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NYN-93119

August 26, 1993

United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

References: (a) Facility Operating License NPF-86, Docket No. 50-443
(1) Teleconference between Mr. W. Butler, Mr. J. Stolz, Mr. A. De Agazio, Mr R. Cooper, Mr. N. Dudley, Mr J. Rogge et. al., USNRC and Mr. T. Harpster, Mr. J. Peschel et. al., North Atlantic, August 25, 1993

Subject: Request For Exercise of Enforcement Discretion and Issuance of Exigent License Amendment, License Amendment Request 93-10 (TAC M87257)

Dear Dr. Murley:

North Atlantic Energy Service Corporation (North Atlantic) hereby requests that the NRC exercise enforcement discretion pursuant to 10CFR2, Appendix C, Section VII.C., Exercise of Discretion for an Operating Facility. The enforcement discretion requested by North Atlantic will authorize noncompliance with Seabrook Station Technical Specification Surveillance Requirement 4.3.2.1, Table 4.3-2, Functional Unit 8.b, CHANNEL CHECK, commencing August 25, 1993 and continuing until the NRC reviews and issues the enclosed exigent License Amendment Request. The request for exercise of enforcement discretion was discussed during an August 25, 1993 teleconference between NRC and North Atlantic representatives [Reference (b)] and the NRC verbally authorized the North Atlantic request.

Functional Unit 8.b pertains to the Refueling Water Storage Tank (RWST) low-low level instrumentation channels which provide an automatic switchover from the RWST to the Containment Sump when the RWST low-low level setpoint is reached coincident with a Safety Injection signal. The CHANNEL CHECK of the RWST low-low level instrumentation, prescribed by Functional Unit 8.b is required to be performed at least once per 12 hours. On August 24, 1993 North Atlantic determined that the RWST low-low level instrumentation CHANNEL CHECK had not been adequately performed in the past. The inadequate CHANNEL CHECK performance was classified as a missed surveillance and an operational check of the four RWST low-low level channels was performed on August 24, 1993 pursuant to Technical Specification 4.0.3.

The operational check of the RWST low-low level channels meets the intent of the CHANNEL CHECK requirement, but it also imposes a significant operational burden upon the Station due to both the 12 hour frequency and the fact that it involves testing that is inappropriate for the particular plant

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condition and design. The operational check requires that each of the four protection channels be placed in the tripped condition at least once per 12 hours. This could contribute to the premature switchover of the Residual Heat Removal suction path from the RWST to the containment sump during accident conditions. In addition, the operational check exposes personnel to increased radiation exposure and the potential for contact with radioactively contaminated RWST water during the transmitter venting portion of the operational check.

North Atlantic is confident that the RWST low-low level transmitters are fully functional on the basis of seven years of satisfactory performance of calibrations and ANALOG CHANNEL OPERATIONAL TESTS (ACOT), and three successful operational checks that have been performed since August 24, 1993. North Atlantic is confident that the transmitters will remain functional in light of the high degree of reliability which is demonstrated by their maintenance history. North Atlantic believes that the requested Exercise of Enforcement Discretion to allow noncompliance with the requirement to perform a CHANNEL CHECK on the RWST low-low level transmitters will not result in a condition which is detrimental to the health and safety of the public. The Request for Exercise of Enforcement Discretion and its justification is provided as Enclosure 1.

North Atlantic has also enclosed as Enclosure 2 a request for an exigent License Amendment Request submitted pursuant to 10CFR50.91(a)(6). The License Amendment Request (LAR 93-10) revises Technical Specification 4.3.2.1, Table 4.3-2, to delete the requirement for the twice daily CHANNEL CHECK and includes a new requirement for the performance of a TADOT on each of the four RWST low-low level channels at least once per 92 days. The TADOT, like the operational check, will verify that the transmitter output voltage is indicative of the simulated RWST level and will also verify that the level bistables for each RWST transmitter actuates.

The Request for Exercise of Enforcement Discretion and License Amendment Request 93-10 have been reviewed and approved by the Station Operation Review Committee and the Nuclear Safety Audit Review Committee.

