



ASEA BROWN BOVERI

December 31, 1993  
LD-93-178

Docket No. 52-002

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

**Subject:** System 80+™ ITAAC Submittal

**Reference:** NRC letter, T. Boyce (NRC) to C. Brinkman (ABB-CE) dated December 3, 1993

Dear Sirs:

This letter provides responses to comments on ABB-CE's Design Descriptions (DD) and associated Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) and on changes to CESSAR-DC that are related to those DD/ITAAC (Reference). Responses to CESSAR-DC comments will be transmitted under separate cover.

The following ITAAC comments of the Reference were withdrawn as a result of discussions between NRC and ABB-CE personnel:

- The first three I&C Task Group comments on DD/ITAAC 2.5.2 (Engineered Safety Features-Component Control System) regarding Figures 2.5.2-2, 2.5.2-3, and 2.5.2-4 and ITAAC item 15; and
- Plant Systems comment on DD/ITAAC 2.7.4 (Fuel Handling System) regarding seismic classification.

The response to some comments is different from the response requested. Identification and explanation of those responses is as follows:

- 1) A Structural Task Group comment on DD/ITAAC 2.1.6 (Reactor Vessel Internals) noted that the words, "and mid-loop monitors," were not added to the DD. DD/ITAAC 2.1.6 shows the guide paths for those instruments, which is felt to be the appropriate information for DD/ITAAC 2.1.6. The heated junction thermocouples used to monitor water level over the elevation of the reactor vessel inlet nozzle are addressed in DD/ITAAC 2.3.1 (Reactor Coolant System). This approach was discussed with NRC staff, and is believed to address the substance of the comment.

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- 2) A Structural Task Group comment on DD/ITAAC 2.3.4 (NSSS Integrity Monitoring System) requested that certain information in CESSAR-DC be incorporated into DD/ITAAC 2.3.4. The information is not incorporated in the DD/ITAAC based on agreement with HICB personnel during meetings in October, 1993 that placing the cited information in CESSAR-DC is sufficient.
- 3) A Projects comment on DD/ITAAC 2.7.6 (Component Cooling Water System) requested that the DD state that component cooling water to the instrument air compressors is not isolated by a safety injection actuation signal (SIAS). For consistency in treating individual components in this DD/ITAAC, Figure 2.7.6-1 was revised to place the instrument air compressors in the portion of the component cooling water system that is not isolated by an SIAS, and Table 2.7.6-2 was revised to show that the instrument air compressors are supplied with component cooling water during design basis accidents. These revisions are believed to achieve the objective of the comment.
- 4) An I&C Task Group comment on DD/ITAAC 2.7.15 (Equipment and Floor Drainage System) requested that certain level instruments be shown on Figure 2.7.15-1. The requested instrumentation was added to Figure 2.4.7-1 where the holdup tank volume and the reactor cavity are shown.
- 5) A Project comment on Section 1.2 (General Provisions) requested removal of the word "initial" from the maximum core power level. The word "initial" was retained based on an ABB-CE management evaluation that the modifier is consistent with the treatment of numerical information elsewhere in the DD/ITAAC.
- 6) A Project comment noted that an earlier staff comment on definition of interface requirements was not addressed. The DD/ITAAC in which interfaces are located are identified in Section 4.0 of the Enclosure, and the interface requirements themselves are provided in the identified DD/ITAAC sections under the subheading, "Interface Requirements". We believe this treatment is consistent with discussions on interfaces between the staff and ABB-CE. The commitments to the requirements of 10CFR52.47 on interfaces are discussed in the introduction to Section 4.0.
- 7) A Severe Accident comment noted that basaltic concrete would need to be addressed. A decision has been made not to use basaltic concrete and, therefore, basaltic concrete is not addressed in the DD/ITAAC.

A number of non-editorial DD/ITAAC revisions in the Enclosure resulted from factors other than the referenced NRC comments. Those revisions are:

- 1) Table 2.1.1-1 (item 2.c) acceptance criterion) - Containment leakage was corrected to state volume percent rather than weight percent.
- 2) Table 2.3.1-1 (item 7.a) acceptance criterion) - RCS flow rate was corrected to the value assumed in the safety analysis.
- 3) Table 2.4.5-2 - The valve arrangement reference for item 52 was corrected, and a note was added explaining that the check valves in items 13, 14, 15, and 16 are not containment isolation valves. This treatment of the check valves was agreed to with the staff.
- 4) DD/ITAAC 2.3.2 - Discussion of automatic starting of a shutdown cooling pump on CSAS was added. The shutdown cooling pumps are interchangeable in function with the containment spray pumps. Figure 2.3.2-1 was modified to explain that the pressure and current instruments are not safety-related and not Class 1E.
- 5) DD/ITAAC 2.4.6 - The containment spray pump start signal was changed from SIAS to CSAS. The pump will start on SIAS, but CSAS is the signal credited in the safety analysis. Discussion of automatic starting of a shutdown cooling pump on CSAS was also added. Figure 2.4.6-1 was modified to explain that the pressure and current instruments are not safety-related and not Class 1E.
- 6) DD/ITAAC 2.7.15 - Automatic diversion of the turbine building floor drain sump discharge to the liquid waste management system (LWMS) on high radiation level was changed to automatic termination of the discharge. Diversion to the LWMS is manual. This was agreed to with the staff.
- 7) DD/ITAAC 2.7.31 - The component cooling water heat exchanger structure ventilation system serving a component cooling water heat exchanger structure is now referred to as a "system" rather than a "Division". The term "Division" is inappropriate for a non-safety system.
- 8) DD/ITAAC 2.8.2 - As part of the action to close the steam generator tube rupture issue, discussion of a radiation instrument to detect primary-to-secondary leakage was added to the DD, and ITAAC item 11.a) was added to verify the existence of the instrument.

- 9) DD/ITAAC 2.8.6 - The description of the location of the condensate system was revised.
- 10) Table 2.9.4-2 - The number of steam generator blowdown monitors was revised, the steam generator drain tank discharge monitor was deleted, a condensate cleanup system neutralization tank discharge monitor was added, and the main steam line radiation monitors were added.
- 11) Figure 2.12.1-1 - Separations between panels were deleted from the figure.
- 12) Table 2.12.2-1 - Footnote 2 was changed to refer to indication for two discharge headers rather than to trains 3 and 4.
- 13) DD/ITAAC 2.8.7 - Of the three signals that actuate the steam generator blowdown line containment isolation valves, the SIAS was changed to an alternate feedwater actuation signal.
- 14) Figure 2.4.5-1 - A note was added stating that the check valve in configuration 4 is not a containment isolation valve.
- 15) Figure 2.4.4-1 - The first check valve inside containment in each direct vessel injection line is no longer identified as a containment isolation valve.
- 16) Ventilation System Figures - Fan status instrumentation has been added.
- 17) Figure 2.4.7-1 - An IRWST vent was added and the vacuum breakers deleted for resolution of the IRWST hydrogen buildup issue.
- 18) Figures 5.0-1 and 5.0-2 - The figures are scaled to a safe shutdown earthquake acceleration of 1.0 g. Replacement figures scaled to 0.3 g will be provided as soon as they are available.

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Please feel free to query us as the staff evaluates this submittal. You may contact me or Mr. George Hess at (203) 285-5218 for assistance in this matter.

Very truly yours,

COMBUSTION ENGINEERING, INC.

*G. D. Hess for*

C. B. Brinkman  
Acting Director  
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GDH/agk

Enclosure: As Stated

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