Westinghouse Electric Corporation Energy Systems

Box 355
Pittsburgh Pennsylvania 15230-0355

DCP/NRC1166
NSD-NRC-97-5470
Docket No.: 52-003

December 4, 1997

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

ATTENTION: T. R. QUAY

SUBJECT: RESPONSES TO STAFF REQUESTS REGARDING THE AP600 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC) - PIPING

Dear Mr. Quay:

Enclosed are three copies of Westinghouse's responses to RAI 640.72 and RAIs 640.143 through 640.147 related to comments from the Civil and Geosciences Branch on Revision 3 of the AP600 Certified Design Material as requested in letters from the staff dated August 22, 1997 and October 6, 1997.

This submittal closes, from Westinghouse's perspective, open items 5731 and 6009 through 6013. As a result, the Westinghouse status column will be changed to "Closed" in the Open Item Tracking System (OITS). The NRC should review these responses and inform Westinghouse of the status of the open items to be designated in the "NRC Status" column of the OITS.

Please contact Mr. Eugene J. Piplica at (412) 374-5310 if you have any questions concerning this transmittal.

C. H. Hoy for BAM

Brian A. McIntyre, Manager
Advanced Plant Safety and Licensing

jml

Enclosures

cc: J. M. Sebrosky, NRC (w/Enclosure)
J. N. Wilson, NRC (w/Enclosure)
N. J. Liparulo, Westinghouse (w/o Enclosure)

Question 640.72

In the Design Description and Table 2.2.1-3, Item 6a, the erosion-corrosion allowance for wall thickness may be deleted because, with the elimination of the piping DAC, the design commitment is more appropriately addressed in the SSAR as a Tier 2 commitment. However, it is not clear how erosion-corrosion is addresses in the SSAR and needs further discussion.

This is a generic comment that applies to the same ITAAC in other systems as well.

Response:

Erosion-corrosion is addressed in Section 3B.2.1, 10.1.2, and 10.1.3 of the SSAR. ITAAC Section 2.2.1 and 2.2.4 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

Section 2.1.2 Containment System

Remove Item 6.a)

Modify Item 6.b) to Item 6.

Table 2.2.1-2

Remove Erosion-Corrosion Allowance from Table.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria

Remove Item 6.a)

Modify Item 6.b) to Item 6.

Section 2.2.4 Steam Generator System

Remove Item 6.c)

Modify Item 6.d) to Item 6.c)

Table 2.2.4-2

Remove Erosion-Corrosion Allowance from Table.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria

Remove Item 6.c)

Modify Item 6.d) to Item 6.c)

Question: 640.143

Because the final seismic amplified response spectra has not been used in the preliminary piping design, Westinghouse proposed to add a COL action item to have the COL applicant verify the final as-built piping design by using the final seismic input loadings. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for those applicable piping systems where the final seismic input loadings will need to be verified by the COL applicant.

Response:

We agree with the item identified above, ITAAC Sections 2.1.2, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.3.2, 2.3.6, 2.3.7, 2.3.10, and 2.3.13 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None.

ITAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.e)

The piping identified in Table 2.1.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.e)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.e) The piping identified in Table 2.1.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.1.2-2 as ASME Code Section III.

Section 2.2.1 Containment System

Insert Item 2.c)

The piping identified in Table 2.2.1-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.1-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.1-2 as ASME Code Section III.

Section 2.2.2 Passive Containment Cooling System

Insert Item 2.c)

The piping identified in Table 2.2.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.2-2 as ASME Code Section III.

Section 2.2.3 Passive Core Cooling System

Insert Item 2.d)

The piping identified in Table 2.2.3-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.2.3-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.3-2 as ASME Code Section III.

Section 2.2.4 Steam Generator System

Insert Item 2.c)

The piping identified in Table 2.2.4-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.4-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.4-2 as ASME Code Section III.

Section 2.2.5 Main Control Room Emergency Habatibility System

Insert Item 2.c)

The piping identified in Table 2.2.5-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.5-5 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.5-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.5-2 as ASME Code Section III.

Section 2.3.2 Chemical and Volume Control System

Insert Item 2.d)

The piping identified in Table 2.3.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.3.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.2-2 as ASME Code Section III.