As discussed in the enclosed License Amendment Request 93-10, Section IV, the proposed changes have been determined not to involve a significant hazards consideration pursuant to the standards of 10CFR50.92. A copy of this letter and the Enclosed License Amendment Request 93-10 have been forwarded to the State of New Hampshire State Liaison Officer pursuant to 10CFR50.91(b).

Should you have any questions regarding this letter, please contact Mr. Terry L. Harpster, Director of Licensing Services, at (603) 474-9521, extension 2765.

Very truly yours,


Ted C. Feigenbaum

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Enclosures

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Office of Nuclear Reactor Regulation

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North Atlantic
August 6, 1993

ENCLOSURE 1 TO NYN-93119

REQUEST FOR EXERCISE OF ENFORCEMENT DISCRETION

REQUEST FOR EXERCISE OF ENFORCEMENT DISCRETION

The following addresses the elements of Manual Chapter 9900:

1. Technical Specification Condition That Will be Violated

Technical Specification 4.3.2.1, Table 4.3-2, Functional Unit 8.b, requires that a CHANNEL CHECK be performed on the Refueling Water Storage Tank (RWST) low-low level instrumentation channels at least once per 12 hours.

On August 24, 1993, North Atlantic determined that the requirements of a CHANNEL CHECK had not been adequately performed in the past. The inadequate surveillance performance was determined to be a missed surveillance and an operational check of the four RWST low-low level channels was performed on August 24, 1993 pursuant to Technical Specification 4.0.3. This non-compliance with Technical Specifications will be documented in a Licensee Event Report that will be submitted to the NRC by September 23, 1993 pursuant to 10CFR50.73.

North Atlantic requests that the NRC exercise enforcement discretion to authorize non-compliance with the requirement of Technical Specification 4.3.2.1, Table 4.3-2, Functional Unit 8.b, for the performance of a CHANNEL CHECK on the RWST Level Instruments at least once every 12 hours. North Atlantic proposes to revise the Technical Specifications to delete the requirement for the CHANNEL CHECK and to include the requirement for the performance of a TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT) at least once per 92 days.

North Atlantic completed three operability check surveillances to satisfy the CHANNEL CHECK requirement since the discovery on August 24, 1993. In addition, each RWST low-low level transmitter has had an ANALOG CHANNEL OPERATIONAL TEST between August 3 and August 24, 1993.

2. Circumstances and Background Information

The RWST at Seabrook Station is equipped with seven level transmitters. Four of these level transmitters provide an input into the 2/4 low-low level logic for swapping the water supply for the Emergency Core Cooling System (ECCS) pumps from the RWST to the containment recirculation sump. These four low-low level transmitters are narrow range transmitters and do not cover the entire volume of the RWST, but do provide level indication for approximately 140% of the low-low level setpoint. Therefore, these transmitters are over-ranged and are saturated when the RWST is at its normal operating level and as a result the output signal is at the saturation level. In addition, these level transmitters are not equipped with remote level indication readout on the Main Control Board (MCB). The remaining level transmitters provide RWST level indication on the MCB and are used for accident monitoring and Technical Specification monitoring of the RWST level. Technical Specification 4.3.2.1, Table 4.3-2, Functional Unit 8.b requires that a CHANNEL CHECK be performed on the channels which input into the RWST Level low-low coincident with Safety Injection logic. This requires that a CHANNEL CHECK be performed on the RWST low-low level transmitters which are not provided with indication. North Atlantic has been performing a CHANNEL CHECK of the RWST channels since the issuance of the original Operating License for Seabrook Station by verification that the transmitters have not failed low. However, since it is not possible to verify that the transmitters are not failed in the high condition due to their narrow range design, North Atlantic determined this CHANNEL CHECK to be inadequate to meet the Technical Specification definition for a CHANNEL CHECK.

During the licensing of Seabrook Station a commitment was made to install MCB indicators for the RWST low-low level transmitters in the response to RAI 420.73. The RAI response was subsequently revised and the commitment to install MCB indication commitment was deleted. The revised RAI response (FSAR Amendment 59, May 1986) states in part: "Narrow range transmitters are normally over-ranged so indicators would not be useful for routine surveillance. Increased surveillance will be employed to ensure operability of the level transmitters."

