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Your ref: Docket No. 52-006
Our ref: DCP_NRC_002785

February 19, 2010

Subject: AP1000 Response to Request for Additional Information (SRP 14)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 14. This RAI response is submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information included in this response is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

Enclosure 1 provides the response for the following RAI(s):

RAI-SRP14.3-NWE2-01 R2

Questions or requests for additional information related to the content and preparation of this response should be directed to Westinghouse. Please send copies of such questions or requests to the prospective applicants for combined licenses referencing the AP1000 Design Certification. A representative for each applicant is included on the cc: list of this letter.

Very truly yours,

Robert Sisk, Manager
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/Enclosure

1. Response to Request for Additional Information on SRP Section 14

D063
NRO

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ENCLOSURE 1

Response to Request for Additional Information on SRP Section 14

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP14.3-NWE2-01
Revision: 2

Question:

By letter dated June 13, 2008, Westinghouse submitted AP1000 DCD Impact Document APP-GW-GLE-007, Revision 0, "ITAAC Changes." One of the proposed changes to ITAAC would change the definition of "As-built." The proposed change would add the following to the definition of "As-built":

> Determination of physical properties of the as-built structure, system, or component may be based on measurements, inspections, or tests that occur prior to installation provided that subsequent fabrication, handling, installation, and testing does not alter the properties.

On August 1, 2008, the Nuclear Energy Institute (NEI) submitted NEI 08-01, Rev. 0, "Industry Guidelines for ITAAC Closure Process Under 10 CFR Part 52" a draft of which was the basis for the proposed change to the definition of "As-built" in APP-GW-GLE-007. Section 3.1.4 of NEI 08-01contains the following statement:

> Many ITAAC require verification of "as-built" SSCs. However, some of these ITAAC will involve measurements and/or testing that can only be conducted at the vendor site due to the configuration of equipment or modules or the nature of the test (e.g., measurements of reactor vessel internals). For these specific items where access to the component for inspection or test is impractical after installation in the plant, the ITAAC closure documentation (e.g., test or inspection record) will be generated at the vendor site and provided to the licensee.

Please address why the proposed change to the definition of "As-built" should not be made more restrictive in light of the above-cited statement from NEI-08-01.

Subsequent to the submittal of Revision 0 of this response NRC personnel provided additional explanation for their concerns with the as-built definition.

Subsequent to the submittal of Revision 1 of this response, NRC personnel and industry personnel have better refined the definition of "as-built". Along with this the NRC staff has requested each design center to review their ITAACs to ensure that the use of the term "as-built" is consistent with the Tier 1 definition and that the substitution of undefined, similar terms (e.g., as-installed) for "as-built" is discouraged. The NRC staff also encouraged the design centers to review their ITAACs for appropriate inspectability and quality as was provided in the December 17th, 2009 Category 3 meeting on ITAAC maintenance.

Westinghouse Response:

This response supersedes previous responses provided to this RAI. A complete re-write of the prior Westinghouse response is provided. The main principle of revision 0 and revision 1 of this RAI response was that the AP1000 definition of "as-built" would match what was provided in NEI 08-01 which is endorsed by the NRC in Regulatory Guide 1.215. The definition of as-built has further evolved based on interactions during public Construction Inspection Program

Taskforce meetings. Through Construction Inspection Program Taskforce meetings the industry and the NRC have agreed to augment the NEI 08-01 definition to match the definition agreed to between the NRC and the industry at the December 17th, 2009 Category 3 Public Meeting on ITAAC Maintenance.

The Revised definition that will replace the DCD Revision 17 version is provided in the mark-ups below. The suggested wording to Section 14.3.2.2 that was provided in Revision 1 of this RAI response is being removed as it provides no clarification to the revised definition.

A thorough review of the AP1000 DCD Revision 17 ITAACs has been completed. The review was focused on ensuring that the ITAACs that used the term "as-built" were still valid based on the key principles provided by the NRC.

At the December 17th public meeting the NRC provided insight that the substitution of the term "as-built" for an undefined term such as "as-installed" or "installed" is discouraged. The NRC stated that the term as-installed would be considered equivalent to the term "as-built". Therefore, for consistency, the term "as-installed" was replaced with "as-built" and the term "installed" was replaced with more specific terminology as appropriate.

There are key principles that the NRC has provided for further clarification to the term "as-built" and it's use for determining the physical properties of the SSC in a location other than it's final location. Those Key Principles are based on whether the definition is applied to:

- an "as-built" system
- an ITA that specifies testing
- terminology in the ITAAC that implies the as-built construction is bounding some previous qualification
- ITA that is related to Code Work
- ITA where analysis is required.
- ITA where inspection can only be done on an as-built component

"As-Built" System

When written to apply to an entire system, the application of the term, "as-built", is constrained by the first sentence of the definition. The following ITAAC are considered system ITAAC that would require the entire system to be in it's final location for the ITA to be completed.

1. Functional Arrangement ITAAC – as-built system (implies that the system as described in the DCD is it's final location to meet the ITAAC) – AC specifically states the "as-built" system conforms with the description in the DCD.

   ITAACs – 2.1 01.01, 2.1 02.01, 2.1 03.01, 2.2 01.01, 2.2 02.01, 2.2 03.01, 2.2 04.01, 2.2 05.01, 2.3 01.01, 2.3 02.01, 2.3 03.01, 2.3 04.01, 2.3 05.01, 2.3 06.01, 2.3 07.01, 2.3 08.01, 2.3 09.01, 2.3 10.01, 2.3 11.01, 2.3 12.01, 2.3 13.01, 2.3 14.01, 2.3 15.01, 2.3 19.01a & b, 2.3 29.01, 2.4 01.01, 2.4 02.01, 2.4 06.01, 2.5 01.01, 2.5 02.01, 2.5 03.01, 2.5 04.01, 2.5 05.01, 2.5 06.01, 2.5 09.01, 2.6 01.01, 2.6 02.01, 2.6 03.01, 2.6 04.01, 2.6 05.01, 2.7 01.01, 2.7 02.01, 2.7 03.01, 2.7 04.01, 2.7 05.01, 2.7 06.01, 2.7 07.01, 3.3 00.01

2. ITAAC 2.5 01.03e – Inspection of the "as-built" system will be performed for sensors being separate for DAS vs. PMS.

3. ITAAC 2.5 05.03b – inspection of the "as-built" system will be performed.

4. ITAAC 2.6 03.05di and 2.6 03.05dii – inspection of the "as-built" system will be performed

5. ITAAC 2.6 05.02.i – inspection of the "as-built" system will be performed

There are other system ITAACs that have the term "as-built" in the ITA where it is considered technically justifiable to determine physical attributes of the system prior to the system in its final location. These ITAACs are 2.1 03.02a, 2.1 03.02b, 2.1 03.02c, 2.5 01.03a, and 2.5 01.03b. These justifications will be completed in accordance with NEI 08-01 (Regulatory Guide 1.215).

"As-built" Testing

When the ITA specifies testing and the location is not prescribed, it is assumed that such tests will be performed with the SSC installed in its final location at the plant site. The AP1000 definition of testing is the "actuation, operation, or establishment of specified conditions to evaluate the performance or integrity of as-built structures, systems, or components, unless explicitly stated otherwise." A review of all of the ITAACs that contain testing has been completed and the following ITAACs are either satisfied by the Code testing allowance as described later or have changes identified to specifically state testing that may occur prior to installation of the SSC in its final location. There are a number of ITAAC that reference the term testing and use the term "as-built" in the ITA. This is redundant but does not require a change to the ITAACs.

ITAACs satisfied by Code Testing;

1. ITAAC 2.1 02.08a.ii will not be changed because the ITAAC specifically states that the testing will be done in accordance with ASME Code Section III and may be performed at a vendor facility as described later in "As-Built" Code Requirements.

2. ITAAC 2.2 01 04a.ii will not be changed because the ITAAC specifically states that the testing will be done in accordance with ASME Code Section III and may be performed at a vendor facility as described later in "As-Built" Code Requirements.

3. ITAAC 2.2 04.08a.ii will not be changed because the ITAAC specifically states that the testing will be done in accordance with ASME Code Section III and may be performed at a vendor facility as described later in "As-Built" Code Requirements.

4. ITAAC 2.3 06.09a.ii will not be changed because the ITAAC specifically states that the testing will be done in accordance with ASME Code Section III and may be performed as a vendor facility as described later in "As-Built" Code Requirements.

ITAACs that required word changes in the ITA due to compliance with definition of "testing" are as shown below. The acceptance criteria remains the same but the ITA must be changed because the testing was never intended to be testing that would be performed with the component in its final location.

1. ITAAC 2.1 03.11 has been changed to identify the testing as Manufacturing testing that may be performed at a vendor facility because it is impractical to perform Charpy V-Notch testing on Reactor Vessel materials after the vessel is on-site.

2. ITAAC 2.2 03.09c has been changed to "Type Tests, analysis, or a combination of Type Tests and analyses…." to better define that the testing will be done prior to the equipment being placed on-site.

3. ITAAC 2.2 04.09b.ii has been changed to "Type Tests and/or analyses will be performed…." to better define that the testing will be done prior to the equipment being placed on-site.

The other testing that may be performed on equipment at locations other than their final location is hydrostatic testing and pressure testing as performed to meet ASME Code requirements. Those ITAACs are described in the "As-Built" Code Requirements write-up in this document.

"As-Built" Bounding

When the ITAAC uses terminology that implies that the as-built construction should be bounded by any offsite inspections, tests, or analyses, the performance of such ITA would include verification of any affected structure, system, or component in its final location. For the AP1000, these ITAACs would be the "as-built" reconciliation of type tested equipment as listed below.

1. Seismic anchorage ITAACs - "as-built" equipment including anchorage is seismically bounded by the tested or analyzed conditions.