Section 2.3.6 Normal Residual Heat Removal System

Insert Item 2.d)

The piping identified in Table 2.3.6-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.3.6-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.6-2 as ASME Code Section III.

Section 2.3.7 Spent Fuel Pool Cooling System

Modify Item 2 to Item 2.a)
Insert Item 2.b)

The piping identified in Table 2.3.7-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.7-4 Inspections, Tests, Analyses, and Acceptance Criteria

Modify Item 2 to Item 2.a)
Insert Item 2.b)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.b) The piping identified in Table 2.3.7-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.7-2 as ASME Code Section III.

Section 2.3.10 Liquid Radwaste System

Insert Item 2.c)

The piping identified in Table 2.3.10-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.3.10-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.10-2 as ASME Code Section III.

Section 2.3.13 Primary Sampling System

Modify Item 2 to Item 2.a)
Insert Item 2.b)

The piping identified in Table 2.3.13-1 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

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

Modify Item 2 to Item 2.a)
Insert Item 2.b)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.b) The piping identified in Table 2.3.13-1 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.13-1 as ASME Code Section III.

Question 640.144

Because Westinghouse has not completed the design of the reactor coolant loop piping by using time-history seismic analyses that accounts for a ± 15 percent peak broadening effects, Westinghouse proposed to add a COL action item to have the COL applicant verify the time-history analyses of the RCL piping by using a time-history analysis that varies the time-history loading by ± 15 percent. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for the verification of the RCL piping by a time-history analysis that varies the time-history loading by ± 15 percent.

Response:

We agree with the item identified above, ITAAC Section 2.1.2 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.c)

The reactor coolant loop piping (hot legs, cold legs) identified in Table 2.1.2-2 is designed using time-history seismic analyses that account for ± 15 percent peak broadening.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The reactor coolant loop piping (hot legs, cold legs) identified in Table 2.1.2-2 is designed using time-history seismic analyses that account for ± 15 percent peak broadening.	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 applicable as-built piping identified in Table 2.1.2-2 as ASME Code Section III.

Question 640.145

Westinghouse is not planning to complete the fatigue analysis for the ASME Code Class 1 piping prior to design certification. Westinghouse proposed to add a COL action item to have the COL applicant verify through final analysis that the Class 1 fatigue limits have been satisfied. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for the COL applicant to verify that the ASME Code fatigue requirements have been met for the ASME Code Class 1 piping. ITAAC are needed for each system that contain ASME Code Class 1 piping.

Response:

We agree with the item identified above, ITAAC Section 2.1.2, 2.2.3, 2.3.2, and 2.3.6 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.d)

The ASME Code Class 1 piping identified in Table 2.1.2-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The ASME Code Class 1 piping identified in Table 2.1.2-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.1.2-2 as ASME Code Section III.

Section 2.2.3 Passive Core Cooling System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.2.3-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.2.3-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.2.3-2 as ASME Code Section III.

Section 2.3.2 Chemical and Volume Control System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.3.2-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.3.2-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.3.2-2 as ASME Code Section III.

Section 2.3.6 Normal Residual Heat Removal System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.3.6-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.3.6-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.3.6-2 as ASME Code Section III.

Question 640.146

Westinghouse is not planning to complete the stress analysis for small-bore piping (less than 3 inches nominal pipe size). Westinghouse proposed to add a COL action item to have the COL applicant complete the small-bore piping stress analysis. The staff has determined that a COL action item is not appropriate to complete this effort, and that the effort must be completed through ITAAC. Westinghouse is requested to develop ITAAC for the COL applicant to complete the design of the small bore piping stress effort.

Response:

Westinghouse does not agree that an ITAAC for the COL applicant to complete the small-bore piping (less than 3 inches nominal pipe size) stress analysis is required. A commitment in Tier 2 to have the COL applicant perform the small-bore piping stress analysis is both appropriate and sufficient to complete this requirement.

The piping most important to safety is identified in the AP600 Certified Design Material (CDM) on a system basis as an ITAAC to verify 1) that the ASME Code Section III requirements to retain pressure boundary integrity, 2) leak-before-break (LBB) criteria (where applicable), and 3) functional capability requirements are met. It is therefore not necessary to include the small-bore piping as the most critical piping with respect to safety has been identified in the CDM.