A set of surveillance procedures were developed to verify the operability of the RWST low-low level transmitters. The procedures involve venting the level instrument and verifying that the empty bistable is actuated and that the transmitter is accurate at the zero level. This surveillance has been performed every six months on a staggered test basis.

This surveillance was performed as the operability check to satisfy the CHANNEL CHECK requirements on August 24, 1993. The performance of this surveillance takes approximately 7 man-hours to complete and exposes personnel to increased radiation exposure (approximately 2 mrem per performance or 850 mrem if continued until the refueling outage) and has the potential to contaminate personnel with radioactive water due to the venting processes required by the procedure. The performance of this operability check procedure every 12 hours to satisfy the current CHANNEL CHECK requirement imposes an unnecessary operational burden on North Atlantic without any commensurate increase in safety.

North Atlantic believes that this surveillance was intended to replace the requirement to perform a periodic CHANNEL CHECK and that during the review and approval of the original Technical Specifications an error was made which resulted in the inclusion of the CHANNEL CHECK requirement in the Technical Specifications that were issued with the issuance of the original Operating License, NPF-56, for Seabrook Station. Because the CHANNEL CHECK requirement remains in the Technical Specifications, North Atlantic has determined that a CHANNEL CHECK must be performed and has been performing the operability check surveillance every 12 hours since August 24, 1993.

North Atlantic believes that the performance of the surveillance procedure, which requires venting the RWST transmitters every 12 hours, warrants enforcement discretion because this activity has the potential to reduce the level of protection to the health and safety of the public and imposes a significant burden upon the Station. The performance of this surveillance activity requires that the individual RWST low-low level channels be placed in the tripped condition. While one channel is tripped, the failure of a second channel would make up the 2/4 logic required to allow the transfer of the ECCS suction from the RWST to the containment sump coincident with a Safety Injection. The transfer is designed to take place approximately 20 minutes into the accident scenario and therefore the failure of a channel while another is being tested places the plant in a less safe condition. If a loss of coolant accident were to occur at this time the transfer of the ECCS suction from the RWST to the containment sump would occur earlier than assumed in the accident analyses. In addition, North Atlantic believes that with the continual manipulation of equipment to perform these surveillance activities the potential for equipment malfunction or human error is greatly increased. For these reasons North Atlantic believes that the exercise of enforcement discretion is warranted to ensure continued safe plant operation and to avoid an unnecessary plant shutdown.

3. Safety Basis for the Request

The Technical Specifications define a CHANNEL CHECK as "a qualitative assessment of channel behavior during operation by observation. This determination shall include where possible, comparison

of the channel indication and/or status with other indications and/or status derived from independent instrument channels measuring the same parameter." At Seabrook Station the RWST low-low level narrow range instrument design precludes performance of a channel to channel comparison and verification that the transmitters have not failed high. Thus it is not possible to perform a CHANNEL CHECK using this methodology. This condition was acknowledged in the revised response to RAI 420.73 which also committed to performing increased surveillance to ensure operability of the level transmitters. In addition, the definition of a CHANNEL CHECK states that the check shall be a qualitative assessment of channel behavior during operation. It is not intended by the definition that the instrument channel be removed from service to perform the check. The action which North Atlantic has established to ensure that the requirements of a CHANNEL CHECK are being met, requires that the instrument be removed from service to perform the surveillance.

North Atlantic proposes to replace the requirement for performing a CHANNEL CHECK on the RWST level transmitters with a requirement to complete a TADOT, without a setpoint verification, at least once per 92 days. The Technical Specifications define TADOT as "operating the Trip Actuating Device and verifying OPERABILITY of alarm, interlock and/or trip functions. The TADOT shall include adjustment, as necessary, of the Trip Actuating Device such that it actuates at the required setpoint within the required accuracy." The setpoint verification requirement is not included in the TADOT because it is already being accomplished during the monthly performance of the ANALOG CHANNEL OPERATIONAL TEST (ACOT). The ACOT will continue to be performed per the current Technical Specification requirement. The narrow range RWST low-low level transmitters have not experienced any gross failures and have not required significant adjustment during periodic calibrations. These transmitters have been installed and operational since 1986. Since other like transmitters are installed in the plant and have MCB indication, these transmitters would provide indication of common mode failure. North Atlantic believes that the installed devices are accurate and reliable instruments and that the requirement to perform a quarterly TADOT is sufficient to detect an instrument failure in the time period between channel calibrations.