   ITAACs – 2.1 02.05a.iii, 2.1 03.06a.iii, 2.2 01.05.iii, 2.2 02.05a.iii, 2.2 03.05a.iii, 2.2 04.05a.iii, 2.2 05.05a.iii, 2.3 02.05.iii, 2.3 05.02.iii, 2.3 06.05a.iii, 2.3 07.05.iii, 2.3 10.05a.iii, 2.3 13.05.iii, 2.5 02.02.iii, 2.5 05.02.iii, 2.6 01.02.iii, 2.6 03.02.iii, 2.7 01.05.iii, 3.5 00.01.iii

2. Harsh Environment ITAACs – "as-built" Class 1E (non-Class 1E for some ITAACs) equipment and the associated wiring, cables, and terminations identified in Table XXX as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

   ITAACs – 2.1 02.07a.ii, 2.1 03.09a.ii, 2.2 01.06a.ii, 2.2 01.06d.ii, 2.2 02.06a.ii, 2.2 03.07a.ii, 2.2 04.07a.ii, 2.3 02.6a.ii, 2.3 06.07a.ii, 2.3 13.06a.ii, 2.5 05.03a.ii, 3.5 00.02.ii

3. Active Safety Related Valve Functional Capability – "as-built" motor-operated valves (or squib valves for certain ITAAC) are bounded by the tests or type tests.

   ITAACs – 2.1 02.12a.ii, 2.1 02.12a.v, 2.2 01.11a.ii, 2.2 02.11a.ii, 2.2 04.12a.ii, 2.3 02.11a.ii, 2.3 06.12a.iii

"As-Built" Code Requirements

If any Code provisions specify conduct of the Inspection, Tests, or Analysis requirements at locations separate from the plant site, it is "technically justifiable" not to repeat the ITA at the final in-plant location as long as the Acceptance Criteria have been previously met in the application of the approved "as-built" location.

1. ASME Code Section III design reports exist for the as-built components and/or piping as identified in each sections Table.

   ITAACs – 2.1 02.02a & 2b, 2.1 03.03, 2.2 01.02a & 2b, 2.2 02.02a & 02b, 2.2 03.02a & 02b, 2.2 04.02a & 02b, 2.2 05.02a & 02b, 2.3 02.02 & 02b, 2.3 06.02a & 02b, 2.3 07.02a & 02b, 2.3 10.02a & 02b, 2.3 13.02, 2.7 01.02a & 02b

2. ASME Code Section III requirements are met for the non-destructive examination of pressure boundary welds for the as-built components and piping as identified in each sections Table.

   ITAACs – 2.1 02.03a & 03b, 2.1 03.04, 2.2 01.03a & 03b, 2.2 02.03a & 03b, 2.2 03.03a & 03b, 2.2 04.03a & 03b, 2.2 05.03a & 03b, 2.3 02.03a & 03b, 2.3 06.03a & 03b, 2.3 07.03, 2.3 10.03a & 03b, 2.3 13.03, 2.7 01.03a & 03b

3. Hydrostatic (or pressure) testing of components and/or piping required by the ASME Code Section III. These specific ITAACs do not contain the word "as-built" but because the word testing is used, "as-built" is implied due to the definition of testing.

   ITAACs – 2.1 02.04a & 04b, 2.1 03.05, 2.2 01.04a.i, 4a.ii & 04b, 2.2 02.04a & 04b, 2.2 03.04a & 04b, 2.2 04.04a & 04b, 2.2 05.04a & 04b, 2.3 02.04a & 04b, 2.3 06.04a & 04b, 2.3 07.04, 2.3 10.04a & 04b, 2.3 13.04, 2.7 01.04a & 04b

"As-built" Analysis

Where the ITA prescribes analyses of as-built construction, it is "technically justifiable" for such analyses to be performed prior to construction completion, as long as there is supporting evidence (e.g., inspections, tests) that the final construction was not in variance with analytical assumptions or conclusions.

1. ITAACs on inspection that will be performed for the existence of a report verifying that the "as-built" piping meets the requirements for functional capability. The requirements and design of the piping will be completed prior to piping construction but another report will be issued verifying that the "as-built" piping meets the prior analysis.

   ITAACs – 2.1 02.05b, 2.2 02.05b, 2.2 03.05b, 2.2 04.05b, 2.2 05.05b, 2.3 06.05b

2. ITAACs on verification of a Leak Before Break evaluation report exists and concludes that the LBB acceptance criteria are met by the "as-built" piping and materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.

ITAACs – 2.1 02.06, 2.2 03.06, 2.2 04.06, 2.3 06.06

3. ITAAC 2.2 01.08 – Analysis for the "as-built" containment electrical penetrations.
4. ITAAC 2.2 05.07c – Analysis will be performed to determine the heat loads from the "as-built" equipment.
5. ITAAC 2.3 03.02 – Inspection will be performed for the existence of a report verifying that the "as-built" ancillary diesel generator fuel tank and its anchorage are designed using Seismic Category II methods and criteria.
6. ITAAC 2.3 04.02.ii – A reconciliation analysis using the as-designed and as-built piping information will be performed, or an analysis of the "as-built" piping will be performed.
7. ITAAC 2.6 03.07 – Analyses for the "as-built" IDS dc electrical distribution system ....
8. ITAAC 2.6 03.08 – Analyses for the "as-built" IDS dc electrical distribution system ....
9. ITAAC 2.6 03.09 – Analyses for the "as-built" IDS dc electrical distribution system ....
10. ITAAC 2.6 03.10 – Analyses for the "as-built" IDS dc electrical distribution system ....

"As-built" Inspections

Based on examples that will be provided in NEI 08-01 there may be cases for "as-built" inspections where it is objectively understood that an ITA inspection can only be performed on an as-built component at a location other than the plant site, it is "technically justifiable" to document that inspection as record of the related ITAAC completion.

There are other ITAACs that have the term "as-built" in the ITA where it is considered technically justifiable to determine physical attributes of those ITAACs prior to the system, structure or component in their final location. Examples of these ITAACs are 2.2 03.08c.xi, 3.3 00.02a.ii, 3.3 00.03, 3.3 00.04a, 3.3 00.04b, 3.3 00.04c, 3.3 00.09, 3.3 00.07a, 3.3 00.07b, 3.3 00.07e, 3.3 00.12, and 3.7 00.01. These justifications will be completed in accordance with NEI 08-01 (Regulatory Guide 1.215).

There is one ITAAC for "as-built" inspections that the term "as-built" is being removed because the ITAAC is related to obtaining manufacturer's data and the use of the term "as-built" in this ITAAC does not agree with the Tier 1 definition of "as-built". ITAAC 2.2 05.07a.ii – The analysis of storage capacity of the "as-built" manufacturer's data is conflicting so the term "as-built" is being removed from the ITA.

To further improve the inspectability and quality issues brought up by the NRC at the December 17th meeting the ITAACs were reviewed against 9 quality issues.

1. The ITAAC lacks specific and quantitative attributes.
   The NRC has noted that some ITAACs that have been received from various design centers contained words in the acceptance criteria such as sufficient, acceptable, and adequate with no real quantitative attributes of what those terms

meant. A review of the AP1000 ITAACs has been completed and there were no ITAACs found that appear to contain information in the acceptance criteria that is not quantifiable or measurable. The only ITAAC that may have been vague was the D-RAP ITAAC which was subsequently changed in RAI-SRP17.4-SPLA-04 (DCP/NRC 2397).

2. The ITAAC is inconsistent with Tier 2 information.
The NRC has noted that some ITAACs that they have received from various design centers had data in the ITAACs that was inconsistent with the values supplied in Tier 2. The AP1000 uses a design change control process that should ensure that all the Tier 2 changes are also captured in any appropriate Tier 1 changes. This was demonstrated with the changes to Tier 1 that were made based on design changes made to DCD Revisions 16 and 17.

3. The ITAAC lacks an analysis to determine the value that needs to be verified by the test.
The NRC has noted that some ITAACs that they have received from various design centers lacked specific analysis that would be used to determine what would be required in testing or inspection. The example that was provided was an ITAAC that stated the diesel generator is sized to accommodate the expected loads without listing those loads or how they will be determined.
A review of the AP1000 ITAACs has been completed and there were no ITAACs found that contain information in the ITA or Acceptance Criteria that lacks an analysis needed to determine specified values.

4. Reference ITAAC improperly refers to sections of the DCD rather than other ITAAC.
The NRC has noted that some ITAACs that they have received from various design centers referenced entire sections of other ITAACs. The NRC has stated that this is a viable reference as long as it is understood that you cannot close out that ITAAC until all of the ITAACs from that Section are completed. For the AP1000, there are a number of ITAACs that reference other sections. The intent for many of those ITAACs was not that the entire subsection is closed but certain ITAAC in that subsection are closed. The following are the ITAACs that are changed because they reference sections and would be better suited to reference specific ITAACs. These are not technical changes to the ITAACs but administrative changes in nature to ensure that the correctly referenced ITAACs are completed to meet the intent of the original ITAAC. All of the technical requirements required by the referenced ITAACs are maintained and the components that are listed in the ITAACs are not changed.

ITAAC 2.2 04.09b – Acceptance Criteria changed to "See Tier 1 Material, Table 2.4.1-2, Item 2."

ITAAC 3.3 00 .02c – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.2.1-3, Items 2a, 2b, 3a, and 3b."

ITAAC 3.3 00.02d – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.2.1-3, Items 4a and 4b."

ITAAC 3.3 00.02e – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.2.1-3, Items 4a, 4b and 7."

The following ITAAC listed the subsection with extra information related to the component that was being verified. To be more exact the ITAACs are being revised to specifically state which ITAACs are associated with specific equipment in the originally referenced sections.

ITAAC 3.6 00.01.i – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.3.10-4, Item 7a for the sump level measuring instruments WLS-034 and WLS-035."

ITAAC 3.6 00.01.ii – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 3.5-6, Item 1 for the containment atmosphere radioactivity monitor PSS-RE027."

ITAAC 3.6 00.01.iii – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.1.2-4, Items 5a, 7a, and 10 for the pressurizer level measuring instruments RCS-195A, RCS-195B, RCS-195C, and RCS-195D."