SSAR Revision:

None

ITAAC Revision:

None

Question 640.147

Westinghouse is planning to complete the pipe break hazards analysis as described in SSAR Section 3.6.2.5 except for the design of protective hardware and the reconciliation of as-built condition. The SSAR should be revised to reflect the responsibility of the COL applicant to complete the design of protective hardware and reconciliation of the as-bulit condition. An additional ITAAC is not needed because the ITAAC in Table 3.3-5 (#7) already addresses this effort.

Response:

We agree with the above statement. Sections 3.6.2.5 and 3.6.4.1 of the SSAR have been modified in Revision 17 to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

None

Question 640.72

In the Design Description and Table 2.2.1-3, Item 6a, the erosion-corrosion allowance for wall thickness may be deleted because, with the elimination of the piping DAC, the design commitment is more appropriately addressed in the SSAR as a Tier 2 commitment. However, it is not clear how erosion-corrosion is addresses in the SSAR and needs further discussion.

This is a generic comment that applies to the same ITAAC in other systems as well.

Response:

Erosion-corrosion is addressed in Section 3B.2.1, 10.1.2, and 10.1.3 of the SSAR. ITAAC Section 2.2.1 and 2.2.4 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

Section 2.1.2 Containment System

Remove Item 6.a)

Modify Item 6.b) to Item 6.

Table 2.2.1-2

Remove Erosion-Corrosion Allowance from Table.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria

Remove Item 6.a)

Modify Item 6.b) to Item 6.

Section 2.2.4 Steam Generator System

Remove Item 6.c)

Modify Item 6.d) to Item 6.c)

Table 2.2.4-2

Remove Erosion-Corrosion Allowance from Table.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria

Remove Item 6.c)

Modify Item 6.d) to Item 6.c)

Question: 640.143

Because the final seismic amplified response spectra has not been used in the preliminary piping design, Westinghouse proposed to add a COL action item to have the COL applicant verify the final as-built piping design by using the final seismic input loadings. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for those applicable piping systems where the final seismic input loadings will need to be verified by the COL applicant.

Response:

We agree with the item identified above, ITAAC Sections 2.1.2, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.3.2, 2.3.6, 2.3.7, 2.3.10, and 2.3.13 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None.

ITAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.e)

The piping identified in Table 2.1.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.e)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.e) The piping identified in Table 2.1.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.1.2-2 as ASME Code Section III.

Section 2.2.1 Containment System

Insert Item 2.c)

The piping identified in Table 2.2.1-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.1-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.1-2 as ASME Code Section III.

Section 2.2.2 Passive Containment Cooling System

Insert Item 2.c)

The piping identified in Table 2.2.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.2-2 as ASME Code Section III.

Section 2.2.3 Passive Core Cooling System

Insert Item 2.d)

The piping identified in Table 2.2.3-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.2.3-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.3-2 as ASME Code Section III.

Section 2.2.4 Steam Generator System

Insert Item 2.c)

The piping identified in Table 2.2.4-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.4-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.4-2 as ASME Code Section III.

Section 2.2.5 Main Control Room Emergency Habatibility System

Insert Item 2.c)

The piping identified in Table 2.2.5-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.5-5 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.5-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.5-2 as ASME Code Section III.

Section 2.3.2 Chemical and Volume Control System

Insert Item 2.d)

The piping identified in Table 2.3.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.3.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.2-2 as ASME Code Section III.

Section 2.3.6 Normal Residual Heat Removal System

Insert Item 2.d)

The piping identified in Table 2.3.6-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.3.6-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.6-2 as ASME Code Section III.

Section 2.3.7 Spent Fuel Pool Cooling System

Modify Item 2 to Item 2.a)
Insert Item 2.b)

The piping identified in Table 2.3.7-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.7-4 Inspections, Tests, Analyses, and Acceptance Criteria

Modify Item 2 to Item 2.a)
Insert Item 2.b)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.b) The piping identified in Table 2.3.7-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.7-2 as ASME Code Section III.

Section 2.3.10 Liquid Radwaste System

Insert Item 2.c)

The piping identified in Table 2.3.10-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.3.10-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.10-2 as ASME Code Section III.

