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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 30 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 application dated October 28, 1993, North Atlantic Energy Service Corporation (North Atlantic/the licensee) proposed an amendment to the Appendix A Technical Specifications (TS) for the Seabrook Station, Unit 1 (Seabrook). The proposed amendment would implement 13 of the 47 line-item TS improvements that were identified by the U.S. Nuclear Regulatory Commission staff in NUREG-1366, "Improvements to Technical Specification Surveillance Requirements," December 1992.

The line-item TS improvements were based on an NRC study of surveillance requirements and included information provided to the staff by personnel of several nuclear power plants who plan, manage, and perform surveillances. The study included insights from a qualitative risk assessment of surveillance requirements based on the standard technical specifications for Westinghouse plants and the TS for the Edwin I. Hatch Nuclear Plant, Unit 2. The staff examined operational data from licensee event reports, the nuclear plant reliability data system (NPRDS), and other sources to assess the effect of TS surveillance requirements on plant operation. The staff evaluated the effect of longer surveillance intervals to reduce the possibility for plant transients, wear on equipment, personnel radiation exposure, and burden on licensee resources. Finally, the staff considered surveillance activities for which the safety benefits are small and not justified when compared to the effects of these activities on the safety of personnel and the plant. The NRC staff issued guidance on the proposed TS changes in Generic Letter (GL) 93-05, September 27, 1993.

2.0 EVALUATION

North Atlantic proposed 13 line item Technical Specification improvements recommended by the Commission in GL 93-05. The specific changes proposed are as follows:

1. SR 4.1.3.1.2 - The allowable interval between surveillance tests to demonstrate the operability of any partially or fully withdrawn control rod would be increased to 92 days from 31 days.

Staff comment: The incorporation of the proposed change would make SR 4.1.3.1.2 consistent with the recommendation of ¶ 4.2.1 of GL 93-05.

2. SR 4.6.4.1 - The allowable interval between tests to demonstrate the operability of the hydrogen monitors by performing an Analog Channel Operational Test would be increased to 92 days from 31 days, and by performing a Channel Calibration to every refueling outage from 92 days on a staggered basis.

   Staff comment: The proposed changes are consistent with the recommendations of ¶ 5.4 of GL 93-05.

3. SR 4.3.2.1, Table 4.3-2, Functional Unit 3.c.4 and SR 4.3.3.1, Table 4.3-3, Functional Units 1 through 6 - The allowable interval between tests to demonstrate the operability of the radiation monitors by performing an Analog Channel Operational Test (Functional Unit 3. c. 4, Table 4.3-2) and Digital Channel Operational Test (Functional Units 1 through 6, Table 4.3-3) would be increased to quarterly from monthly.

   Staff comment: The proposed changes are consistent with the recommendations of ¶ 5.14 of GL 93-05.

4. SR 4.4.6.2.2 - The time the plant may be in Cold Shutdown before Pressure Isolation Valve testing is required prior to entering Mode 2 would be increased to 7 days from 72 hours.

   Staff comment: The proposed change is consistent with the recommendation of ¶ 6.1 of GL 93-05.

5. SR 4.4.11.1 - The allowable interval between tests to demonstrate the operability of the Reactor Coolant System vent block valves would be increased to cold shutdown from every 92 days. A test at cold shutdown would not be required if the valves have been tested within the previous 92 days.

   Staff comment: The proposed change is consistent with the recommendation of ¶ 6.3 of GL 93-05. The existing Bases 3/4 4.11 is identical to the Catawba TS Bases identified in GL 93-05, and no change is required.

6. SR 4.4.3.2 - The allowable interval between tests to verify pressurizer heater capacity would be increased to each refueling outage from 92 days.

   Staff comment: The proposed change is consistent with the recommendation of ¶ 6.6 of GL 93-05.

7. SR 4.5.1.1.1 - The requirement to verify the boron concentration of the accumulator contents after a volume increase of 1-percent or more would be removed under certain conditions.

   Staff comment: The proposed change would clarify that the surveillance is not required if the volume increase makeup source is the Refueling Water Storage Tank (RWST) and the RWST content has not been diluted since verifying that the RWST content boron concentration is at least equal to that of the accumulator contents. The proposed change is consistent with the recommendation of ¶ 7.1 of GL 93-05.

8. SR 4.5.1.1.2 - The requirement to perform an ACOT and Channel Calibration on accumulator water level and pressure instrumentation would be deleted.

   Staff comment: The proposed change is consistent with the recommendation of ¶ 7.4 of GL 93-05.

9. SR 4.5.2 - The requirement to visually inspect the containment sump upon completion of each containment entry would be modified to avoid unnecessary containment sump inspections when multiple containment entries are made on the same day. The inspection would be required at least once each day a containment entry is made and during the final entry when containment integrity is established.

   Staff comment: The proposed change is consistent with the recommendation of ¶ 7.5 of GL 93-05.

10. SR 4.6.2.1 - The allowable interval between tests to verify that each containment spray nozzle is unobstructed would be increased to every 10 years from 5 years.

    Staff comment: The materials of construction used for the Containment Building Spray (CBS) system are identified in Table 6.2-75 of the Seabrook Updated Final Safety Analysis Report. Seabrook uses austenitic stainless steel piping and nozzles in the CBS. Therefore, the proposed change is consistent with the recommendation of ¶ 8.1 of GL 93-05.

11. SR 4.6.4.2 - The allowable interval between tests to demonstrate operability of each hydrogen recombiner system would be increased to each refueling interval from 6 months.

    Staff comment: The proposed change is consistent with the recommendation of ¶ 8.5 of GL 93-05.

12. SR 4.7.1.2.1 - The allowable interval between tests of the auxiliary and startup feedwate pumps would be increased to 92 days on a staggered test basis from 31 days.

Staff comment: The proposed change is consistent with the recommendation of ¶ 9.1 of GL 93-05.

13. TS 3.8.1.1 - The ACTION statements would be changed so that when the Limiting Conditions for Operation are not met due to:

    a. Inoperability of one or two offsite power circuits, the starting of a diesel-generator would no longer be required;
    b. Inoperability of one diesel-generator, the starting of the remaining diesel-generator would be required within 8 hours only under certain conditions instead of within 24 hours under all conditions;
    c. Inoperability of a diesel-generator and an offsite power circuit, the starting of the remaining diesel-generator would be required within 8 hours only under certain conditions instead of within 24 hours under all conditions.

    Staff comment: The proposed changes are consistent with the intent of the recommendations of ¶ 10.1 of GL 93-05. NUREG-1366 and the guidance contained in GL 93-05 include a requirement to load the operable diesel-generator to the grid when testing is required because of an inoperable diesel-generator. North Atlantic has concluded that this provision is not compatible with plant operating experience because of the potential to subject the unit under test to grid faults which could impair the unit's ability to perform its safety function. North Atlantic, therefore, has not proposed testing by loading the operable diesel-generator to the grid. The staff notes that the current TS 3.8.1.1 does not require testing in this manner. Therefore, the staff does not object to not including testing by loading to the grid.

North Atlantic has stated that the proposed changes to the Seabrook TSs are completely compatible with plant operation. The staff finds that the proposed changes are consistent with the recommendations or intent of NUREG-1366 and GL 93-05. Based upon North Atlantic's assertion of compatibility with plant operation and the consistency with the recommendations or intent of NUREG-1366 and GL 93-05, the staff concludes that the changes proposed by North Atlantic are acceptable.

3.0 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.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes requirements 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 (59 FR 4942). 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 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.

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