ITAAC 3.6 00.01.iv – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.1.2-4, Items 5a and 7a for the RCS hot and cold leg temperature instruments RCS-121A, RCS-121B, RCS-121C, RCS-121D, RCS-122A, RCS-122B, RCS-122C, RCS-122D, RCS-131A, RCS-131B, RCS-131C, RCS-131D, RCS-132A, RCS-132B, RCS-132C, RCS-132D."

ITAAC 3.6 00.01.v – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.1.2-4, Items 5a, 7a, and 10 for the RCS pressure instruments RCS-140A, RCS-140B, RCS-140C, and RCS-140D."

ITAAC 3.6 00.01.vi – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.3.2-4, Item 13 for the letdown and makeup flow instruments CVS-001 and CVS-025."

ITAAC 3.6 00.01.vii – Inspections, Tests, Analyses and Acceptance Criteria changed to "See Tier 1 Material, Table 2.3.10-4, Item 10 for the reactor coolant drain tank level instrument WLS-002."

There are two ITAACs where it is appropriate to ensure that the other subsection is closed out prior to sending in the closure letter from that ITAAC. They are ITAACs 3.2 00.03 and 3.2 00.06.

5. The ITAAC either incorrectly uses the terminology "as-built," or uses the undefined term "as-installed."
   The NRC has noted that some ITAACs that they have received from various design centers used undefined terms such as "as-installed". This has been

discussed and addressed in the previous discussion related to "as-built" and in the DCD mark-ups provided below.

ITAACs 2.1 02.12b, 2.2 01.11b, 2.2 02.11b, 2.2 03.12b, 2.2 04.12b, 2.2 05.10, 2.3 02.11b, 2.3 06.12b, 2.3 13.11b, 2.7 01.11 had the term installed in the ITA. The term installed was removed due to it's not being defined. Installed was replaced with the term "remotely operated" to be more consistent with what is in the Design Commitment and Acceptance Criteria. These ITAACs also had the term testing in each of the ITA's. By definition of the term testing, this will be done in the final location of the equipment so removing the term installed was an administrative change.

6. The ITAAC improperly associates the defined terms "Inspection," "Test," or "Analysis" with the activity needed to validate the acceptance criteria.
The NRC has noted that some ITAACs that they have received from various design centers improperly associated the terms inspection, tests, or analyses with the activity needed to validate the acceptance criteria. The NRC provided the example of an inspection for records in the ITA column when the acceptance criteria was specific that the construction is reinforced concrete and there was no requirement for a record to exist.
A review of the AP1000 ITAACs has been completed and there were no ITAACs found that improperly associated the defined terms, inspection, test, or analysis in the ITA with the requirement in the Acceptance Criteria. In each instance of the AP1000 ITAACs where an inspection for records exists in the ITA, there is the requirement in the Acceptance Criteria that a report exists.

7. The ITAAC does not verify the intent of the design commitment.
The NRC has noted that some ITAACs that they have received from various design centers have ITAACs that required both the existence and operation of the equipment in the same ITAAC without the ITA clearly having the testing as one of the methods to determine the ITAAC.
A review of the AP1000 ITAACs has been completed and there were no ITAACs found that did not verify the intent of the design commitment in the ITA or the Acceptance Criteria.

8. The ITAAC does not provide sufficient information to allow verification of the essential attributes during the performance of the ITAAC.
The NRC has noted that some ITAACs that they have received from various design centers have ITAACs that did not provide sufficient information to allow verification of the attributes during the performance of the ITAAC. An example given was of as-built flood barriers with no reference to a table or location of those flood barriers.
A review of the AP1000 ITAACs has been completed and there were no ITAACs found that did not provide sufficient information to allow verification of the essential attributes during the performance of the ITAAC. Most of the AP1000 ITAACs clearly reference a Table or Figure for structures, systems, and components. If there is no Table or Figure referenced there is sufficient information in the ITA or the Acceptance Criteria.

9. The ITAAC is not in agreement with the references provided in it.
   The NRC has noted that some ITAACs that they have received from various design centers have ITAACs where the Commitment wording and the Acceptance Criteria wording do not fully describe what is being referenced to meet the ITAAC. The example provided by the NRC was a flooding barrier wall and water-tight door that are referred to in a Table that does not contain any doors and the flooding barrier walls are not specifically spelled out in the Table. A review of the AP1000 ITAACs has been completed and there were no ITAACs found that were not in agreement with the references provided in the ITAAC. This issue did appear in DCD Revision 17 in Tables 2.2.3-4 and 2.3.11-2. There were two null set ITAACs that were created because of design changes for DCD Revision 17. Both of those issues were corrected in letter to the NRC DCP_NRC_002672 dated October 23, 2009.

The following mark-ups are based on ITAACs that have been provided in DCD Revision 17. There are ITAACs that are currently being created, changed, and deleted for DCD Revision 18 based on NRC Requests for Additional Information (RAIs). A review of any new or changed ITAACs will be performed prior to the issuance of DCD Revision 18 to ensure that the ITAACs meet the standards presented in this letter for the definition of "as-built," inspectability and quality of ITAACs. This RAI is based on information available at this time and some of the ITA that are referenced as being completed in their final location may change based on future information. For those changes, technical justification would be provided with the ITAACs as specified in NEI 08-01 (Regulatory Guide 1.215).

Design Control Document (DCD) Revision:

Replace the Tier 1 definition of "as-built" from **Section 1.1 Definitions** with the following;

> **As-built** means the physical properties of a structure, system, or component following completion of its installation or construction activities at its final location at the plant site. In cases where it is technically justifiable, determination of physical properties of the as-built structure, system, or component may be based on measurements, inspections, or tests that occur prior to installation, provided that subsequent fabrication, handling, installation, and testing do not alter the properties.

~~Add~~ Delete the following ~~to~~ from the end of the write-up for **14.3.2.2 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)** that was provided in Rev 1 of RAI-SRP14.3-NWE2-01

> ~~**As-built** In the ITAAC table entries as built means the physical properties of a structure, system, or component following the completion of its installation or construction activities at its final location at the plant site. Determination of physical properties of the as built structure, system, or component may be based on measurements, inspections, or tests that occur prior to installation provided that subsequent fabrication, handling, installation, and testing does not alter the properties.~~
>
> ~~Many ITAAC require verification of as built SSCs. However, some of these ITAAC will involve measurements and/or testing that can only be conducted at the vendor site due to the configuration of equipment or modules or the nature of the inspection or test. For these specific items where access to the component for inspection or test is impracticable after installation in the plant, the ITAAC closure documentation (e.g., test or inspection record) will be generated at the vendor site and provided to the licensee. Onsite activities for these ITAAC will likely be limited to receipt and placement of the component/module in its final location.~~

Only the parts of the Tier 1 Tables that have changes are attached below. All other ITAAC in the tables are not changed as part of this RAI.

2.1.2 Reactor Coolant System

Table 2.1.2-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
5.a) The seismic Category I equipment identified in Table 2.1.2-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.1.2-1 are located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.1.2-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
5.b) Each of the lines identified in Table 2.1.2-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.1.2-2 for which functional capability is required meets the requirements for functional capability.
6. Each of the as-built lines identified in Table 2.1.2-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Tier 1 Material, Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RCS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.

Table 2.1.2-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
7.a) The Class 1E equipment identified in Table 2.1.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.1.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.1.2-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
7.b) The Class 1E components identified in Table 2.1.2-1 are powered from their respective Class 1E division.	Testing will be performed on the RCS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.1.2-1 when the assigned Class 1E division is provided the test signal.
7.c) Separation is provided between RCS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
8.a) The pressurizer safety valves provide overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code.	i) Inspections will be conducted to confirm that the value of the vendor code plate rating is greater than or equal to system relief requirements.	i) The sum of the rated capacities recorded on the valve ASME Code plates of the safety valves exceeds 1,500,000 lb/hr.
	ii) Testing and analysis in accordance with ASME Code Section III will be performed to determine set pressure.	ii) A report exists and concludes that the safety valves set pressure is 2485 psig $\pm$ 25 psi.
8.b) The RCPs have a rotating inertia to provide RCS flow coastdown on loss of power to the pumps.	A test will be performed to determine the pump flow coastdown curve.	The pump flow coastdown will provide RCS flows greater than or equal to the flow shown in Figure 2.1.2-2, "Flow Transient for Four Cold Legs in Operation, Four Pumps Coasting Down."

Table 2.1.2-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
12.a) The automatic depressurization valves identified in Table 2.1.2-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed that demonstrate the capability of the valve to operate under its design conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.1.2-1 under design conditions.
	ii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built motor-operated valves are bounded by the tests or type tests.	ii) A report exists and concludes that the as-~~installed~~ built motor-operated valves are bounded by the tests or type tests.
	iii) Tests of the ~~as-installed~~ motor-operated valves will be performed under pre-operational flow, differential pressure and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.1.2-1 under pre-operational test conditions.
	iv) Tests or type tests of squib valves will be performed that demonstrate the capability of the valve to operate under its design conditions.	iv) A test report exists and concludes that each squib valve changes position as indicated in Table 2.1.2-1 under design conditions.
	v) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built squib valves are bounded by the tests or type tests.	v) A report exists and concludes that the as-~~installed~~ built squib valves are bounded by the tests or type tests.
	vi) See item 8.d.i in this table.	vi) See item 8.d.i in this table. The ADS stage 1-3 valve flow resistances are verified to be consistent with the ADS stage 1-3 path flow resistances.
	vii) See item 8.d.ii in this table.	vii) See item 8.d.ii in this table. The ADS stage 4 valve flow resistances are verified to be consistent with the ADS stage 4 path flow resistances.
	viii) See item 8.d.iii in this table.	viii) See item 8.d.iii in this table.
	ix) See item 8.d.iv in this table.	ix) See item 8.d.iv in this table.