In addition, the existing level instrumentation for the transfer to the containment sump on low-low level in the RWST is effectively a level switch and could have been implemented as a switch. The proposed Technical Specification changes are consistent with the surveillance requirements for this type of device. Boiling Water Reactors have in the past, typically used switches for applications such as this where indication for each channel is not required. In those cases the surveillance requirements are typically quarterly channel functional tests and calibrations on a refueling outage basis.

North Atlantic believes that the request for the exercise of enforcement discretion from the requirement to perform a CHANNEL CHECK of the narrow range RWST level transmitter and the proposed change to the Technical Specifications to replace the requirement for performing a CHANNEL CHECK with the requirement to perform a quarterly TADOT, provides adequate assurance that the RWST level instruments are capable of performing their intended safety function. Therefore, the request for exercise of enforcement discretion and the request for an exigent Technical Specification change does not pose a condition adverse to safety and there are no adverse safety consequences created by this request.

4. Compensatory Measures

North Atlantic has taken action to ensure that the requirements of a CHANNEL CHECK are being met. This action involves the performance of the operability surveillance as described above at least once per 12 hours.

5. Requested Duration

North Atlantic requests the exercise of enforcement discretion from the requirement to perform a CHANNEL CHECK on the narrow range RWST low-low level transmitters, commencing on August 25 1993 and continuing until the NRC reviews and issues the enclosed exigent License Amendment Request.

6. Basis for No Significant Safety Hazards

The testing inadequacy notwithstanding, North Atlantic believes that the narrow range RWST level transmitters are OPERABLE and fully capable of fulfilling their intended safety function. North Atlantic has established contingency actions to ensure that the requirements of a periodic CHANNEL CHECK are satisfied. These actions, however, constitute an unnecessary operational burden to North Atlantic without any commensurate increase in safety and has the potential to place the plant in a condition of greater risk. North Atlantic believes that performance of a quarterly TADOT provides equivalent assurance that the narrow range RWST level instruments remain OPERABLE between Channel Calibrations and that there is no significant safety impact associated with the proposed request for exercise of enforcement discretion. The basis for this determination is discussed below:

1. The proposed request for exercise of enforcement discretion does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The accident of concern is the Loss of Coolant Accident (LOCA). The function of the RWST low-low transmitters and the related instrumentation is to ensure that the suction for the ECCS equipment is switched from the RWST to the containment sump when the RWST has injected to the low-low level. The RWST circuitry is designed with four channels and operates on 2/4 low-low logic to provide one half of the transfer logic. The other half of the transfer logic is provided by the existence of a safety injection signal.

The request for exercise of enforcement discretion does not involve a change in the design or operation of the plant, nor does it affect the plant's response to an accident. The request and the accompanying License Amendment Request involves the revision of Technical Specification surveillance requirements for devices which are used in the mitigation of an accident. The performance of the revised surveillance requirements will not affect the operation of the equipment. The RWST transmitters could potentially fail in the high state, low state or be out of calibration. None of these failure modes are accident initiators and would be detected during the proposed quarterly TADOT or during calibrations. Therefore the probability of an accident previously analyzed has not been increased. The equipment will still operate as required to mitigate the consequences of an accident, and the consequences would not be increased.

The revised surveillance requirements have been reviewed to determine if they provide adequate assurance that the equipment will perform its specified function if called upon to do so. The implementation of the TADOT is consistent with the surveillance requirements established for other instrumentation without remote or local indication. The TADOT in combination with the ACOT and the 18 month calibration provides adequate assurance that the devices will be capable of performing their specified functions.

