

March 7, 1983

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

Attention: Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) USNRC Letter, dated January 12, 1983, "Combined Inspection
Nos. 50-443/82-15 and 50-444/82-13," R. W. Starostecki to
W. C. Tallman

Subject: Design Control Program

Dear Sir:

On Thursday, February 24, 1983, we met with representatives of Region I to discuss our verification programs which assure that FSAR, program and engineering criteria are translated into construction and inspection documents and are implemented. Since your office is undoubtedly interested in the content of that meeting, this is to inform you of the existing program to ensure that all design commitments made to your staff subsequent to submittal of the Final Safety Analysis Report (FSAR) are consistent with previous FSAR commitments and ultimately reflected in the as constructed plant.

Our correspondence with your office is reviewed by PSNH for commitments of various types. These commitments are listed on a Commitment Tracking List (CTL), which uniquely identifies the commitment, provides a summary description of each commitment, identifies the serial number of the correspondence, identifies the affected FSAR section as appropriate and the resolution status of the commitment. The CTL is statused and issued periodically. This program was initiated in September, 1982.

All commitments that involve design changes to Seabrook Station are reviewed and verified by the Yankee engineering office and formally transmitted to United Engineers & Constructors (UE&C) for implementation. Yankees' internal procedures provide a means for ensuring that each request is logged and statused until the design change has been accomplished.

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UE&C procedures provide for independent identification of design change requirements of formally transmitted commitments to your staff and design changes that may result from the construction program. The design changes are identified by UE&C and statused on a Design Change Status Report (DCSR). The DCSR provides a mechanism for identifying and statusing each design change and its source, effected FSAR section and revision status and design and installation status. In addition, UE&C procedures require distribution of the DCSR to UE&C Site Engineering Personnel for field verification of the design change, FSAR description, and as-constructed condition.

In summary, we have currently in place two independent programs for handling design changes to Seabrook Station. These programs require that all design changes are identified, are consistent with FSAR commitments and ultimately incorporated into the as constructed Seabrook Station. These programs are in place and full compliance is scheduled for September 1, 1983.

The following discussion concerns items of this nature identified by Region I in Reference (b).

It was indicated in Reference (b), that "with regard to other FSAR commitments and RAI responses, further licensee clarification is required to address some apparently contradictory information." The five specific issues and their applicable references as specified in unresolved item 443/82-15-02 are:

1. Cadweld splice stagger to the ACI-349 Code (RAI 220.32)
2. Common mode flooding of the PAB equipment vaults (RAI 410.34)
3. Diesel generator control panel vibration (RAI 430.65)
4. Containment isolation on RHR suction lines (FSAR Section 3.1.5.6 and 6.2.4.1d)
5. Containment isolation valve (MSIV) location (FSAR Section 6.2.4.2)

Clarification of this information for each of the above items is as follows:

1. The FSAR was revised in OL Application Amendment 48 to delineate specific exceptions to the cadweld staggering recommendations of ACI-349 (reference FSAR Page RAI 220-24).
2. In discussions with the Seabrook Station NRC Resident Inspector, concerns were raised as to the adequacy of the response to RAI 410.34 specifically in the area concerning flooding of the RHR vaults.

The concern was raised that water stops were not provided in the construction of the internal walls between the RHR vaults. It is acknowledged that without the water stops, some seepage may occur. However, the amount of seepage through the joints of 2-foot thick steel reinforced concrete walls is considered to be an insignificant

contributor to a potential flooding situation. Additionally, it should be noted that epoxy paint has been applied to both sides of all wall joints and will act as a sealant to even further reduce the possibility of seepage through the joints.

Secondly, a concern was raised that a potential existed for transferring water from one vault to the other via the Equipment Drain System and the discharge piping of the RHR vault sump pumps. In performing Moderate Energy Line Break analyses to determine the effects of flooding on safety-related equipment, the mitigating effects of the non-safety related area sump pumps are not considered. However, should the sump pumps function as intended, flow of water to the opposite RHR vault is prevented by 2 in-series check valves in the discharge of the opposite vault's sump pumps. These check valves are spring-loaded check valves to assure positive seating and are located in different plant areas to preclude any potential common-mode failure. One check valve is located locally near the discharge of the sump pump and the other is located in the Containment Pipe Penetration Area. Should a single failure occur relative to the upstream check valve, a small amount of flow may be diverted to the opposite sump via the sump spray sparger line. However, the flowrate through the sparger line is: 1) small (5 gpm), 2) a small percentage of the capacity of either redundant sump pump, and 3) allows sufficient time for operator action should neither of the sump pumps function.

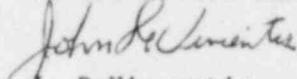
It is our position that the above design represents a conservative approach to assuring that common-mode flooding of the PAB equipment vaults will not occur.

3. The NRC Power Systems Branch has reviewed our response to RAI 430.65 which is included in OL Application Amendment 48. Also, the issue of vibration isolation of free-standing and skid-mounted equipment has been discussed in several meetings with Power Systems Branch representatives. The Division of Licensing has not notified us of an open review item on this subject.
4. FSAR Section 3.5.1.6 (FSAR Page 3.1-51) was revised in OL Application Amendment 48 to delineate the FSAR section where details and clarifications to General Design Criterion 55 exist. Clarifications to General Design Criterion 55 for the Residual Heat Removal suction lines isolation valves is provided in FSAR Table 6.2-83 and FSAR Section 6.2.4.2.m.
5. FSAR Section 6.2.4.2.8 (FSAR Page 6.2-68) was revised in OL Application Amendment 48 to delineate and justify the correct location of the main steam isolation valves and feedwater isolation valves relative to the containment.

Please contact me if further clarification is required.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


J. DeVincentis
Project Manager

ALL/fsf

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