



Public Service of New Hampshire

SEABROOK STATION  
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January 28, 1983

SBN-438  
T.F. B7.1.2

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

Subject: Open Item Responses: (SRP 5.2.5 and 6.2.8; Auxiliary Systems  
Branch and Containment Systems Branch)

Dear Sir:

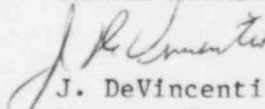
We have enclosed responses to the following open items which were  
discussed with representatives of the NRC Staff in meetings conducted on  
January 10-12, 1983 and January 26, 1983:

<u>NRC BRANCH</u>	<u>SRP SECTION</u>	<u>COMMENTS</u>
ASB	5.2.5	RCPB Leakage Detection
CSB	6.2.8	NUREG-0737; (Item II.E.4.2) Containment Isolation Dependability
CSB	6.2.8	NUREG-0737; (Item II.F.1.2) Containment Water Level

The enclosed responses will be included in Amendment 49 to the OL  
Application.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

  
J. DeVincentis  
Project Manager

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ALL/fsf

cc: Atomic Safety and Licensing Board Service List

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SRP 6.2.8, TMI Item II.E.4.2

The setpoint for containment isolation Phase A (Hi-1) is 5 psig. There is a 1.7 psig margin between the minimum setpoint and the maximum normal pressure.

Hi-1 setpoint	5 psig
-Channel accuracy allowance	<u>-1.8 psig</u>
=Minimum Hi-1 setpoint	3.2 psig
-Maximum normal containment pressure	<u>-1.5 psig</u>
= Margin	1.7 psig

This is 0.7 psig more than the NUREG-0737 recommended margin of 1 psig. The additional margin is considered justified as the addition is small (less than 1/2 of the instrument channel allowance). In addition, the 5 psig setpoint is an industry "standard" value and is also specified in the Standard Technical Specifications (NUREG 0452).

# SRP 5.2.5, RCPB Leakage Detection

The following provides the accuracy, response time, and sensitivity of the Reactor Coolant Pressure Boundary leak detection methods that meet the guidance of Regulatory 1.5, position C.3:

<u>Detection Method</u>	<u>Accuracy</u>	<u>Response Time For 1 gpm leak</u>	<u>Sensitivity</u>
Sump Level	<u>+0.5%</u>	<1 Hr.	1 in.
Containment Air Particulate Activity	<u>+20%</u>	<1 Hr.	$10^{-10}$ $\mu$ Ci/cc
Containment Gaseous Activity	<u>+20%</u>	<1 Hr.	$10^{-6}$ $\mu$ Ci/cc

indication/recording time constants. This results in a time constant of 2.3 seconds for indication and 3.2 seconds for recording. The adequacy of this response is justified in Exhibit 480.22-1.

b. Containment Water Level Instrumentation

(The five points shown below address the five clarification points of Page II.F.1-16 of NUREG-0737.)

1. The Seabrook design for containment water level complies with this requirement. Refer to clarification 3. for a discussion of the narrow range qualification.
2. ~~The indicated range of 0-6 feet adequately covers the maximum calculated capacity of 540,000 gallons above the (-)26 foot elevation.~~
3. ~~Narrow range water level monitors are provided in the containment drainage sumps. This instrumentation provides the operator with information on operational leakage inside the containment, and is not required to operate in an accident environment. Design of the instrumentation meets the intent of NUREG-0737 (see clarification 1.) by satisfying the specification for the normal operating environment including expected transients. Adequate design features ensure continuous availability of this instrumentation during operation. Operability of the instrumentation is addressed in the Technical Specifications.~~
4. This requirement is not applicable to Seabrook.
5. The +5% accuracy of the wide range level monitors provided in FSAR Table 7.5-1 is adequate for the intended function. Justification is provided as follows:
  - a. The accuracy results in a water capacity uncertainty of approximately 27,000 gallons.
  - b. The capacity of the RWST (between the Tech Spec limit and the Recirc. Setpoint) is in excess of 325,000 gallons. Of this capacity, approximately 127,000 gallons would fill open cavities below (-)26 elevation, leaving a minimum capacity of 198,000 gallons above the (-)26 elevation only considering the RWST capacity.
  - c. In light of b., the uncertainty of a. will become negligible well before the recirculation phase is entered.

Full span of the wide range level instrument corresponds to approximately 665,000 gal. The level instrument will adequately monitor the maximum liquid volume in the containment of approximately 601,000 gal.

see  
INSERT  
A  
(next  
page)

INSERT A

The narrow range water level monitors are not required to operate after their respective sump has been flooded as their purpose is to monitor operational leakage. As their environment will not become harsh until after the sump is flooded, it is not necessary to qualified the equipment inside the containment for a harsh environment per IEEE 323-74 as endorsed by Regulatory Guide 1.89. The inside containment equipment has been selected based on the normal conditions inside the containment and these instruments will be included in the maintenance/surveillance program for equipment qualified for mild environments (see NUREG 0800, p. 3.11-5). The narrow range level instruments will be operable after a operating basis earthquake (OBE) as recommended by Regulatory Guide 1.45.