specifications and Bases are included in the attached markups:

Technical Specification	Title	Page(s)
Specification 4.1.2.3.1	Boration Systems, Charging Pump - Shutdown	3/4 1-9
Specification 4.1.2.4	Boration Systems, Charging Pump – Operating	3/4 1-10
Specification 4.5.2 f & h	ECCS Subsystems – Tavg Greater than Or Equal To 350°F	3/4 5-6 & 5-7
Bases 3/4.5.2 and 3/4.5.3	ECCS Subsystems	B 3/4 5-2

REACTIVITY CONTROL SYSTEMS

BORATION SYSTEMS

CHARGING PUMP - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.3 One charging pump in the boron injection flow path required by Specification 3.1.2.1 shall be OPERABLE and capable of being powered from an OPERABLE emergency power source.

APPLICABILITY: MODES 4, 5, and 6.

ACTION:

With no charging pump OPERABLE or capable of being powered from an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

SURVEILLANCE REQUIREMENTS

4.1.2.3.1 The above required charging pump shall be demonstrated OPERABLE by verifying, on recirculation flow, that a differential pressure across the pump of greater than or equal to 2480 psid is developed when tested pursuant to Specification 4.0.5.

4.1.2.3.2 All charging pumps, excluding the above required OPERABLE pump, shall be demonstrated inoperable* by verifying that the motor circuit breakers are secured in the open position** within 4 hours after entering MODE 4 from MODE 3 or prior to the temperature of one or more of the RCS cold legs decreasing below 325°F, whichever comes first, and at least once per 31 days thereafter, except when the reactor vessel head closure bolts are fully detensioned or the vessel head is removed.

*An additional pump may be made capable of injecting under administrative control for up to 1 hour during pump-swap operation, except during RCS water-solid conditions. Additionally, an inoperable pump may be energized for testing provided the discharge of the pump has been isolated from the RCS by a closed isolation valve with power removed from the valve operator, or by a manual isolation valve secured in the closed position.

**An alternate method to assure pump inoperability may be used by placing the control room pump-control switch in the Pull-to-Lock position and isolating the discharge flow path of the pump from the RCS by at least one closed isolation valve. Use of the alternate method requires inoperability verification at least once every 12 hours.

REACTIVITY CONTROL SYSTEMS

BORATION SYSTEMS

CHARGING PUMPS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.4 At least two charging pumps shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.*

ACTION:

With only one charging pump OPERABLE, restore at least two charging pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to at least the limit specified in the CORE OPERATING LIMITS REPORT (COLR) for the above MODES at 200°F within the next 6 hours; restore at least two charging pumps to OPERABLE status within the next 7 days or be in HOT SHUTDOWN within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.4 At least two charging pumps shall be demonstrated OPERABLE by verifying, on recirculation flow, that a differential pressure across each pump of greater than or equal to 2480 psig is developed when tested pursuant to Specification 4.0.5.

*The provisions of Specifications 3.0.4 and 4.0.4 are not applicable for entry into MODE 3 for the centrifugal charging pump declared inoperable pursuant to Specification 4.1.2.3.2 provided that the centrifugal charging pump is restored to OPERABLE status within 4 hours or prior to the temperature of one or more of the RCS cold legs exceeding 375°F, whichever comes first.

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 440 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.

OPERABILITY OF

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 ≥ 2480 psid;

2) Safety Injection pump ≥ 1445 psid; and

3) RHR pump ≥ 171 psid

4.5.2 (Continued)

g. By verifying the correct position of each electrical and/or mechanical position stop for the following ECCS throttle valves:

1) Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE, and

2) At least once per 18 months.

High Head SI System Valve Number	Intermediate Head SI System Valve Number
SI-V-143	SI-V-80
SI-V-147	SI-V-85
SI-V-151	SI-V-104
SI-V-155	SI-V-109
	SI-V-117
	SI-V-121
	SI-V-125
	SI-V-129

NOT USED

h. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:

1) For centrifugal charging pump lines, with a single pump running:

a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 306 gpm, and

b) The total pump flow rate is less than or equal to 549 gpm.

2) For Safety Injection pump lines, with a single pump running:

a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 419 gpm, and

b) The total pump flow rate is less than or equal to 669 gpm.

3) For RHR pump lines, with a single pump running, the sum of the injection line flow rates is greater than or equal to 4213 gpm.