Table 2.1.2-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
12.b) After loss of motive power, the remotely operated valves identified in Table 2.1.2-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	Upon loss of motive power, each remotely operated valve identified in Table 2.1.2-1 assumes the indicated loss of motive power position.
13.a) Controls exist in the MCR to trip the RCPs.	Testing will be performed on the RCPs using controls in the MCR.	Controls in the MCR operate to trip the RCPs.
13.b) The RCPs trip after receiving a signal from the PMS.	Testing will be performed using real or simulated signals into the PMS.	The RCPs trip after receiving a signal from the PMS.
13.c) The RCPs trip after receiving a signal from the DAS.	Testing will be performed using real or simulated signals into the DAS.	The RCPs trip after receiving a signal from the DAS.
14. Controls exist in the MCR to cause the components identified in Table 2.1.2-3 to perform the listed function.	Testing will be performed on the components in Table 2.1.2-3 using controls in the MCR.	Controls in the MCR operate to cause the components listed in Table 2.1.2-3 to perform the listed functions.
15. Displays of the parameters identified in Table 2.1.2-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the RCS parameters in the MCR.	The displays identified in Table 2.1.2-3 can be retrieved in the MCR.

2.1.3 Reactor System

Table 2.1.3-2 (cont.)
Inspections, Tests, Analysis, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
6. The seismic Category I equipment identified in Table 2.1.3-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.1.3-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.1.3-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
7. The reactor internals will withstand the effects of flow induced vibration.	i) A vibration type test will be conducted on the (first unit) reactor internals representative of AP1000.	i) A report exists and concludes that the (first unit) reactor internals have no observable damage or loose parts as a result of the vibration type test.
	ii) A pre-test inspection, a flow test and a post-test inspection will be conducted on the as-built reactor internals.	ii) The as-built reactor internals have no observable damage or loose parts.
8. The reactor vessel direct vessel injection nozzle limits the blowdown of the RCS following the break of a direct vessel injection line.	An inspection will be conducted to verify the flow area of the flow limiting venturi within each direct vessel injection nozzle.	The throat area of the direct vessel injection line nozzle flow limiting venturi is less than or equal to 12.57 in^2.

Table 2.1.3-2 (cont.)
Inspections, Tests, Analysis, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
9.a) The Class 1E equipment identified in Table 2.1.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analysis, or a combination of type tests and analysis will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.1.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.1.3-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
9.b) The Class 1E components identified in Table 2.1.3-1 are powered from their respective Class 1E division.	Testing will be performed by providing simulated test signals in each Class 1E division.	A simulated test signal exists for Class 1E equipment identified in Table 2.1.3-1 when the assigned Class 1E division is provided the test signal.
9.c) Separation is provided between RXS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
10. The reactor lower internals assembly is equipped with holders for at least eight capsules for storing material surveillance specimens.	Inspection of the reactor lower internals assembly for the presence of capsules will be performed.	At least eight capsules are in the reactor lower internals assembly.
11. The RPV beltline material has a Charpy upper-shelf energy of no less than 75 ft-lb.	Manufacturing Test~~sing~~ of the Charpy V-Notch specimen of the RPV beltline material will be performed.	A report exists and concludes that the initial RPV beltline Charpy upper-shelf energy is no less than 75 ft-lb.
12. Safety-related displays of the parameters identified in Table 2.1.3-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.1.3-1 can be retrieved in the MCR.

2.2.1 Containment System

Table 2.2.1-3 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.a) The components identified in Table 2.2.1-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	i) A hydrostatic or pressure test will be performed on the components required by the ASME Code Section III to be tested. ii) Impact testing will be performed on the containment and pressure-retaining penetration materials in accordance with the ASME Code Section III, Subsection NE, to confirm the fracture toughness of the materials.	iii) A report exists and concludes that the results of the pressure test of the components identified in Table 2.2.1-1 as ASME Code Section III conform with the requirements of the ASME Code Section III. ii) A report exists and concludes that the containment and pressure-retaining penetration materials conform with fracture toughness requirements of the ASME Code Section III.
4.b) The piping identified in Table 2.2.1-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic or pressure test will be performed on the piping required by the ASME Code Section III to be pressure tested.	A report exists and concludes that the results of the pressure test of the piping identified in Table 2.2.1-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
5. The seismic Category I equipment identified in Table 2.2.1-1 can withstand seismic design basis loads without loss of structural integrity and safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.2.1-1 are located on the Nuclear Island. ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed. iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	i) The seismic Category I equipment identified in Table 2.2.1-1 is located on the Nuclear Island. ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis dynamic loads without loss of structural integrity and safety function. iii) The as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

Table 2.2.1-3 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
6.a) The Class 1E equipment identified in Table 2.2.1-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.2.1-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.1-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
6.b) The Class 1E components identified in Table 2.2.1-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.1-1 when the assigned Class 1E division is provided the test signal.
6.c) Separation is provided between CNS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
6.d) The non-Class 1E electrical penetrations identified in Table 2.2.1-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of containment pressure boundary integrity.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on non-Class 1E electrical penetrations located in a harsh environment.	i) A report exists and concludes that the non-Class 1E electrical penetrations identified in Table 2.2.1-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of containment pressure boundary integrity.
	ii) Inspection will be performed of the as-~~installed~~ built non-Class 1E electrical penetrations located in a harsh environment.	ii. A report exists and concludes that the as-~~installed~~ built non-Class 1E electrical penetrations identified in Table 2.2.1-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

Table 2.2.1-3 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
10.b) The valves identified in Table 2.2.1-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	Testing will be performed on remotely operated valves listed in Table 2.2.1-1 using real or simulated signals into the PMS.	The remotely operated valves identified in Table 2.2.1-1 as having PMS control perform the active function identified in the table after receiving a signal from PMS.
10.c) The valves identified in Table 2.2.1-1 as having DAS control perform an active safety function after receiving a signal from DAS.	Testing will be performed on remotely operated valves listed in Table 2.2.1-1 using real or simulated signals into the DAS.	The remotely operated valves identified in Table 2.2.1-1 as having DAS control perform the active function identified in the table after receiving a signal from DAS.
11.a) The motor-operated and check valves identified in Table 2.2.1-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed to demonstrate the capability of each valve to operate under design conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.1-1 under design conditions.
	ii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built motor-operated valves are bounded by the tests or type tests.	ii) A report exists and concludes that the as-~~installed~~ built motor-operated valves are bounded by the tests or type tests.
	iii) Tests of the ~~as-installed~~ motor-operated valves will be performed under preoperational flow, differential pressure, and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.2.1-1 under pre-operational test conditions.
	iv) Exercise testing of the check valves with active safety functions identified in Table 2.2.1-1 will be performed under preoperational test pressure, temperature and fluid flow conditions.	iv) Each check valve changes position as indicated in Table 2.2.1-1.
11.b) After loss of motive power, the remotely operated valves identified in Table 2.2.1-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.1-1 assumes the indicated loss of motive power position.

2.2.2 Passive Containment Cooling System

Table 2.2.2-3 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.b) The pipelines identified in Table 2.2.2-2 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	A hydrostatic test will be performed on the piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the piping identified in Table 2.2.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
5.a) The seismic Category I components identified in Table 2.2.2-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I components and valves identified in Table 2.2.2-1 are located on the Nuclear Island.	i) The seismic Category I components identified in Table 2.2.2-1 are located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I components will be performed.	ii) A report exists and concludes that the seismic Category I components can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built components including anchorage are seismically bounded by the tested or analyzed conditions.	iii) The report exists and concludes that the as-~~installed~~ built components including anchorage are seismically bounded by the tested or analyzed conditions.
5.b) Each of the pipelines identified in Table 2.2.2-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report concluding that the as-built pipelines meet the requirements for functional capability.	A report exists and concludes that each of the as-built pipelines identified in Table 2.2.2-2 for which functional capability is required meets the requirements for functional capability.
5.c) The PCCAWST can withstand a seismic event.	Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built PCCAWST and its anchorage are designed using seismic Category II methods and criteria.	A report exists and concludes that the as-~~installed~~ built PCCAWST and its anchorage are designed using seismic Category II methods and criteria.

Table 2.2.2-3 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
6.a) The Class 1E components identified in Table 2.2.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests or a combination of type tests and analyses will be performed on Class 1E components located in a harsh environment.	i) A report exists and concludes that the Class 1E components identified in Table 2.2.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E components and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E components and the associated wiring, cables, and terminations identified in Table 2.2.2-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
6.b) The Class 1E components identified in Table 2.2.2-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E components identified in Table 2.2.2-1 when the assigned Class 1E division is provided the test signal.
6.c) Separation is provided between PCS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.

Table 2.2.2-3 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
10.b) The valves identified in Table 2.2.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	Testing will be performed on the remotely operated valves in Table 2.2.2-1 using real or simulated signals into the PMS.	The remotely operated valves identified in Table 2.2.2-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.
10.c) The valves identified in Table 2.2.2-1 as having DAS control perform an active safety function after receiving a signal from the DAS.	Testing will be performed on the remotely operated valves listed in Table 2.2.2-1 using real or simulated signals into the DAS.	The remotely operated valves identified in Table 2.2.2-1 as having DAS control perform the active function identified in the table after receiving a signal from the DAS.
11.a) The motor-operated valves identified in Table 2.2.2-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed to demonstrate the capability of the valve to operate under its design conditions. ii) Inspection will be performed for the existence of a report verifying that the capability of the as-~~installed~~ built motor-operated valves bound the tested conditions. iii) Tests of the ~~as-installed~~ motor-operated valves will be performed under preoperational flow, differential pressure, and temperature conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.2-1 under design conditions. ii) A report exists and concludes that the capability of the as-~~installed~~ built motor-operated valves bound the tested conditions. iii) Each motor-operated valve changes position as indicated in Table 2.2.2-1 under preoperational test conditions.
11.b) After loss of motive power, the remotely operated valves identified in Table 2.2.2-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.2-1 assumes the indicated loss of motive power position.

2.2.3 Passive Core Cooling System

Table 2.2.3-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.a) The components identified in Table 2.2.3-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	A hydrostatic test will be performed on the components required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components identified in Table 2.2.3-1 as ASME Code Section III conform with the requirements of the ASME Code Section III.
4.b) The piping identified in Table 2.2.3-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the piping identified in Table 2.2.3-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
5.a) The seismic Category I equipment identified in Table 2.2.3-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.2.3-1 are located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.2.3-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis dynamic loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
5.b) Each of the lines identified in Table 2.2.3-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.2.3-2 for which functional capability is required meets the requirements for functional capability.

