

May 11, 1982

SBN-272
T.F. B 7.1.2



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

Attention: Mr. Frank J. Miraglia, Chief
Licensing Branch #3
Division of Licensing

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444

Subject: Meeting Notes; Reactor Systems Branch

Dear Sir:

We have attached notes resulting from the March 29-30, 1982 meeting with
Reactor Systems Branch (RSB).

These notes were previously submitted to RSB.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

for: *Allen J. Legendre Jr.*
John DeVincentis
Project Manager

Attachment

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A

- 440.105 Open: Applicant to provide Technical Specifications which address equipment or administrative control required to eliminate an event from analysis.
- 440.106 Closed: PORV testing is addressed in Technical Specification.
- 440.107 Open: There must be a Technical Specification which assures that there is a steam space in the pressurizer or the reactor coolant system be aligned to RHR.*
- * Subsequent to the RSB meeting, it was determined that Technical Specifications do address this situation (Technical Specification 3.4.4.1).
- 440.108 Open: The results of a generic analysis which assume the reactor trip comes from the second safety grade signal must be shown to be applicable to Seabrook.
- 440.109 Closed: Instrument and control errors are specifically listed in Chapter 15 for all accident analyses (see Section 15.0.3.2).
- 440.110 Closed: This question does not specifically request a comparison to BTP RSB 5-1*, "Design Requirements of the Residual Heat Removal System". The question will be rewritten as 440.131 and resubmitted to the applicant for resolution (with specific reference to BTP RSB 5-1).
- * It was noted that Seabrook is a Class 2 plant and, therefore, will address BTP RSB 5-1, Table 1, for Class 2 plants.
- 440.111 Closed: Same status as 440.110.
- 440.112 Open: It will be confirmed that the air within the RWST enclosure will remain above 32°F. The steam heater capacity and enclosure temperature calculation were also requested. This question also asked by ICSB (RAI #420.7).
- 440.113 Open: Applicant to provide analytical justification for last sentence of response to 440.26, "In the event that the SI pumps do fail as a result of this single failure, adequate safety injection and cooling capability is maintained via the charging pumps and residual heat removal pumps".
- 440.114 Open: The relief capacity (and justification) of the accumulator relief valves will be provided. Accumulator temperature assumptions should also be included.
- 440.115 Open: Applicant to evaluate need for thermal relief protection in RHR (piping between isolation valves RC-V88 and RC-V87; also RC-V23 and RC-V22).

- 440.116 Open: Applicant to verify that the conditions postulated in the RAI (RHR LOCA: accumulator isolation valves closed: SI and charging pumps circuit breakers open) are bounded by the limiting LOCA calculation.
- 440.117 Open: Refer to RAI 440.113. It was also noted that the SI mini-flow lines, although not seismically designed are seismically supported.
- Note: It was not brought out in the meeting that there is a safety valve upstream of isolation valve V-93, therefore, if V-93 fails closed, mini-flow to the RWST can still be accomplished through the safety valve.
- 440.118 Open: The applicant should verify that the instrumentation listed in the response to 440.49 is available with loss of off-site power.
- This RAI will be coordinated with ICSB.
- 440.119 Closed: Per W explanation.
- 440.120 Closed: It was verified by W that DNBR always exceeds 1.3 in the complete loss of forced flow analysis.
- 440.121 Open: The applicant shall verify that the full RC pumped flow assumption yields the most limiting conditions during a major steam line break.
- 440.122 Closed: Per W explanation.
- 440.123 Open: Tables 440.57-1 and 2 (included with response to 440.57) shall be revised to list components for which credit is taken in each Chapter 15 event. Discrepancies in the value of EFW flow listed should be clarified.
- 440.124 Open: The response to 440.70 will be amended to include alarms and indications.
- 440.125 Open: Applicant to provide reference to generic studies to support choice of worst single failure assumed in 440.64.
- 440.126 Open: NRC to further discuss FSAR Figures 15.2-13 and 15.2-18 with Core Physics Branch. These figures indicate a nuclear power and core heat flux increase following reactor trip.
- 440.127 Open: The applicant shall provide the assumed worst single failure for the locked rotor, loss of off-site power transient. This will be provided with 440.125.
- The applicant to provide off-site doses based on the assumed percent fuel failed.

The applicant to justify two second delay between reactor trip and loss of off-site power.

- 440.128 Open: The applicant to provide description of potential administrative controls for lockout of valves in possible boron dilution paths.
- 440.129 Open: Applicant to revise FSAR Sections 6.3.3.2 and 6.3.3.3 to correctly list break areas for small and large LOCA's.
- 440.130 Open: The applicant shall revise applicable sections of FSAR Chapter 6 and 15 to identify the number of accumulators assumed in analysis.

440.4 Open: Function generator curve should be in the Technical Specifications upon completion of analysis.

440.5 Open: The parameters in Table 2-2 should be provided for the analysis which assumes reactor trip from second safety grade trip signal.

440.6 Open: The applicant shall provide justification for assuming 102% power level in the Overpressure Protection Report.

440.8 Open: Per written response.

440.11 Open: RSB and ICSB to discuss this response.

440.13 Open: Instrument air which is required for air-operated valves necessary for safe shutdown will be addressed with the discussion of compliance to BTP RSB 5-1 (RAI 440.131).

440.14 Open: The response will be provided to NRC ASB for review.

440.16 Closed: Per discussion.

440.17 Open: The response to this RAI will be referred to ICSB.

440.18 Open: The response shall be revised to discuss alarms.

440.21 Closed: Per discussion.

440.22 Open: Response to be provided.

440.30 Closed: Per discussion.

440.31 Closed: Per discussion.

440.32 Closed: Per discussion.

440.33 Closed: Per discussion.

440.36 Open: Refer to 440.115

440.37 Closed: Per discussion.

440.38 Open: W Owners Group ERG's are still undergoing NRC review.

440.39 Open: Applicant to provide NPSH curves for all ECCS pumps.

440.40 Open: Refer to 440.116.

440.42 Open: Pending NRC review of pre-operational tests.

440.44 Open: Pending NRC review of referenced reports.

440.47 Closed: RAI to be reviewed by MEB and Equipment Qualification Branch.

440.48 Open: Refer to 440.117.

440.49 Open: Refer to 440.118.

440.52 Open: Applicant to provide type of thermal insulation used in containment.

440.53 Open: Reference 1 to be reviewed.

440.54 Open: NRC reviewing other setpoint studies to determine that Seabrook methodology is consistent.

440.56 Open: Some figures were discussed, review not complete.

440.57 Open: Refer to 440.123.

440.59 Open: To be reviewed by Core Performance Branch.

440.60 Open: A safety-related instrument air supply will be addressed in response to 440.131.

440.89 Open: Discussion regarding locked rotor flow vs. broken shaft flow; no resolution.

440.91 Open: Response indicates boron dilution event is ongoing.

440.94 Open: The last paragraph on the first page of the response must be deleted.

440.103 Open: To be reviewed by Core Performance Branch.

440.104 Open: To be reviewed by PTSB.

440.131 New question which requests comparison to BTP RSB 5-1.

440.132 New question which requests discussion of most limiting single failure during LOCA.