Section 2.3.13 Primary Sampling System

Modify Item 2 to Item 2.a)
Insert Item 2.b)

The piping identified in Table 2.3.13-1 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

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

Modify Item 2 to Item 2.a)
Insert Item 2.b)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.b) The piping identified in Table 2.3.13-1 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.13-1 as ASME Code Section III.

Question 640.144

Because Westinghouse has not completed the design of the reactor coolant loop piping by using time-history seismic analyses that accounts for a ± 15 percent peak broadening effects, Westinghouse proposed to add a COL action item to have the COL applicant verify the time-history analyses of the RCL piping by using a time-history analysis that varies the time-history loading by ± 15 percent. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for the verification of the RCL piping by a time-history analysis that varies the time-history loading by ± 15 percent.

Response:

We agree with the item identified above, ITAAC Section 2.1.2 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

iTAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.c)

The reactor coolant loop piping (hot legs, cold legs) identified in Table 2.1.2-2 is designed using time-history seismic analyses that account for ± 15 percent peak broadening.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The reactor coolant loop piping (hot legs, cold legs) identified in Table 2.1.2-2 is designed using time-history seismic analyses that account for ± 15 percent peak broadening.	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 applicable as-built piping identified in Table 2.1.2-2 as ASME Code Section III.

Question 640.145

Westinghouse is not planning to complete the fatigue analysis for the ASME Code Class 1 piping prior to design certification. Westinghouse proposed to add a COL action item to have the COL applicant verify through final analysis that the Class 1 fatigue limits have been satisfied. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for the COL applicant to verify that the ASME Code fatigue requirements have been met for the ASME Code Class 1 piping. ITAAC are needed for each system that contain ASME Code Class 1 piping.

Response:

We agree with the item identified above, ITAAC Section 2.1.2, 2.2.3, 2.3.2, and 2.3.6 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.d)

The ASME Code Class 1 piping identified in Table 2.1.2-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The ASME Code Class 1 piping identified in Table 2.1.2-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.1.2-2 as ASME Code Section III.

Section 2.2.3 Passive Core Cooling System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.2.3-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.2.3-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.2.3-2 as ASME Code Section III.

Section 2.3.2 Chemical and Volume Control System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.3.2-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.3.2-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.3.2-2 as ASME Code Section III.

Section 2.3.6 Normal Residual Heat Removal System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.3.6-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.3.6-2 is designed using the ASME Code Section III fatigue requirements.	An 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 applicable as-built Class 1 piping identified in Table 2.3.6-2 as ASME Code Section III.

Question 640.146

Westinghouse is not planning to complete the stress analysis for small-bore piping (less than 3 inches nominal pipe size). Westinghouse proposed to add a COL action item to have the COL applicant complete the small-bore piping stress analysis. The staff has determined that a COL action item is not appropriate to complete this effort, and that the effort must be completed through ITAAC. Westinghouse is requested to develop ITAAC for the COL applicant to complete the design of the small bore piping stress effort.

Response:

Westinghouse does not agree that an ITAAC for the COL applicant to complete the small-bore piping (less than 3 inches nominal pipe size) stress analysis is required. A commitment in Tier 2 to have the COL applicant perform the small-bore piping stress analysis is both appropriate and sufficient to complete this requirement.

The piping most important to safety is identified in the AP600 Certified Design Material (CDM) on a system basis as an ITAAC to verify 1) that the ASME Code Section III requirements to retain pressure boundary integrity, 2) leak-before-break (LBB) criteria (when applicable), and 3) functional capability requirements are met. It is therefore not necessary to include the small-bore piping as the most critical piping with respect to safety has been identified in the CDM.

SSAR Revision:

None

ITAAC Revision:

None

Question 640.147

Westinghouse is planning to complete the pipe break hazards analysis as described in SSAR Section 3.6.2.5 except for the design of protective hardware and the reconciliation of as-built condition. The SSAR should be revised to reflect the responsibility of the COL applicant to complete the design of protective hardware and reconciliation of the as-bulit condition. An additional ITAAC is not needed because the ITAAC in Table 3.3-5 (#7) already addresses this effort.