Table 2.2.3-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
6. Each of the as-built lines identified in Table 2.2.3-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Tier 1 Material, Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RCS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.
7.a) The Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.3-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
7.b) The Class 1E components identified in Table 2.2.3-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.3-1 when the assigned Class 1E division is provided the test signal.
7.c) Separation is provided between PXS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
8.a) The PXS provides containment isolation of the PXS lines penetrating the containment.	See Tier 1 Material, Table 2.2.1-3, items 1 and 7.	See Tier 1 Material, Table 2.2.1-3, items 1 and 7.

Table 2.2.3-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
		A report exists and concludes that the minimum flow area between the vessel insulation and reactor vessel for the flow path that vents steam is not less than 12 ft^2 considering the maximum deflection of the vessel insulation with a static pressure of 12.95 ft of water.
	iii) Inspections will be conducted of the flow path(s) from the loop compartments to the reactor vessel cavity.	iii) A flow path with a flow area not less than 6 ft^2 exists from the loop compartment to the reactor vessel cavity.
9.b) The accumulator discharge check valves (PXS-PL-V028A/B and V029A/B) are of a different check valve type than the CMT discharge check valves (PXS-PL-V016A/B and V017A/B).	An inspection of the accumulator and CMT discharge check valves is performed.	The accumulator discharge check valves are of a different check valve type than the CMT discharge check valves.
9.c) The equipment listed in Table 2.2.3-6 has sufficient thermal lag to withstand the effects of identified hydrogen burns associated with severe accidents.	Type ~~T~~tests, analyses, or a combination of type tests and analyses will be performed to determine the thermal lag of this equipment.	A report exists and concludes that the thermal lag of this equipment is greater than the value required.
10. Safety-related displays of the parameters identified in Table 2.2.3-1 can be retrieved in the MCR.	Inspection will be performed for the retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.3-1 can be retrieved in the MCR.
11.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.2.3-1 to perform their active function(s).	i) Testing will be performed on the squib valves identified in Table 2.2.3-1 using controls in the MCR, without stroking the valve. ii) Stroke testing will be performed on remotely operated valves other than squib valves identified in Table 2.2.3-1 using the controls in the MCR.	i) Controls in the MCR operate to cause a signal at the squib valve electrical leads that is capable of actuating the squib valve. ii) Controls in the MCR operate to cause remotely operated valves other than squib valves to perform their active functions.

Table 2.2.3-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
11.b) The valves identified in Table 2.2.3-1 as having PMS control perform their active function after receiving a signal from the PMS.	i) Testing will be performed on the squib valves identified in Table 2.2.3-1 using real or simulated signals into the PMS without stroking the valve.	i) Squib valves receive an electrical signal at the valve electrical leads that is capable of actuating the valve after a signal is input to the PMS.
	ii) Testing will be performed on the remotely operated valves other than squib valves identified in Table 2.2.3-1 using real or simulated signals into the PMS.	ii) Remotely operated valves other than squib valves perform the active function identified in the table after a signal is input to the PMS.
	iii) Testing will be performed to demonstrate that remotely operated PXS isolation valves PXS-V014A/B, V015A/B, V108A/B open within the required response times.	iii) These valves open within 20 seconds after receipt of an actuation signal.
11.c) The valves identified in Table 2.2.3-1 as having DAS control perform their active function after receiving a signal from the DAS.	i) Testing will be performed on the squib valves identified in Table 2.2.3-1 using real or simulated signals into the DAS without stroking the valve.	i) Squib valves receive an electrical signal at the valve electrical leads that is capable of actuating the valve after a signal is input to the DAS.
	ii) Testing will be performed on the remotely operated valves other than squib valves identified in Table 2.2.3-1 using real or simulated signals into the DAS.	ii) Remotely operated valves other than squib valves perform the active function identified in Table 2.2.3-1 after a signal is input to the DAS.
12.a) The check valves identified in Table 2.2.3-1 perform an active safety-related function to change position as indicated in the table.	i) Deleted.	i) Deleted.
	ii) Deleted.	ii) Deleted.
	iii) Deleted.	iii) Deleted.
	iv) Exercise testing of the check valves with active safety functions identified in Table 2.2.3-1 will be performed under preoperational test pressure, temperature and fluid flow conditions.	iv) Each check valve changes position as indicated in Table 2.2.3-1.

Table 2.2.3-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
12.b) After loss of motive power, the remotely operated valves identified in Table 2.2.3-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.3-1 assumes the indicated loss of motive power position.
13. Displays of the parameters identified in Table 2.2.3-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the displays identified in Table 2.2.3-3 in the MCR.	Displays identified in Table 2.2.3-3 can be retrieved in the MCR.

2.2.4 Steam Generator System

Table 2.2.4-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.a) The components identified in Table 2.2.4-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	A hydrostatic test will be performed on the components required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components identified in Table 2.2.4-1 as ASME Code Section III conform with the requirements of the ASME Code Section III.
4.b) The piping identified in Table 2.2.4-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the piping identified in Table 2.2.4-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
5.a) The seismic Category I equipment identified in Table 2.2.4-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.2.4-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.2.4-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
5.b) Each of the lines identified in Table 2.2.4-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report concluding that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.2.4-2 for which functional capability is required meets the requirements for functional capability.

Table 2.2.4-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
6. Each of the as-built lines identified in Table 2.2.4-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from effects of a pipe break. Tier 1 Material, Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RCS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.
7.a) The Class 1E equipment identified in Table 2.2.4-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.2.4-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.4-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
7.b) The Class 1E components identified in Table 2.2.4-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.4-1 when the assigned Class 1E division is provided the test signal.
7.c) Separation is provided between SGS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.

Table 2.2.4-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
9.b) During shutdown operations, the SGS removes decay heat by delivery of startup feedwater to the steam generator and venting of steam from the steam generators to the atmosphere.	i) Tests will be performed to demonstrate the ability of the startup feedwater system to provide feedwater to the steam generators. ii) Type ~~T~~tests and/or analyses will be performed to demonstrate the ability of the power-operated relief valves to discharge steam from the steam generators to the atmosphere.	i) See Tier 1 Material, Table 2.4.1-2, Item 2.~~See Tier 1 Material, subsection 2.4.1, Main and Startup Feedwater System~~. ii) A report exists and concludes that each power-operated relief valve will relieve greater than 300,000 lb/hr at 1106 psia ±10 psi.
10. Safety-related displays identified in Table 2.2.4-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.4-1 can be retrieved in the MCR.
11.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.2.4-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves listed in Table 2.2.4-1 using controls in the MCR.	Controls in the MCR operate to cause the remotely operated valves to perform active safety functions.
11.b) The valves identified in Table 2.2.4-1 as having PMS control perform an active safety function after receiving a signal from PMS.	i) Testing will be performed on the remotely operated valves listed in Table 2.2.4-1 using real or simulated signals into the PMS. ii) Testing will be performed to demonstrate that remotely operated SGS isolation valves SGS-V027A/B, V040A/B, V057A/B, V250A/B close within the required response times.	i) The remotely-operated valves identified in Table 2.2.4-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS. ii) These valves close within the following times after receipt of an actuation signal: V027A/B < 44 sec V040A/B, V057A/B < 5 sec V250A/B < 5 sec

Table 2.2.4-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
12.a) The motor-operated valves identified in Table 2.2.4-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed to demonstrate the capability of the valve to operate under its design conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.4-1 under design conditions.
	ii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built motor-operated valves are bounded by the tests or type tests.	ii) A report exists and concludes that the as-~~installed~~ built motor-operated valves are bounded by the tests or type tests.
	iii) Tests of the ~~as-installed~~ motor-operated valves will be performed under pre-operational flow, differential pressure, and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.2.4-1 under pre-operational test conditions.
12.b) After loss of motive power, the remotely operated valves identified in Table 2.2.4-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.4-1 assumes the indicated loss of motive power position. Motive power to SGS-PL-V040A/B and SGS-PL-V057A/B is electric power to the actuator from plant services.

2.2.5 Main Control Room Emergency Habitability System

Table 2.2.5-5 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
5.a) The seismic Category I equipment identified in Table 2.2.5-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.2.5-1 are located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.2.5-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
5.b) Each of the lines identified in Table 2.2.5-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.2.5-2 for which functional capability is required meets the requirements for functional capability.
6.a) The Class 1E components identified in Table 2.2.5-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.5-1 when the assigned Class 1E division is provided the test signal.
6.b) Separation is provided between VES Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.

Table 2.2.5-5 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
7.a) The VES provides a 72-hour supply of breathable quality air for the occupants of the MCR.	i) Testing will be performed to confirm that the required amount of air flow is delivered to the MCR.	i) The air flow rate from the VES is at least 60 scfm and not more than 70 scfm.
	ii) Analysis of storage capacity will be performed based on ~~as-built~~ manufacturers data.	ii) The calculated storage capacity is greater than or equal to 314,132 scf.
	iii) MCR air samples will be taken during VES testing and analyzed for quality.	iii) The MCR air is of breathable quality.
7.b) The VES maintains the MCR pressure boundary at a positive pressure with respect to the surrounding areas.	i) Testing will be performed with VES flow rate between 60 and 70 scfm to confirm that the MCR is capable of maintaining the required pressurization of the pressure boundary.	i) The MCR pressure boundary is pressurized to greater than or equal to 1/8-in. water gauge with respect to the surrounding area.
	ii) Air leakage into the MCR will be measured during VES testing using a tracer gas.	ii) Analysis of air leakage measurements indicate that VES operation limits MCR air infiltration consistent with operator dose analysis.
7.c) The heat loads within the MCR, the I&C equipment rooms, and the Class 1E dc equipment rooms are within design basis assumptions to limit the heatup of the rooms identified in Table 2.2.5-4.	An analysis will be performed to determine that the heat loads from as-built equipment within the rooms identified in Table 2.2.5-4 are less than or equal to the design basis assumptions.	A report exists and concludes that: the heat loads within rooms identified in Table 2.2.5-4 are less than or equal to the specified values or that an analysis report exists that concludes: – The temperature and humidity in the MCR remain within limits for reliable human performance for the 72-hour period. – The maximum temperature for the 72-hour period for the I&C rooms is less than or equal to 120°F. – The maximum temperature for the 72-hour period for the Class 1E dc equipment rooms is less than or equal to 120°F.

