



April 5, 1993
LD-93-062

Mr. Dennis M. Crutchfield
Associate Director for
Advanced Reactors and License Renewal
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: System 80+™ ITAAC Submittal Schedule

Dear Mr. Crutchfield:

Last week the NRC and ABB-CE conducted a very productive review of the twelve System 80+ prototype Design Descriptions and ITAAC, as well as agreeing upon the Definitions and General Provisions sections. Enclosed is the listing of agreements and open issues which was compiled during the four-day review session and confirmed or modified in the three-hour wrap-up session with Mr. Russell.

In your letter proposing the aforementioned review, you requested that ABB-CE provide a schedule for submission of the remaining ITAAC by April 5, 1993. The following is in response to that request:

First Submittal	April 30
Second Submittal	May 28
Third Submittal	June 18

It is our intention to coordinate these submissions such that the system or structure will have completed closeout of its respective DSER open items prior to submission of the corresponding Design Description and ITAAC. This is in order to prevent subsequent changes to the ITAAC and was stipulated by Mr. Russell. Consequently, we anticipate the bulk of ITAAC will be issued May 28.

During the wrap-up session last week, Mr. Wilson indicated that NRR staff needed to reach internal agreement on the procedures for coordinating DSER open issue closeout with ITAAC submittals in order to finalize the FSER. As soon as NRR has reached this

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internal agreement, I propose that a project meeting be held to work out the details of the System 80+ ITAAC submissions and follow-on meetings so as to achieve the earliest possible FSER issuance.

Very truly yours,

C. B. Brinkman for

C. B. Brinkman
Acting Director
Nuclear Systems Licensing

/lw

Enclosure: As Stated

cc: R. Borchardt (NRC)
T. Boyce (NRC)
P. Lang (DOE)
J. Trotter (EPRI)
T. Wambach (NRC)
J. Wilson (NRC)

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AGREEMENTS ON GUIDANCE FOR ITAAC PREPARATION

1. Format of Design Description and ITAAC

The specific format can be chosen by ABB C-E following NRC guides. The format used should be consistent among DD and ITAAC. The NRC has no objections to a renumbering of the DD and ITAAC.

2. Equipment in Harsh Environments

Covered by the Basic Configuration as in General Provisions for systems. Safety related equipment described in the DD and/or designated or annotated on a figure is demonstrated to be qualified for its appropriate environment by performance of the Basic Configuration verification.

3. Safety Related MOVs Identified in SSAR

ABB C-E must review the list of MOVs designated in the SSAR as having an active safety function. Also, review the recent IST submittal to determine its relationship to valves identified as MOVs and check valves in Tier 1.

4. Check Valves

Treatment to be similar in approach for MOVs but in-situ testing can be limited to preoperational tests. If analysis is required to adjust test results to specific operating conditions, the analysis method and criteria are provided in Tier 2.

5. Designation of Valve Motive Power

In general, ABB C-E will designate MOVs. If pneumatic or solenoid operated valves may be used, the DD and ITAAC must contain entries to address responses of these valves upon loss of motive power and the SSAR must describe this option.

6. Specification of Numeric Performance Values

Numeric performance values for SSC should be specified as ITAAC acceptance criteria to demonstrate satisfaction of a Design Commitment (DC). The numeric performance values do not have to be specified as DC and in the DD unless there is a specific reason to include them there.

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7. Specification of Design Pressures and Temperatures

Design pressures and temperatures for ASME Code pressure retaining components do not have to be specified in the DD, Figure, or ITAAC except for those pressure retaining components in systems directly connected to RCPB system and subject of ISLOCA, pending resolution of ISLOCA open items.

8. Use of METRIC Units

ABB C-E proposes to use only English units in DD, Figures and ITAAC and will submit an official policy exemption request. This issue is not within the scope of the Tier 1 material review process and ABB C-E will proceed using only English units until the Commission decides on the exemption request.

9. Remote Shutdown Panel (RSP)

Displays, controls, and alarms in the RSP can be identified and verified as part of the RSP ITAAC, rather than included in each system ITAAC.

10. Containment Isolation Valves (CIV)

CIVs are to be shown on the Figure of the applicable system ITAAC. However, the demonstration of CIV performance to a Containment Isolation Signal, electrical power assignment to the CIVs and failure response of the CIVs, as applicable, will be included in the CIS ITAAC that encompasses all CIVs. This approach should be described in the General Provisions section or in an alternate section of the Tier 1 document to show where CIV power, logic and leak rate testing will be performed in Tier 1.