Response:

We agree with the above statement. Sections 3.6.2.5 and 3.6.4.1 of the SSAR have been modified in Revision 17 to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

None

Question 640.72

In the Design Description and Table 2.2.1-3, Item 6a, the erosion-corrosion allowance for wall thickness may be deleted because, with the elimination of the piping DAC, the design commitment is more appropriately addressed in the SSAR as a Tier 2 commitment. However, it is not clear how erosion-corrosion is addresses in the SSAR and needs further discussion.

This is a generic comment that applies to the same ITAAC in other systems as well.

Response:

Erosion-corrosion is addressed in Section 3B.2.1, 10.1.2, and 10.1.3 of the SSAR. ITAAC Section 2.2.1 and 2 2.4 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

Section 2.1.2 Containment System

Remove Item 6.a)

Modify Item 6.b) to Item 6.

Table 2.2.1-2

Remove Erosion-Corrosion Allowance from Table.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria

Remove Item 6.a)

Modify Item 6.b) to Item 6.

Section 2.2.4 Steam Generator System

Remove Item 6.c)

Modify Item 6.d) to Item 6.c)

Table 2.2.4-2

Remove Erosion-Corrosion Allowance from Table.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria

Remove Item 6.c)

Modify Item 6.d) to Item 6.c)

Question: 640.143

Because the final seismic amplified response spectra has not been used in the preliminary piping design, Westinghouse proposed to add a COL action item to have the COL applicant verify the final as-built piping design by using the final seismic input loadings. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for those applicable piping systems where the final seismic input loadings will need to be verified by the COL applicant.

Response:

We agree with the item identified above, ITAAC Sections 2.1.2, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.3.2, 2.3.6, 2.3.7, 2.3.10, and 2.3.13 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None.

ITAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.e)

The piping identified in Table 2.1.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.e)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.e) The piping identified in Table 2.1.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.1.2-2 as ASME Code Section III.

Section 2.2.1 Containment System

Insert Item 2.c)

The piping identified in Table 2.2.1-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.1-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.1-2 as ASME Code Section III.

Section 2.2.2 Passive Containment Cooling System

Insert Item 2.c)

The piping identified in Table 2.2.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.2-2 as ASME Code Section III.

Section 2.2.3 Passive Core Cooling System

Insert Item 2.d)

The piping identified in Table 2.2.3-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.2.3-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.3-2 as ASME Code Section III.

Section 2.2.4 Steam Generator System

Insert Item 2.c)

The piping identified in Table 2.2.4-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.4-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.4-2 as ASME Code Section III.

Section 2.2.5 Main Control Room Emergency Habatibility System

Insert Item 2.c)

The piping identified in Table 2.2.5-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.2.5-5 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.2.5-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.2.5-2 as ASME Code Section III.

Section 2.3.2 Chemical and Volume Control System

Insert Item 2.d)

The piping identified in Table 2.3.2-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.3.2-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.2-2 as ASME Code Section III.

Section 2.3.6 Normal Residual Heat Removal System

Insert Item 2.d)

The piping identified in Table 2.3.6-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The piping identified in Table 2.3.6-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.6-2 as ASME Code Section III.

Section 2.3.7 Spent Fuel Pool Cooling System

Modify Item 2 to Item 2.a)
Insert Item 2.b)

The piping identified in Table 2.3.7-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.7-4 Inspections, Tests, Analyses, and Acceptance Criteria

Modify Item 2 to Item 2.a)
Insert Item 2.b)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.b) The piping identified in Table 2.3.7-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.7-2 as ASME Code Section III.

Section 2.3.10 Liquid Radwaste System

Insert Item 2.c)

The piping identified in Table 2.3.10-2 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The piping identified in Table 2.3.10-2 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.10-2 as ASME Code Section III.

Section 2.3.13 Primary Sampling System

Modify Item 2 to Item 2.a)
Insert Item 2.b)

The piping identified in Table 2.3.13-1 as ASME Code Section III is designed using the certified seismic amplified response spectra input.

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

Modify Item 2 to Item 2.a)
Insert Item 2.b)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.b) The piping identified in Table 2.3.13-1 as AMSE Code Section III is designed using the certified seismic amplified response spectra.	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 applicable as-built piping identified in Table 2.3.13-1 as ASME Code Section III.