Table 2.2.5-5 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
8. Safety-related displays identified in Table 2.2.5-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.5-1 can be retrieved in the MCR.
9.a) Controls exist in the MCR to cause remotely operated valves identified in Table 2.2.5-1 to perform their active functions.	Stroke testing will be performed on remotely operated valves identified in Table 2.2.5-1 using the controls in the MCR.	Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.5-1 to perform their active safety functions.
9.b) The valves identified in Table 2.2.5-1 as having PMS control perform their active safety function after receiving a signal from the PMS.	Testing will be performed on remotely operated valves listed in Table 2.2.5-1 using real or simulated signals into the PMS.	The remotely operated valves identified in Table 2.2.5-1 as having PMS control perform the active safety function identified in the table after receiving a signal from the PMS.
10. After loss of motive power, the remotely operated valves identified in Table 2.2.5-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.5-1 assumes the indicated loss of motive power position.
11. Displays of the parameters identified in Table 2.2.5-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the parameters in the MCR.	The displays identified in Table 2.2.5-3 can be retrieved in the MCR.

2.3.2 Chemical and Volume Control System

Table 2.3.2-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.b) The piping identified in Table 2.3.2-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the piping identified in Table 2.3.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
5. The seismic Category I equipment identified in Table 2.3.2-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.2-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.3.2-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis dynamic loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
6.a) The Class 1E equipment identified in Table 2.3.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.2-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

Table 2.3.2-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
8.b) The CVS provides the pressurizer auxiliary spray.	Testing will be performed by aligning a flow path from each CVS makeup pump to the pressurizer auxiliary spray and measuring the flow rate in the makeup pump discharge line with each pump suction aligned to the boric acid storage tank and with RCS pressure greater than or equal to 2000 psia.	Each CVS makeup pump provides spray flow to the pressurizer.
9. Safety-related displays identified in Table 2.3.2-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.3.2-1 can be retrieved in the MCR.
10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.3.2-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.3.2-1 using the controls in the MCR.	Controls in the MCR operate to cause the remotely operated valves identified in Table 2.3.2-1 to perform active functions.
10.b) The valves identified in Table 2.3.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	i) Testing will be performed using real or simulated signals into the PMS. ii) Testing will be performed to demonstrate that the remotely operated CVS isolation valves CVS-V090, V091, V136A/B close within the required response time.	i) The valves identified in Table 2.3.2-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS. ii) These valves close within the following times after receipt of an actuation signal: V090, V091 < 30 sec V136A/B < 20 sec
11.a) The motor-operated and check valves identified in Table 2.3.2-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed that demonstrate the capability of the valve to operate under its design conditions. ii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built motor-operated valves are bounded by the tested conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.3.2-1 under design conditions. ii) A report exists and concludes that the as-~~installed~~ built motor-operated valves are bounded by the tests or type tests.

Table 2.3.2-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	iii) Tests of the ~~as-installed~~ motor-operated valves will be performed under pre-operational flow, differential pressure, and temperature conditions. iv) Exercise testing of the check valves with active safety functions identified in Table 2.3.2-1 will be performed under pre-operational test pressure, temperature and fluid flow conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.3.2-1 under pre-operational test conditions. iv) Each check valve changes position as indicated in Table 2.3.2-1.
11.b) After loss of motive power, the remotely operated valves identified in Table 2.3.2-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	Upon loss of motive power, each remotely operated valve identified in Table 2.3.2-1 assumes the indicated loss of motive power position.
12.a) Controls exist in the MCR to cause the pumps identified in Table 2.3.2-3 to perform the listed function.	Testing will be performed to actuate the pumps identified in Table 2.3.2-3 using controls in the MCR.	Controls in the MCR cause pumps identified in Table 2.3.2-3 to perform the listed function.
12.b) The pumps identified in Table 2.3.2-3 start after receiving a signal from the PLS.	Testing will be performed to confirm starting of the pumps identified in Table 2.3.2-3.	The pumps identified in Table 2.3.2-3 start after a signal is generated by the PLS.
13. Displays of the parameters identified in Table 2.3.2-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the displays identified in Table 2.3.2-3 in the MCR.	Displays identified in Table 2.3.2-3 can be retrieved in the MCR.
14. The nonsafety-related piping located inside containment and designated as reactor coolant pressure boundary, as identified in Table 2.3.2-2, has been designed to withstand a seismic design basis event and maintain structural integrity.	Inspection will be conducted of the as-built components as documented in the CVS Seismic Analysis Report.	The CVS Seismic Analysis Reports exist for the non-safety related piping located inside containment and designated as reactor coolant pressure boundary as identified in Table 2.3.2-2.

2.3.3 Standby Diesel Fuel Oil System

Table 2.3.3-2
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the DOS is as described in the Design Description of this Section 2.3.3.	Inspection of the as-built system will be performed.	The as-built DOS conforms with the functional arrangement described in the Design Description of this Section 2.3.3.
2. The ancillary diesel generator fuel tank can withstand a seismic event.	Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built ancillary diesel generator fuel tank and its anchorage are designed using seismic Category II methods and criteria.	A report exists and concludes that the as-~~installed~~ built ancillary diesel generator fuel tank and its anchorage are designed using seismic Category II methods and criteria.
3.a) Each fuel oil storage tank provides for at least 7 days of continuous operation of the associated standby diesel generator.	Inspection of each fuel oil storage tank will be performed.	The volume of each fuel oil storage tank available to the standby diesel generator is greater than or equal to 55,000 gallons.
3.b) Each fuel oil storage day tank provides for at least 4 hours of operation of the associated standby diesel generator.	Inspection of the fuel oil day tank will be performed.	The volume of each fuel oil day tank is greater than or equal to 1300 gallons.
3.c) The fuel oil flow rate to the day tank of each standby diesel generator provides for continuous operation of the associated diesel generator.	Testing will be performed to determine the flow rate.	The flow rate delivered to each day tank is 8 gpm or greater.
3.d) The ancillary diesel generator fuel tank is sized to supply power to long-term safety-related post accident monitoring loads and control room lighting through a regulating transformer and one PCS recirculation pump for four days.	Inspection of the ancillary diesel generator fuel tank will be performed.	The volume of the ancillary diesel generator fuel tank is greater than or equal to 650 gallons.
4. Controls exist in the MCR to cause the components identified in Table 2.3.3-1 to perform the listed function.	Testing will be performed on the components in Table 2.3.3-1 using controls in the MCR.	Controls in the MCR operate to cause the components listed in Table 2.3.3-1 to perform the listed functions.
5. Displays of the parameters identified in Table 2.3.3-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of parameters in the MCR.	The displays identified in Table 2.3.3-1 can be retrieved in the MCR.

2.3.5 Mechanical Handling System

Table 2.3.5-2
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the MHS is as described in the Design Description of this Section 2.3.5.	Inspection of the as-built system will be performed.	The as-built MHS conforms with the functional arrangement as described in the Design Description of this Section 2.3.5.
2. The seismic Category I equipment identified in Table 2.3.5-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.5-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.3.5-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
3.a) The polar crane is single failure proof.	Validation of redundant or double design factors are provided for load bearing components such as: Hoisting ropes Sheaves Equalizer assembly Hooks Holding brakes The polar crane shall be static-load tested to 125% of the rated load. The polar crane shall lift a test load that is 100% of the rated load. Then it shall lower, stop, and hold the test load.	A report exists and concludes that the polar crane is single failure proof.

2.3.6 Normal Residual Heat Removal System

Table 2.3.6-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.b) The piping identified in Table 2.3.6-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the piping identified in Table 2.3.6-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
5.a) The seismic Category I equipment identified in Table 2.3.6-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.6-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.3.6-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
5.b) Each of the lines identified in Table 2.3.6-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.3.6-2 for which functional capability is required meets the requirements for functional capability.
6. Each of the as-built lines identified in Table 2.3.6-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Tier 1 Material, Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RCS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.

Table 2.3.6-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
7.a) The Class 1E equipment identified in Tables 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.6-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
7.b) The Class 1E components identified in Table 2.3.6-1 are powered from their respective Class 1E division.	Testing will be performed on the RNS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.3.6-1 when the assigned Class 1E division is provided the test signal.
7.c) Separation is provided between RNS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
8.a) The RNS preserves containment integrity by isolation of the RNS lines penetrating the containment.	See Tier 1 Material, Table 2.2.1-3, item 7.	See Tier 1 Material, Table 2.2.1-3, item 7.
8.b) The RNS provides a flow path for long-term, post-accident makeup to the RCS.	See item 1 in this table.	See item 1 in this table.
9.a) The RNS provides LTOP for the RCS during shutdown operations.	i) Inspections will be conducted on the low temperature overpressure protection relief valve to confirm that the capacity of the vendor code plate rating is greater than or equal to system relief requirements.	i) The rated capacity recorded on the valve vendor code plate is not less than the flow required to provide low-temperature overpressure protection for the RCS, as determined by the LTOPS evaluation based on the pressure-temperature curves developed for the as-procured reactor vessel material.

Table 2.3.6-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
12.a) The motor-operated and check valves identified in Table 2.3.6-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed that demonstrate the capability of the valve to operate under its design conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.3.6-1 under design conditions.
	ii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built motor-operated valves are bounded by the tested conditions.	ii) A report exists and concludes that the as-~~installed~~ built motor-operated valves are bounded by the tested conditions.
	iii) Tests of the ~~as-installed~~ motor-operated valves will be performed under preoperational flow, differential pressure and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.3.6-1 under preoperational test conditions.
	iv) Exercise testing of the check valves active safety functions identified in Table 2.3.6-1 will be performed under preoperational test pressure, temperature and fluid flow conditions.	iv) Each check valve changes position as indicated in Table 2.3.6-1.
12.b) After loss of motive power, the remotely operated valves identified in Table 2.3.6-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	Upon loss of motive power, each remotely operated valve identified in Table 2.3.6-1 assumes the indicated loss of motive power position.
13. Controls exist in the MCR to cause the pumps identified in Table 2.3.6-3 to perform the listed function.	Testing will be performed to actuate the pumps identified in Table 2.3.6-3 using controls in the MCR.	Controls in the MCR cause pumps identified in Table 2.3.6-3 to perform the listed action.
14. Displays of the RNS parameters identified in Table 2.3.6-3 can be retrieved in the MCR.	Inspection will be performed for retrievability in the MCR of the displays identified in Table 2.3.6-3.	Displays of the RNS parameters identified in Table 2.3.6-3 are retrieved in the MCR.

