



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

SAFETY EVALUATION REPORT  
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE  
SEABROOK STATION, UNIT NO. 1  
FSAR AMENDMENT 63  
DOCKET NO. 50-443

1. "FSAR Sections 7.3, 15.2 and Tables 7.2-3, Sheet 2, 7.5-2 Sheets 3 and 5 were revised to reflect the replacement of Veritrak transmitters with Rosemount transmitters that provide steam generator level, pressurizer pressure and pressurizer level inputs to the Solid State Protection System. The Veritrak transmitters were replaced because they experienced ambient temperature compensation shifts in excess of their specified value."

"This issue was identified in SSER 6, Section 7.3.2.16, and resolved in SSER 8, Section 7.3.2.8."

The Instrumentation and Control Systems Branch (SICB) has reviewed this revision item. The staff finds that the revisions are in conformance with Seabrook Station, Unit No. 1 SSER 8, Section 7.3.2.8 and are acceptable.

2. "FSAR Tables 8.3-1, 8.3-2, "Diesel Generator Load Tables," were revised to reflect plant modifications that eliminated, added or revised certain loads."

The Electrical Systems Branch (SELB) has reviewed this item. The staff concludes that these FSAR changes of diesel generator load tables to reflect plant modifications are acceptable.

3. "FSAR Table 7.5-1 and Appendix 7A, "Accident Monitoring Instrumentation," was revised to reflect the design change that increased the Pressurizer Relief Tank (PRT) temperature indicator range to meet commitments identified in SSER 5, Section 7.5.2.4, to comply with Regulatory Guide 1.97 guidelines. The completion of this design change and acceptability of the instrumentation range is addressed in SSER 9, Section 7.5.2.4."

The Instrumentation and Control Systems Branch (SICB) has reviewed this item. The staff finds that the revisions to FSAR 7.5-1 and Appendix A are in conformance with the Seabrook Station Unit No. 1 SSER 9, Section 7.5.2.4 and are acceptable.

4. "FSAR Sections 6.4, 6.5, 9.4.1 and Appendix 15B, Tables 3.2-2, 7.5-1, 8.3-1, 8.3-2 and 15.6-20 through 24, Figures 8.3-20, 25, 54, 55 and 3.11(B)-1 were revised to reflect the completion of modifications to the Control Room Ventilation System to comply with 10 CFR 50 Appendix A

General Design Criterion 19 and Standard Review Plan Sections 6.4, 6.5.1 and 9.4.1. The issue is discussed in SSERs 7 and 8, and closed in SSER 9, Section 6.4."

The Plant Systems Branch (SPLB) has reviewed this item. The staff finds that Section 6.2 was revised to briefly describe the two data analysis techniques (the total time analysis technique and the mass point analysis technique). The staff finds this to be acceptable.

Sections 6.4, 6.5, and 9.4.1 were revised to reflect the approved (see SSER No. 8) and implemented design changes to the control building heating, ventilation, and air conditioning system. Therefore, they are acceptable.

Tables 15.6-20 through 24 are listings of the dose calculations after the implemented design changes to the control building heating, ventilation, and air conditioning system. The staff finds these results are consistent with the conclusions in SSER 9, Section 6.4, and are acceptable.

5. "FSAR Figures 8.3-32, 33, 34 and Figures 12.3-18 and 19 were revised to reflect completion of modifications which added electrical isolators in the RDMS communication loop to provide qualified electrical isolation between the Class 1-E radiation monitors and the non-Class 1-E radiation monitors and between the Class 1-E radiation monitors and the SPDS."

"This issue was identified in SSERs 5 and 8, and closed in SSER 9, Section 7.5.2.2."

The Electrical Systems Branch (SELB) has reviewed this revision item and concludes that the addition of electrical isolators in the communication loop between the Class 1E radiation monitors and the non-Class 1E radiation monitors, and the changes to battery duty cycle diagrams for Train A and B on the safety related equipment in the FSAR are acceptable.

6. "FSAR Section 6.3.2.8, Tables 3.9(B)-23, 25, Tables 3.9(N)-11 and Figures 6.2-77, 78 were revised to reflect the completion of modifications which added redundant check valves at the interfaces between the CBS and RHR systems, the inclusion of new CBS relief valves adjacent to the new check valves and bypass piping around existing and new check valves."

"This issue was identified in SSERs 7 and 8, and closed in SSER 9, Section 6.6.2."

The Mechanical Engineering Branch (EMEB) has reviewed this revision item. The staff has determined that the changes are acceptable.