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS (Continued)

When the RCS has a vent area equal to or greater than 18 square inches, or the RCS is in a reduced inventory condition, i.e., whenever reactor vessel water level is lower than 36 inches below the reactor vessel flange, one Safety Injection pump may be made OPERABLE when in MODE 5 or MODE 6 with the reactor vessel head on and the vessel head closure bolts not fully detensioned. When operating in this configuration, cold overpressure protection is provided by either the mechanical vent opening in the RCS boundary, equal to or greater than 18 square inches, or the additional void volume existing when operating in a reduced inventory condition. Either configuration is required to be present prior to making the SI pump OPERABLE. This required RCS vent area or reduced inventory condition and the cold overpressure protection surveillance requirements to verify the presence of the RCS vent area or verify that the reactor vessel water level is lower than 36 inches below the reactor vessel flange provides assurance that a mass addition transient can be mitigated and that adequate cold overpressure protection is provided.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensures that at a minimum, the assumptions used in the safety analyses are met and that subsystem OPERABILITY is maintained. With the exception of the operating centrifugal charging pump, the ECCS pumps are normally in a standby, non-operating mode. As such, flow path piping has the potential to develop voids and pockets of entrained gases. Maintaining the piping from the refueling water storage tank (RWST) to the RCS full of water (by verifying at the accessible ECCS piping high points and pump casings, excluding the operating centrifugal charging pump) ensures that the system will perform properly, injecting its full capacity into the RCS upon demand. This will also prevent water hammer, pump cavitation, and pumping of non-condensable gas (e.g., air, nitrogen, or hydrogen) into the reactor vessel following a safety injection (SI) signal or during shutdown cooling. The 31 day Frequency takes into consideration the gradual nature of gas accumulation in the ECCS piping and the procedural controls governing system operation. Surveillance Requirements for throttle valve position stops and flow balance testing provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses.

Verifying that the RHR system suction valve interlock is OPERABLE ensures that the RCS will not pressurize the RHR system beyond its design pressure. The value specified in the surveillance requirement ensures that the valves cannot be opened unless the RCS pressure is less than 440 psig. Due to bistable reset design, and the instrument uncertainty, the valves could be open above the interlock setpoint, but below the reset

1 Refer To THE Technical Requirements Manual For Flow Balance Criteria.

SECTION III

Retype Of Proposed Change

The attached retype reflect the currently issued version of the Technical Specifications. Pending Technical Specification changes or Technical Specification changes issued subsequent to this submittal are not reflected in the enclosed retype. The enclosed retype should be checked for continuity with Technical Specifications prior to issuance.

REACTIVITY CONTROL SYSTEMS

BORATION SYSTEMS

CHARGING PUMP - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.3 One charging pump in the boron injection flow path required by Specification 3.1.2.1 shall be OPERABLE and capable of being powered from an OPERABLE emergency power source.

APPLICABILITY: MODES 4, 5, and 6.

ACTION:

With no charging pump OPERABLE or capable of being powered from an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

SURVEILLANCE REQUIREMENTS

4.1.2.3.1 The above required charging pump shall be demonstrated OPERABLE when tested pursuant to Specification 4.0.5.

4.1.2.3.2 All charging pumps, excluding the above required OPERABLE pump, shall be demonstrated inoperable* by verifying that the motor circuit breakers are secured in the open position** within 4 hours after entering MODE 4 from MODE 3 or prior to the temperature of one or more of the RCS cold legs decreasing below 325°F, whichever comes first, and at least once per 31 days thereafter, except when the reactor vessel head closure bolts are fully detensioned or the vessel head is removed.

*An additional pump may be made capable of injecting under administrative control for up to 1 hour during pump-swap operation, except during RCS water-solid conditions. Additionally, an inoperable pump may be energized for testing provided the discharge of the pump has been isolated from the RCS by a closed isolation valve with power removed from the valve operator, or by a manual isolation valve secured in the closed position.

**An alternate method to assure pump inoperability may be used by placing the control room pump-control switch in the Pull-to-Lock position and isolating the discharge flow path of the pump from the RCS by at least one closed isolation valve. Use of the alternate method requires inoperability verification at least once every 12 hours.

REACTIVITY CONTROL SYSTEMS

BORATION SYSTEMS

CHARGING PUMPS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.4 At least two charging pumps shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.*

ACTION:

With only one charging pump OPERABLE, restore at least two charging pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to at least the limit specified in the CORE OPERATING LIMITS REPORT (COLR) for the above MODES at 200°F within the next 6 hours; restore at least two charging pumps to OPERABLE status within the next 7 days or be in HOT SHUTDOWN within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.4 At least two charging pumps shall be demonstrated OPERABLE when tested pursuant to Specification 4.0.5.