2.3.7 Spent Fuel Pool Cooling System

Table 2.3.7-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
5. The seismic Category I components identified in Table 2.3.7-1 can withstand seismic design basis loads without loss of safety functions.	i) Inspection will be performed to verify that the seismic Category I components identified in Table 2.3.7-1 are located on the Nuclear Island.	i) The seismic Category I components identified in Table 2.3.7-1 are located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
6.a) The Class 1E components identified in Table 2.3.7-1 are powered from their respective Class 1E division.	Testing will be performed on the SFS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E components identified in Table 2.3.7-1 when the assigned Class 1E division is provided the test signal.
6.b) Separation is provided between SFS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
7.a) The SFS preserves containment integrity by isolation of the SFS lines penetrating the containment.	See Tier 1 Material, Table 2.2.1-3, items 1 and 7.	See Tier 1 Material, Table 2.2.1-3, items 1 and 7.

2.3.10 Liquid Radwaste System

Table 2.3.10-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
5.a) The seismic Category I equipment identified in Table 2.3.10-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.10-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.3.10-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
5.b) Each of the lines identified in Table 2.3.10-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.3.10-2 for which functional capability is required meets the requirements for functional capability.
6.a) The WLS preserves containment integrity by isolation of the WLS lines penetrating the containment.	See Tier 1 Material, Table 2.2.1-3, items 1 and 7.	See Tier 1 Material, Table 2.2.1-3, items 1 and 7.
6.b) Check valves in drain lines to the containment sump limit cross flooding of compartments.	Refer to item 9 in this table.	Refer to item 9 in this table.

2.3.13 Primary Sampling System

Table 2.3.13-3
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the PSS is as described in the Design Description of this Section 2.3.13.	Inspection of the as-built system will be performed.	The as-built PSS conforms with the functional arrangement as described in the Design Description of this Section 2.3.13.
2. The components identified in Table 2.3.13-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components identified in Table 2.3.13-1 as ASME Code Section III.
3. Pressure boundary welds in components identified in Table 2.3.13-1 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.
4. The components identified in Table 2.3.13-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	A hydrostatic test will be performed on the components required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components identified in Table 2.3.13-1 as ASME Code Section III conform with the requirements of the ASME Code Section III.
5. The seismic Category I equipment identified in Table 2.3.13-1 can withstand seismic design basis loads without loss of its safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.3.13-1 are located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.3.13-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

Table 2.3.13-3 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
6.a) The Class 1E equipment identified in Tables 2.3.13-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of their safety function, for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.13-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of its safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.13-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
6.b) The Class 1E components identified in Table 2.3.13-1 are powered from their respective Class 1E division.	Testing will be performed on the PSS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.3.13-1 when the assigned Class 1E division is provided the test signal.
6.c) Separation is provided between PSS Class 1E divisions, and between Class 1E divisions and non-Class 1E divisions.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
7. The PSS provides the safety-related function of preserving containment integrity by isolation of the PSS lines penetrating the containment.	See Tier 1 Material, Table 2.2.1-3, item 7.	See Tier 1 Material, Table 2.2.1-3, item 7.
8. The PSS provides the nonsafety-related function of providing the capability of obtaining reactor coolant and containment atmosphere samples.	Testing will be performed to obtain samples of the reactor coolant and containment atmosphere.	A sample is drawn from the reactor coolant and the containment atmosphere.
9. Safety-related displays identified in Table 2.3.13-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	The safety-related displays identified in Table 2.3.13-1 can be retrieved in the MCR.

Table 2.3.13-3 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
10.a) Controls exist in the MCR to cause those remotely operated valves identified in Table 2.3.13-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.3.13-1 using the controls in the MCR.	Controls in the MCR operate to cause those remotely operated valves identified in Table 2.3.13-1 to perform active functions.
10.b) The valves identified in Table 2.3.13-1 as having PMS control perform an active function after receiving a signal from the PMS.	Testing will be performed on remotely operated valves listed in Table 2.3.13-1 using real or simulated signals into the PMS.	The remotely operated valves identified in Table 2.3.13-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.
11.a) The check valve identified in Table 2.3.13-1 performs an active safety-related function to change position as indicated in the table.	Exercise testing of the check valve with an active safety function identified in Table 2.3.13-1 will be performed under preoperational test pressure, temperature, and fluid flow conditions.	The check valve changes position as indicated in Table 2.3.13-1.
11.b) After loss of motive power, the remotely operated valves identified in Table 2.3.13-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.3.13-1 assumes the indicated loss of motive power position.
12. Controls exist in the MCR to cause the valves identified in Table 2.3.13-2 to perform the listed function.	Testing will be performed on the components in Table 2.3.13-2 using controls in the MCR.	Controls in the MCR cause valves identified in Table 2.3.13-2 to perform the listed functions.

2.5.2 Protection and Safety Monitoring System

Table 2.5.2-8
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the PMS is as described in the Design Description of this Section 2.5.2.	Inspection of the as-built system will be performed.	The as-built PMS conforms with the functional arrangement as described in the Design Description of this Section 2.5.2.
2. The seismic Category I equipment, identified in Table 2.5.2-1, can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.5.2-1 is located on the Nuclear Island. ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed. iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	i) The seismic Category I equipment identified in Table 2.5.2-1 is located on the Nuclear Island. ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function. iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
3. The Class 1E equipment, identified in Table 2.5.2-1, has electrical surge withstand capability (SWC), and can withstand the electromagnetic interference (EMI), radio frequency interference (RFI), and electrostatic discharge (ESD) conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	Type tests, analyses, or a combination of type tests and analyses will be performed on the equipment.	A report exists and concludes that the Class 1E equipment identified in Table 2.5.2-1 can withstand the SWC, EMI, RFI, and ESD conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.

2.5.5 In-Core Instrumentation System

Table 2.5.5-2
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the IIS is as described in the Design Description of this Section 2.5.5.	Inspection of the as-built system will be performed.	The as-built IIS conforms with the functional arrangement as described in the Design Description of this Section 2.5.5.
2. The seismic Category I equipment identified in Table 2.5.5-1 can withstand seismic design basis dynamic loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.5.5-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.5.5-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis dynamic loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
3.a) The Class 1E equipment identified in Table 2.5.5-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function, for the time required to perform the safety function.	i) Type tests, analysis, or a combination of type tests and analysis will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.5.5-1 as being qualified for a harsh environment. This equipment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.5.5-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

2.6.1 Main ac Power System

Table 2.6.1-4
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the ECS is as described in the Design Description of this Section 2.6.1.	Inspection of the as-built system will be performed.	The as-built ECS conforms with the functional arrangement as described in the Design Description of this Section 2.6.1.
2. The seismic Category I equipment identified in Table 2.6.1-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.6.1-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.6.1-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
3.a) The Class 1E breaker control power for the equipment identified in Table 2.6.1-1 are powered from their respective Class 1E division.	Testing will be performed on the ECS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.6.1-1 when the assigned Class 1E division is provided the test signal.
3.b) Separation is provided between ECS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
4.a) The ECS provides the capability for distributing non-Class 1E ac power from onsite sources (ZOS) to nonsafety-related loads listed in Table 2.6.1-2.	Tests will be performed using a test signal to confirm that an electrical path exists for each selected load listed in Table 2.6.1-2 from an ECS-ES-1 or ECS-ES-2 bus. Each test may be a single test or a series of over-lapping tests.	A test signal exists at the terminals of each selected load.

2.6.3 Class 1E dc and Uninterruptible Power Supply System

Table 2.6.3-3
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the IDS is as described in the Design Description of this Section 2.6.3.	Inspection of the as-built system will be performed.	The as-built IDS conforms with the functional arrangement as described in the Design Description of this Section 2.6.3.
2. The seismic Category I equipment identified in Table 2.6.3-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.6.3-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.6.3-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
3. Separation is provided between Class 1E divisions, and between Class 1E divisions and non-Class 1E cables.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
4.a) The IDS provides electrical independence between the Class 1E divisions.	Testing will be performed on the IDS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.6.3-1 when the assigned Class 1E division is provided the test signal.
4.b) The IDS provides electrical isolation between the non-Class 1E ac power system and the non-Class 1E lighting in the MCR.	Type tests, analyses, or a combination of type tests and analyses of the isolation devices will be performed.	A report exists and concludes that the battery chargers, regulating transformers, and isolation fuses prevent credible faults from propagating into the IDS.

2.7.1 Nuclear Island Nonradioactive Ventilation System

Table 2.7.1-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	**Inspections, Tests, Analyses**	**Acceptance Criteria**
5. The seismic Category I equipment identified in Table 2.7.1-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.7.1-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.7.1-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
6.a) The Class 1E components identified in Table 2.7.1-1 are powered from their respective Class 1E division.	Testing will be performed on the VBS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.7.1-1 when the assigned Class 1E division is provided the test signal.
6.b) Separation is provided between VBS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
7. The VBS provides the safety-related function to isolate the pipe that penetrates the MCR pressure boundary.	See item 10.b in this table.	See item 10.b in this table.
8.a) The VBS provides cooling to the MCR, CSA, RSR, and Class 1E electrical rooms.	See item 12 in this table.	See item 12 in this table.
8.b) The VBS provides ventilation cooling to the Class 1E battery rooms.	See item 12 in this table.	See item 12 in this table.