11. Designation of Safety Related Systems

Each DD should include wording (preferably in the first paragraph) that identified whether the system is safety related or is a non-safety system. Exceptions should be noted if parts of the system are not safety related or if certain aspects of a non-safety system have a safety significance.

12. Equipment Protection Features

Equipment protection features are generally not required to be described in Tier 1 and do not require ITAAC entries. However, there may be exceptions based on other considerations.

13. Components Cooled by Cooling Water or Ventilation Systems

Heat loads requiring cooling, e.g., pump motors, heat exchangers, need not show the source of cooling unless the source of cooling has a specific or unique characteristic that would require Tier 1 treatment, e.g., RCP seal water cooling.

14. Adverse Systems Interactions (ASI) Related to USI A-17

The areas of concern including seismic responses, pipe breaks and floods are covered by considerations included in the Piping DAC/ITAAC and Building ITAAC. ASI entries are not required in each system. ABB C-E proposes to address this issue by preparing a narrative description of how USI A-17 issues are treated and include this narrative in Tier 2.

15. Statement on Seismic Category I Qualification

The statement that safety related components are qualified Seismic Category I is sufficient if the safety related components are identified relative to their ASME Code Class in the DD and Figure.

16. Leak Before Break (LBB)

LBB is included in the Piping Design Description and DAC/ITAAC as an entry. If this approach is used the acceptance criteria for LBB is specified as part of the Piping Design Description and DAC/ITAAC.

17. Treatment of Alarms

The minimum inventory of alarms as established in the MCR or RSP ITAAC do not have to be shown on DD Figures. Other essential alarms, e.g., associated with SCS high pressure (ISLOCA), SCS performance monitoring indications, not part of the minimum inventory should be shown on the DD figures.

18. Separation by Physical or Fire Barriers

ABB C-E should rephrase its Standard Statement on separation of mechanical systems by deleting the phrase "Outside Containment" and include wording that states to the effect that "system mechanical divisions are separated by physical or fire barriers with the exception of (specify portions) in containment that are separated by (use fire protection terminology-SECY90-016)".

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19. Inclusion of Valves

Figures for safety related system should include valves that are on the SSAR P&ID except for items, such as, fill, drain, vents, test tees, and maintenance isolation valves. Valves remotely operable from the Control Room must be shown if their mispositioning could affect system safety function. Other valves are evaluated for exclusion on a case by case basis.

20. PRA Relationships

PRA related materials must be documented in PRA and associated with systems in the ITAAC.

21. Use of the Terms "TEST" and "Type Test"

ABB C-E should review all "Tests" specified in the ITA to use the wording that is consistent with the revised Definitions. Testing which could be classified as "Vendor", "Manufacturer", "Shop" should be specified as such to make clear what type of test is intended. Issue could include the issue of modular construction. An alternate approach would be to define "Shop" test.

22. ASME Pressure Test

The use of the term "pressure test" is acceptable versus "hydro test" since the test will be performed in accordance with ASME specifications.

23. Class 1E Power Designation

Use the term "Division" rather than "Bus". "Bus" can be used for special power cases.

24. Use of the Term "Displays" versus "Indications" for Instruments

ABB C-E will review the use of the term "displays". As presently worded in the ABB C-E ITAAC entry, the term "display" does not seem to apply.

25. Channel

A definition of Channel will be included in the Definitions section.

26. ASME Acceptance Criteria for RCS Vessels and Internals and Containment

NRC recommends the use of acceptance criteria related to materials, preservice inspections, and surveillance specimens (for reactor vessel).

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27. Interface Requirements for Out of Scope Non-Safety Systems

Non-safety systems which cannot impact safety systems do not need Interface Requirements. Specific in-scope design details which preclude the non-safety systems from impacting a safety system must be addressed in Tier 1.

28. Accessibility for ISI Testing and Inspection

Does not need to be addressed in Tier 1. However, NRC will not grant reliefs to the ISI requirements after Design Certification.

29. Flow Control Valves

The flow control capability of control valves does not have to be tested in ITAAC. However, flow control valves must be shown on the Figure if they are required to fail-safe or receive a safety actuation signal. The fail-safe position should be noted on the Figure.

30. Pressure Testing of Ventilation Systems

Where duct work is an extension of the CR boundary for habitability, the duct work should be pressure tested.

31. Operating Procedure Development Commitment in Tier 1

Operating procedures will be developed by the COL applicant and will not be part of the ITAAC for Design Certification.