The narrow range RWST level transmitters have not experienced any gross failures and have not required significant adjustment during periodic calibrations. These transmitters have been installed and operational since 1986. Other like transmitters are installed in the plant and have MCB indication. These transmitters would provide indication of common mode transmitter problems. North Atlantic believes that the RWST

low-low level transmitters are accurate and reliable instruments and that the requirement to perform a quarterly TADOT is sufficient to detect an instrument failure in the time period between channel calibrations. In addition, none of the postulated failures could result from the single failure of a narrow range RWST low-low level transmitter. It is highly unlikely that a common mode failure would occur which would result in multiple failures.

The function of the RWST low-low level transmitters is to allow the 2/4 coincidence to be made up when the RWST reaches its low-low level condition. The input from two of the transmitters will allow the transfer of the ECCS suction from the RWST to the Containment sump to take place when the Safety Injection signal is present. The revision of the surveillance from a 12 hour CHANNEL CHECK to a quarterly TADOT does not affect the operation of the level transmitters nor their input to the 2/4 logic and the completion of the RWST portion of the transfer logic. The function of the bistable will still be verified by the performance of the ACOT as required by the current Technical Specifications.

The transfer of the ECCS water supply from the RWST to the Containment sump is not a fully automatic operation. The only automatic action which takes place is the opening of the containment sump suction valves. Once these valves are open, operator action is required to complete the transfer. The procedure for transferring to cold leg recirculation contains a step to verify that the containment sump recirculation valves are open, and if they are not open, the operator is directed to manually open the valves. Once these valves are open, the transfer to cold leg recirculation can be completed and the response to the accident would remain unchanged.

Therefore, since the response of the plant to an accident is unchanged, the requested exercise of enforcement discretion will not result in a significant increase in either the probability or consequences of an accident previously evaluated.

2. The proposed request for exercise of enforcement discretion will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed request for exercise of enforcement discretion does not affect the operation or response of any plant equipment or introduce any new failure mechanisms. The change affects only the frequency of surveillance performance and does not alter the manner in which the equipment will respond in either normal operation or in accident conditions. Therefore, the previous accident analyses are unchanged and bound all expected plant transients and there are no new or different accident scenarios introduced.

3. The proposed request for exercise of enforcement discretion will not involve a significant reduction in the margin of safety.

The proposed request for exercise of enforcement discretion does not reduce the margin of safety as defined in the bases of the Technical Specifications. The BASES for Technical Specification 3.3.2, Engineered Safety Features Actuation System Instrumentation, states, in part, that OPERABILITY of these systems, (i.e. narrow range RWST low-low level transmitters), is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems, in this case the narrow range RWST low-low level transmitters, is consistent with the assumptions used in the safety analysis. The Surveillance Requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the specified frequencies are sufficient to demonstrate this capability. The performance

of the TADOT in place of the CHANNEL CHECK is consistent with the design of the plant and provides the assurance that the RWST low-low level transmitters will perform their specified functions if required. The function of the RWST low-low level transmitters is to provide the input to the 2/4 logic for transfer of ECCS suction from the RWST to the Containment sump in the event of a loss of coolant accident. The performance of the TADOT provides greater assurance of the bistable tripping than does the performance of the CHANNEL CHECK and therefore ensures that the margin of safety as described in the basis of Technical Specifications is maintained.

Therefore, the assumptions in the Bases of Technical Specifications are not affected and the proposed request for exercise of enforcement discretion will not result in a significant reduction in the margin of safety.

7. Environmental Consequences

The proposed request for exercise of enforcement discretion involves no environmental consequences. The narrow range RWST low-low level transmitters are OPERABLE and capable of performing their intended safety function. The replacement of the requirement to perform a CHANNEL CHECK with the requirement to perform a quarterly TADOT does not revise nor affect the accident analyses and does not affect the response of the plant to an accident nor does it affect systems associated with the control of radiological or non-radiological effluents. Since the proposed surveillance changes do not involve a significant safety hazard nor do they increase the types and amounts of effluents that may be released offsite, North Atlantic has concluded that the request will not involve adverse consequences to the environment.

8. Safety Review

The proposed request for exercise of enforcement discretion has been reviewed and approved by the Station Operational Review Committee and the Nuclear Safety Audit Review Committee.

9. Additional Information

Provided in the above eight sections.