Table 2.7.1-4 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
8.c) The VBS maintains MCR and CSA habitability when radioactivity is detected.	See item 12 in this table.	See item 12 in this table.
8.d) The VBS provides ventilation cooling via the ancillary equipment in Table 2.7.1-3 to the MCR and the division B&C Class 1E I&C rooms.	Testing will be performed on the components in Table 2.7.1-3.	The fans start and run.
9. Safety-related displays identified in Table 2.7.1-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.7.1-1 can be retrieved in the MCR.
10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.7.1-1 to perform their active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.7.1-1 using the controls in the MCR.	Controls in the MCR operate to cause the remotely operated valves identified in Table 2.7.1-1 to perform their active functions.
10.b) The valves identified in Table 2.7.1-1 as having PMS control perform their active safety function after receiving a signal from the PMS.	Testing will be performed using real or simulated signals into the PMS.	The valves identified in Table 2.7.1-1 as having PMS control perform their active safety function after receiving a signal from PMS.
11. After loss of motive power, the remotely operated valves identified in Table 2.7.1-1 assume the indicated loss of motive power position.	Testing of the ~~installed~~ remotely operated valves will be performed under the conditions of loss of motive power.	Upon loss of motive power, each remotely operated valves identified in Table 2.7.1-1 assumes the indicated loss of motive power position.
12. Controls exist in the MCR to cause the components identified in Table 2.7.1-3 to perform the listed function.	Testing will be performed on the components in Table 2.7.1-3 using controls in the MCR.	Controls in the MCR operate to cause the components listed in Table 2.7.1-3 to perform the listed functions.
13. Displays of the parameters identified in Table 2.7.1-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the parameters in the MCR.	The displays identified in Table 2.7.1-3 can be retrieved in the MCR.
14. The background noise level in the MCR and RSR does not exceed 65 dB(A) when the VBS is operating.	The as-built VBS will be operated, and background noise levels in the MCR and RSR will be measured.	The background noise level in the MCR and RSR does not exceed 65 dB(A) when the VBS is operating.

3.3 Buildings

Table 3.3-6 (cont.)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
		ii.f) A report exists that concludes that the as-built concrete thicknesses of the turbine building sections conform to the building sections defined in Table 3.3-1.
2.b) Site grade level is located relative to floor elevation 100'-0" per Table 3.3-5.	Inspection of the as-built site grade will be conducted.	Site grade is consistent with design plant grade within the dimension defined on Table 3.3-5.
2.c) The containment and its penetrations are designed and constructed to ASME Code Section III, Class MC.(1)	See Tier 1 Material, Table 2.2.1-3, Items 2a, 2b, 3a, and 3b.~~See Tier 1 Material, Subsection 2.2.1, Containment System.~~	See Tier 1 Material, Table 2.2.1-3, Items 2a, 2b, 3a, and 3b.~~See Tier 1 Material, Subsection 2.2.1, Containment System.~~
2.d) The containment and its penetrations retain their pressure boundary integrity associated with the design pressure.	See Tier 1 Material, Table 2.2.1-3, Items 4a and 4b~~See Tier 1 Material, Subsection 2.2.1, Containment System~~.	See Tier 1 Material, Table 2.2.1-3, Items 4a and 4b~~See Tier 1 Material, Subsection 2.2.1, Containment System~~.
2.e) The containment and its penetrations maintain the containment leakage rate less than the maximum allowable leakage rate associated with the peak containment pressure for the design basis accident.	See Tier 1 Material, Table 2.2.1-3, Items 4a, 4b and 7~~See Tier 1 Material, Subsection 2.2.1, Containment System~~.	See Tier 1 Material, Table 2.2.1-3, Items 4a, 4b and 7~~See Tier 1 Material, Subsection 2.2.1, Containment System~~.
2.f) The key dimensions of nuclear island structures are defined on Table 3.3-5.	An inspection will be performed of the as-built configuration of the nuclear island structures.	A report exists and concludes that the key dimensions of the as-built nuclear island structures are consistent with the dimensions defined on Table 3.3-5.
2.g) The containment vessel greater than 7 feet above the operating deck provides a heat transfer surface. A free volume exists inside the containment shell above the operating deck.	The maximum containment vessel inside height from the operating deck is measured and the inner radius below the spring line is measured at two orthogonal radial directions at one elevation.	The containment vessel maximum inside height from the operating deck is 146'-7" (with tolerance of +12", -6"), and the inside diameter is 130 feet nominal (with tolerance of +12", -6").

3.5 Radiation Monitoring

Table 3.5-6
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The seismic Category I equipment identified in Table 3.5-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 3.5-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 3.5-1 is located on the Nuclear Island.
	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
	iii) Inspection will be performed for the existence of a report verifying that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-~~installed~~ built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
2. The Class 1E equipment identified in Table 3.5-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that Class 1E equipment identified in Table 3.5-1 as being located in a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	ii) Inspection will be performed of the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-~~installed~~ built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 3.5-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
3. Separation is provided between system Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d).	See Tier 1 Material, Table 3.3-6, item 7.d).

3.6 Reactor Coolant Pressure Boundary Leak Detection

Table 3.6-1
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The diverse leak detection methods provide the nonsafety-related function of detecting small leaks when RCS leakage indicates possible reactor coolant pressure boundary degradation.	~~See Tier 1 Material sections:~~ i) See Tier 1 Material, Table 2.3.10-4, Item 7a for the sump level measuring instruments WLS-034 and WLS-035~~Subsection 2.3.10 for the containment sump level measuring instruments WLS-034 and WLS-035~~ ii) See Tier 1 Material, Table 3.5-6, Item 1 for the containment atmosphere radioactivity monitor PSS-RE027~~Section 3.5 for the containment atmosphere radioactivity monitor PSS-RE027~~ iii) See Tier 1 Material, Table 2.1.2-4, Items 5a, 7a, and 10 for the pressurizer level measuring instruments RCS-195A, RCS-195B, RCS-195C, and RCS-195D~~Subsection 2.1.2 for the pressurizer level measuring instruments RCS-195A, RCS-195B, RCS-195C, and RCS-195D~~ iv) See Tier 1 Material, Table 2.1.2-4, Items 5a and 7a for the RCS hot and cold leg temperature instruments RCS-121A, RCS-121B, RCS-121C, RCS-121D, RCS-122A, RCS-122B, RCS-122C, RCS-122D, RCS-131A, RCS-131B, RCS-131C, RCS-131D, RCS-132A, RCS-132B, RCS-132C, RCS-132D~~Subsection 2.1.2 for the RCS hot and cold leg temperature instruments RCS-121A, RCS-121B, RCS-121C, RCS-121D, RCS-122A, RCS-122B, RCS-122C, RCS-122D, RCS-131A, RCS-131B, RCS-131C, RCS-131D, RCS-132A,~~	~~See Tier 1 Material sections:~~ i) See Tier 1 Material, Table 2.3.10-4, Item 7a for the sump level measuring instruments WLS-034 and WLS-035~~Subsection 2.3.10 for the containment sump level measuring instruments WLS-034 and WLS-035~~ ii) See Tier 1 Material, Table 3.5-6, Item 1 for the containment atmosphere radioactivity monitor PSS-RE027~~Section 3.5 for the containment atmosphere radioactivity monitor PSS-RE027~~ iii) See Tier 1 Material, Table 2.1.2-4, Items 5a, 7a, and 10 for the pressurizer level measuring instruments RCS-195A, RCS-195B, RCS-195C, and RCS-195D~~Subsection 2.1.2 for the pressurizer level measuring instruments RCS-195A, RCS-195B, RCS-195C, and RCS-195D~~ iv) See Tier 1 Material, Table 2.1.2-4, Items 5a and 7a for the RCS hot and cold leg temperature instruments RCS-121A, RCS-121B, RCS-121C, RCS-121D, RCS-122A, RCS-122B, RCS-122C, RCS-122D, RCS-131A, RCS-131B, RCS-131C, RCS-131D, RCS-132A, RCS-132B, RCS-132C, RCS-132D~~Subsection 2.1.2 for the RCS hot and cold leg temperature instruments RCS-121A, RCS-121B, RCS-121C, RCS-121D, RCS-122A, RCS-122B, RCS-122C, RCS-122D, RCS-131A, RCS-131B, RCS-131C, RCS-131D, RCS-132A,~~

Table 3.6-1 Inspections, Tests, Analyses, and Acceptance Criteria		
	~~RCS-132B, RCS-132C, RCS-132D~~ v) See Tier 1 Material, Table 2.1.2-4, Items 5a, 7a, and 10 for the RCS pressure instruments RCS-140A, RCS-140B, RCS-140C, and RCS-140D~~Subsection 2.1.2 for the RCS pressure instruments RCS-140A, RCS-140B, RCS-140C, RCS-140D~~ vi) See Tier 1 Material, Table 2.3.2-4, Item 13 for the letdown and makeup flow instruments CVS-001 and CVS-025~~Subsection 2.3.2 for the letdown and makeup flow instruments CVS-001 and CVS-025~~ vii) See Tier 1 Material, Table 2.3.10-4, Item 10 for the reactor coolant drain tank level instrument WLS-002~~Subsection 2.3.10 for the reactor coolant drain tank level instrument WLS-002~~	~~RCS-132B, RCS-132C, RCS-132D~~ v) See Tier 1 Material, Table 2.1.2-4, Items 5a, 7a, and 10 for the RCS pressure instruments RCS-140A, RCS-140B, RCS-140C, and RCS-140D~~Subsection 2.1.2 for the RCS pressure instruments RCS-140A, RCS-140B, RCS-140C, RCS-140D~~ vi) See Tier 1 Material, Table 2.3.2-4, Item 13 for the letdown and makeup flow instruments CVS-001 and CVS-025~~Subsection 2.3.2 for the letdown and makeup flow instruments CVS-001 and CVS-025~~ vii) See Tier 1 Material, Table 2.3.10-4, Item 10 for the reactor coolant drain tank level instrument WLS-002~~Subsection 2.3.10 for the reactor coolant drain tank level instrument WLS-002~~

PRA Revision:

None

Technical Report (TR) Revision:

None