*The provisions of Specifications 3.0.4 and 4.0.4 are not applicable for entry into MODE 3 for the centrifugal charging pump declared inoperable pursuant to Specification 4.1.2.3.2 provided that the centrifugal charging pump is restored to OPERABLE status within 4 hours or prior to the temperature of one or more of the RCS cold legs exceeding 375°F, whichever comes first.

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 440 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 OPERABILITY of each pump when tested pursuant to Specification 4.0.5:

1) Centrifugal charging pump;

2) Safety Injection pump; and

3) RHR pump.

SURVEILLANCE REQUIREMENTS

4.5.2 (Continued)

g. By verifying the correct position of each electrical and/or mechanical position stop for the following ECCS throttle valves:

1) Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE, and

2) At least once per 18 months.

High Head SI System Valve Number	Intermediate Head SI System Valve Number
SI-V-143	SI-V-80
SI-V-147	SI-V-85
SI-V-151	SI-V-104
SI-V-155	SI-V-109
	SI-V-117
	SI-V-121
	SI-V-125
	SI-V-129

h. NOT USED

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS (Continued)

When the RCS has a vent area equal to or greater than 18 square inches, or the RCS is in a reduced inventory condition, i.e., whenever reactor vessel water level is lower than 36 inches below the reactor vessel flange, one Safety Injection pump may be made OPERABLE when in MODE 5 or MODE 6 with the reactor vessel head on and the vessel head closure bolts not fully detensioned. When operating in this configuration, cold overpressure protection is provided by either the mechanical vent opening in the RCS boundary, equal to or greater than 18 square inches, or the additional void volume existing when operating in a reduced inventory condition. Either configuration is required to be present prior to making the SI pump OPERABLE. This required RCS vent area or reduced inventory condition and the cold overpressure protection surveillance requirements to verify the presence of the RCS vent area or verify that the reactor vessel water level is lower than 36 inches below the reactor vessel flange provides assurance that a mass addition transient can be mitigated and that adequate cold overpressure protection is provided.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensures that at a minimum, the assumptions used in the safety analyses are met and that subsystem OPERABILITY is maintained. With the exception of the operating centrifugal charging pump, the ECCS pumps are normally in a standby, non-operating mode. As such, flow path piping has the potential to develop voids and pockets of entrained gases. Maintaining the piping from the refueling water storage tank (RWST) to the RCS full of water (by verifying at the accessible ECCS piping high points and pump casings, excluding the operating centrifugal charging pump) ensures that the system will perform properly, injecting its full capacity into the RCS upon demand. This will also prevent water hammer, pump cavitation, and pumping of non-condensable gas (e.g., air, nitrogen, or hydrogen) into the reactor vessel following a safety injection (SI) signal or during shutdown cooling. The 31 day Frequency takes into consideration the gradual nature of gas accumulation in the ECCS piping and the procedural controls governing system operation. Surveillance Requirements for throttle valve position stops and flow balance testing[1] provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses.

Verifying that the RHR system suction valve interlock is OPERABLE ensures that the RCS will not pressurize the RHR system beyond its design pressure. The value specified in the surveillance requirement ensures that the valves cannot be opened unless the RCS pressure is less than 440 psig. Due to bistable reset design, and the instrument uncertainty, the valves could be open above the interlock setpoint, but below the reset

[1] Refer to the Technical Requirements Manual for flow balance criteria.

Section IV

Determination Of Significant Hazards For The Proposed Change

IV. DETERMINATION OF SIGNIFICANT HAZARDS FOR THE PROPOSED CHANGE

License Amendment Request (LAR) 02-01 proposes administrative changes to the Seabrook Station Technical Specification (TS) Surveillance Requirements (SR) 4.1.2.3.1, "Boration Systems Charging Pump – Shutdown;" 4.1.2.4, "Boration Systems Charging Pump – Operating;" and 4.5.2; "ECCS Subsystems – T_{avg} Greater Than or Equal To 350°F;" and associated Bases 3/4.5.2 and 3/4.5.3, "ECCS Subsystems."

The proposed changes would relocate specific pressure, differential pressure and flow values, as well as specific test methods, associated with certain Engineered Safety Features (ESF) pumps from the Technical Specifications to the Seabrook Station Technical Requirements (SSTR) Manual. The SSTR is referenced in the Seabrook Station Updated Final Safety Analysis Report and is the implementing manual for the Technical Specifications Improvement Program. Relocation of the specific criteria to the SSTR would afford North Atlantic operational flexibility to revise the criteria, if required (e.g., because of changes in hydraulic resistance due to new fuel design or as a result of power uprate or testing to newer versions of the ASME Code), without need for requesting an amendment to the operating license.