Question 640.144

Because Westinghouse has not completed the design of the reactor coolant loop piping by using time-history seismic analyses that accounts for a ± 15 percent peak broadening effects, Westinghouse proposed to add a COL action item to have the COL applicant verify the time-history analyses of the RCL piping by using a time-history analysis that varies the time-history loading by ± 15 percent. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for the verification of the RCL piping by a time-history analysis that varies the time-history loading by ± 15 percent.

Response:

We agree with the item identified above, ITAAC Section 2.1.2 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.c)

The reactor coolant loop piping (hot legs, cold legs) identified in Table 2.1.2-2 is designed using time-history seismic analyses that account for ± 15 percent peak broadening.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The reactor coolant loop piping (hot legs, cold legs) identified in Table 2.1.2-2 is designed using time-history seismic analyses that account for ± 15 percent peak broadening.	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 applicable as-built piping identified in Table 2.1.2-2 as ASME Code Section III.

Question 640.145

Westinghouse is not planning to complete the fatigue analysis for the ASME Code Class 1 piping prior to design certification. Westinghouse proposed to add a COL action item to have the COL applicant verify through final analysis that the Class 1 fatigue limits have been satisfied. The staff has determined that a COL action item is not appropriate for this verification, and that the verification must be accomplished through ITAAC. Westinghouse is requested to develop ITAAC for the COL applicant to verify that the ASME Code fatigue requirements have been met for the ASME Code Class 1 piping. ITAAC are needed for each system that contain ASME Code Class 1 piping.

Response:

We agree with the item identified above, ITAAC Section 2.1.2, 2.2.3, 2.3.2, and 2.3.6 will be revised as indicated below to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

Section 2.1.2 Reactor Coolant System

Insert Item 2.d)

The ASME Code Class 1 piping identified in Table 2.1.2-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.d)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.d) The ASME Code Class 1 piping identified in Table 2.1.2-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.1.2-2 as ASME Code Section III.

Section 2.2.3 Passive Core Cooling System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.2.3-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.2.3-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.2.3-2 as ASME Code Section III.

Section 2.3.2 Chemical and Volume Control System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.3.2-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.3.2-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.3.2-2 as ASME Code Section III.

Section 2.3.6 Normal Residual Heat Removal System

Insert Item 2.c)

The ASME Code Class 1 piping identified in Table 2.3.6-2 is designed using the ASME Code Section III fatigue requirements.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria

Insert Item 2.c)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c) The ASME Code Class 1 piping identified in Table 2.3.6-2 is designed using the ASME Code Section III fatigue 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 applicable as-built Class 1 piping identified in Table 2.3.6-2 as ASME Code Section III.

Question 640.146

Westinghouse is not planning to complete the stress analysis for small-bore piping (less than 3 inches nominal pipe size). Westinghouse proposed to add a COL action item to have the COL applicant complete the small-bore piping stress analysis. The staff has determined that a COL action item is not appropriate to complete this effort, and that the effort must be completed through ITAAC. Westinghouse is requested to develop ITAAC for the COL applicant to complete the design of the small bore piping stress effort.

Response:

Westinghouse does not agree that an ITAAC for the COL applicant to complete the small-bore piping (less than 3 inches nominal pipe size) stress analysis is required. A commitment in Tier 2 to have the COL applicant perform the small-bore piping stress analysis is both appropriate and sufficient to complete this requirement.

The piping most important to safety is identified in the AP600 Certified Design Material (CDM) on a system basis as an ITAAC to verify 1) that the ASME Code Section III requirements to retain pressure boundary integrity, 2) leak-before-break (LBB) criteria (where applicable), and 3) functional capability requirements are met. It is therefore not necessary to include the small-bore piping as the most critical piping with respect to safety has been identified in the CDM.

SSAR Revision:

None

ITAAC Revision:

None

Question 640.147

Westinghouse is planning to complete the pipe break hazards analysis as described in SSAR Section 3.6.2.5 except for the design of protective hardware and the reconciliation of as-built condition. The SSAR should be revised to reflect the responsibility of the COL applicant to complete the design of protective hardware and reconciliation of the as-bulit condition. An additional ITAAC is not needed because the ITAAC in Table 3.3-5 (#7) already addresses this effort.

Response:

We agree with the above statement. Sections 3.6.2.5 and 3.6.4.1 of the SSAR have been modified in Revision 17 to incorporate the above item.

SSAR Revision:

None

ITAAC Revision:

None