7. "FSAR Section 14.2 and Table 14.2-E were revised to reflect changes to the Power Ascension Test Program which were previously identified to NRC."

The Reactor Systems Branch (SRXB) has reviewed these revisions. The staff's evaluations are as follows:

The change on page 14.2-6 is an editorial clarification with no safety implication and is acceptable.

The change on page 14.2-7 is a deletion of the requirement to demonstrate MSIV closure at 30% power during ST-47. This change is acceptable.

Not performing the referenced movable incore neutron flux instrumentation test is consistent with our findings as stated in SSER No. 9. The stated reasoning is consistent with the information used in our finding and is acceptable.

The changes in Table 14.2-5, on items 31, 35 and 39 are consistent with the test descriptions that follow in the remainder of Table 14.2-5 and are acceptable. Item 47 deletes the previously listed main steam line isolation valve closure test and is acceptable.

The change on sheet No. 25, involves the natural circulation test. The heat source for the natural circulation test is changed from fission heat to decay heat. This is consistent with our SSER No. 9, in which we also stipulated consideration of appropriate information for application to procedures and operator training. This is acceptable.

The change on sheet No. 31, involves instrument calibration. This item was reviewed by SICB and was discussed with licensee representatives in July 1990. SICB found the change to be acceptable with the provision that the licensee would further explain the correlation that they use between feedwater and steam flows during plant calibration activities of these systems. The detail is to include a description that identifies the plant operating plateaus and steady state conditions at which such essential data as steam generator water level, feedwater flow, temperature, and pressure; and sensing transmitter output signals, such as differential pressure and the like, are evaluated. We understand the licensee will include this description as part of their next amendment to the FSAR for Seabrook Station.

The change on sheet No. 33, involves the acceptance criterion change. The acceptance criterion is changed from the correlated power coefficient of reactivity being conservative with respect to values contained in the Westinghouse Nuclear Design Report for Cycle 1 to the average measured power coefficient verification factor being within 0.5 °F/% of the predicted power coefficient verification factor.

The change on sheet No. 42 involves the title. The title is changed from "station blackout test" to "loss of offsite power test." The new title more precisely defines the test and is acceptable.

The change on sheet No. 45 involves an acceptable criteria change. This item was discussed between EMCB and the licensee in July, 1990. The licensee agreed that the wording would be changed to read:

Control and alarm systems function as described in FSAR Sections 9.3.2 and 9.3.4, and water chemistry is maintained within limits established by "Westinghouse Guidelines for Secondary Water Chemistry," Technical Specifications 3.4.7 and 6.7.4c, and FSAR Table 5.2-5. Analyzer responses agree with analysis results.

The staff finds this acceptable.

The change on sheet No. 50 involves the title. The main steam isolation valve test description is deleted consistent with deletion of the test. This is acceptable.

8. "FSAR Section 13.1, Section 13.4 and Figures 13.1-1 and 13.1-2 were revised to reflect the current NHY organization."

The Performance and Quality Evaluation Branch (PQEB) has reviewed this item. Below is a brief description and an evaluation of the changes.

NHY has established the new position of Senior Vice President and Chief Operating Officer (COO) which reports directly to the President & CEO, NHY. The individual in this position will direct the organizational units responsible for the operation and support of the Seabrook Station. In addition, the title of Vice President-Nuclear Production has been changed to Executive Director-Nuclear Production, and the title Vice President-Engineering, Licensing and Quality Programs has been changed to Executive Director-Engineering and Licensing.

We find these changes acceptable as they have not reduced the level of technical support for the Seabrook Station, and they continue to meet the appropriate acceptance criteria of Section 13.1 of the Standard Review Plan, NUREG-0800.

9. "FSAR Section 13.2 was revised to provide descriptive enhancements in response to NRC staff comments/questions resulting from their review of FSAR Amendment 62."

The Human Factors Assessment Branch (LHFB) has reviewed Section 13.2, with respect to training, of the Final Safety Analysis Report (FSAR), through Amendment 63, for Seabrook Station. The staff concludes that the applicant's training program for licensed and non-licensed persons is acceptable as it was updated through Amendment 63.

10. "FSAR Section 17.2-1 and Figure 17.2-1, were revised to reflect the current NHY organization."

The NRC Region I staff has reviewed the changes to the Seabrook FSAR, Section 17.2, Amendment 3 and found these changes were acceptable as they did not reduce the licensee's commitment to Quality Assurance. Basically the changes were made to reflect changes in the licensee's organization as the plant changed from the construction phase to the operational phase.

Dated: December 19, 1990