The Seabrook Station Technical Requirements Manual (SSTR) is a licensee-controlled document which contains certain technical requirements and is the implementing manual for the Technical Specification Improvement Program. Changes to these requirements are reviewed and approved in accordance with Seabrook Station Technical Specifications, Section 6.7.1.i, and as outlined in the SSTR. Specifically, all changes to the SSTR require an evaluation pursuant to 10 CFR 50.59 and review and approval by the Station Operation Review Committee (SORC) prior to implementation.

The proposed changes are based on the improved Standard Technical Specifications (ITS), NUREG-1431, Revision 2, "Standard Technical Specifications – Westinghouse Plants," which itself is based on the NRC's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 FR 39312), issued in July 1993.

The NRC's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" provided a specific set of four (4) objective criteria to determine which of the design conditions and associated surveillances should be located in the TSs as limiting conditions for operation. The Final Policy Statement noted that implementation of these additional criteria, as amended to 10 CFR 50.36, may cause some requirements presently in TSs to no longer merit inclusion in TSs. It has been determined that the specific ESF pump performance verification criteria currently within the Seabrook Station Technical Specifications may be removed from TS because they do not meet the four specific criteria stated in 10 CFR 50.36.

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed changes to relocate the specific ESF pump pressure and flow criteria in the aforementioned Technical Specifications surveillance requirements to the Seabrook Station Technical Requirements (SSTR) Manual are administrative in nature and do not adversely affect accident initiators or precursors nor alter the design assumptions, conditions, configuration of the facility or the manner in which it is operated. The proposed changes do not alter or prevent the ability or structures, systems, or components to perform their intended function to mitigate the consequences of an initiating event within the acceptance limits assumed in the Seabrook Station Updated Final Safety Analysis Report (UFSAR).

The subject surveillance requirement criteria relocated to the Seabrook Station Technical Requirements Manual will continue to be administratively controlled. The SSTR is a licensee-controlled document, which contains certain technical requirements and is the implementing manual for the Technical Specification Improvement Program. Changes to these requirements are reviewed and approved in accordance with Seabrook Station Technical Specifications, Section 6.7.1.i, and as outlined in the SSTR.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Create the possibility of a new or different kind of accident from any accident previously evaluated.**

The proposed changes do not alter the design assumptions, conditions, or configuration of the facility or the manner in which the plant is operated. There are no changes to the source term or radiological release assumptions used in evaluating the radiological consequences in the Seabrook Station UFSAR. The proposed changes have no adverse impact on component or system interactions. The proposed changes will not adversely degrade the ability of systems, structures and components important to safety to perform their safety function nor change the response of any system, structure or component important to safety as described in the UFSAR. The proposed changes are administrative in nature and do not change the level of programmatic and procedural details of assuring operation of the facility in a safe manner. Since there are no changes to the design assumptions, conditions, configuration of the facility, or the manner in which the plant is operated and surveilled, the proposed changes do not create the possibility of a new or different kind of accident from any previously analyzed.

3. **Involve a significant reduction in a margin of safety.**

There is no adverse impact on equipment design or operation and there are no changes being made to the Technical Specification required safety limits or safety system settings that would adversely affect plant safety. The proposed changes are administrative in nature and do not reduce the level of programmatic or procedural controls associated with the activities presently performed via the aforementioned surveillance requirements.

Future changes to the subject technical requirements will be reviewed and approved in accordance with Seabrook Station Technical Specifications, Section 6.7, and as outlined in North Atlantic's programs. Specifically, changes to the Seabrook Station Technical Requirements Manual require an evaluation pursuant to the provisions of 10 CFR 50.59 and review and approval by the Station Operation Review Committee (SORC) prior to implementation.

Therefore, relocation of the specific pump pressure and flow criteria contained in the aforementioned Technical Specifications Surveillance Requirements to the Seabrook Station Technical Requirements Manual does not involve a significant reduction in the margin of safety provided in the existing specifications.

Based on the above evaluation, North Atlantic concludes that the proposed changes do not constitute a significant hazard.

Sections V & VI

Proposed Schedule for License Amendment Issuance and Effectiveness
and
Environmental Impact Assessment

V. PROPOSED SCHEDULE FOR LICENSE AMENDMENT ISSUANCE AND EFFECTIVENESS

North Atlantic requests NRC Staff review of License Amendment Request 02-01 and issuance of a license amendment by May 1, 2002, becoming effective immediately and implemented within 60 days thereafter. The requested date of May 1, 2002 supports the upcoming refueling outage currently scheduled to begin May 4, 2002.

VI. ENVIRONMENTAL IMPACT ASSESSMENT

North Atlantic has reviewed the proposed license amendment against the criteria of 10CFR51.22 for environmental considerations. The proposed change does not involve a significant hazards consideration, nor increase the types and amounts of effluent that may be released off-site, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, North Atlantic concludes that the proposed change meets the criteria delineated in 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an Environmental Impact Statement.

ENCLOSURE 2 TO NYN-02021

Technical Requirement 28
ESF Pump OPERABILITY Requirements
(Sheet 1 of 2)

LIMITING CONDITION FOR OPERATION

TR28-3.1 Each ESF Pump, as listed below, shall be demonstrated OPERABLE when tested in accordance with the Inservice Test Program and/or ASME OM Code per the criteria specified herein.

APPLICABILITY: Whenever the ESF pumps are required to be OPERABLE per the Technical Specification (TS) Surveillance Requirement as tabulated below.

ACTION:

As specified per the applicable Technical Specification.

SURVEILLANCE REQUIREMENTS

TR28-4.1 Demonstrate OPERABILITY of each ESF Pump as listed below:

Technical Specification	ESF Pump	**Operability Requirements**
4.1.2.3.1 *	Centrifugal Charging	By verifying, on recirculation flow, that a differential pressure across the pump of greater than or equal to **2480 psid** is developed.
4.1.2.4 *	Centrifugal Charging	By verifying, on recirculation flow, that a differential pressure across each pump of greater than or equal to **2480 psid** is developed.
4.5.2f.1) *	Centrifugal Charging	By verifying, on recirculation flow, that a differential pressure across each pump of greater than or equal to **2480 psid** is developed.
4.5.2f.2) *	Safety Injection	By verifying, on recirculation flow, that a differential pressure across each pump of greater than or equal to **1445 psid** is developed.
4.5.2f.3) *	RHR	By verifying, on recirculation flow, that a differential pressure across each pump of greater than or equal to **171 psid** is developed.
4.6.2.1b. **	Containment Spray	By verifying, on recirculation flow, that a differential pressure across each pump of greater than or equal to **262 psid** is developed.
4.7.1.2.1b.1) **	Motor-driven EFW	By verifying that the pump develops a discharge pressure of greater than or equal to **1460 psig** at a flow of greater than or equal to **270 gpm**.
4.7.1.2.1b.2) **	Turbine-driven EFW	By verifying that the pump develops a discharge pressure of greater than or equal to **1460 psig** at a flow of greater than or equal to **270 gpm** when the secondary steam supply pressure is greater than **500 psig**.
4.7.1.2.1b.3) **	Startup Feedwater	By verifying that the pump develops a discharge pressure of greater than or equal to **1375 psig** at a flow of greater than or equal to **425 gpm**.

Technical Requirement 28
ESF Pump OPERABILITY Requirements
(Sheet 2 of 2)

SURVEILLANCE REQUIREMENTS (continued)

TR28-4.2.* Perform a flow balance test, during shutdown, following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:

1) For centrifugal charging pump lines, with a single pump running:

   a. The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 306 gpm, and

   b. The total pump flow rate is less than or equal to 549 gpm.

2) For Safety Injection pump lines, with a single pump running:

   a. The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 419 gpm, and

   b. The total pump flow rate is less than or equal to 669 gpm.

3) For RHR pump lines, with a single pump running, the sum of the injection line flow rates is greater than or equal to 4213 gpm.

BASES

TR28-B3/4. Periodic surveillance testing of ESF pumps to detect gross degradation caused by impeller structural damage or other hydraulic component problems is required by Technical Specifications which either 1) invokes inservice testing per Specification 4.0.5 pursuant to the requirements of ASME OM Code, and/or 2) require testing to ensure safety analyses criteria continue to be met. Such testing may be accomplished by measuring the pump-developed head at only one point of the pump characteristic curve. This verifies both that the measured performance is within an acceptable tolerance of the original pump baseline performance and that the performance at the test flow is greater than or equal to the performance assumed in the plant safety analysis.

* Pending approval of LAR 02-01.

** Pending approval of LAR 02-02.