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Your ref: Docket No. 52-006
Our ref: DCP/NRC2251

September 5, 2008

Subject: AP1000 Response to Request for Additional Information (SRP3.2)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 3.2. This RAI response is submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information included in the response is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

A response is provided for RAI-SRP3.2.1-EMB2-01,-02, and -03 and RAI-SRP3.2.2-EMB2-01,-02, and -03, as agreed in a teleconference between Mike Miernicki and Don Lindgren on August 13, 2008 and for RAI-SRP3.2.2-EMB2-04 as sent in an email from Mike Miernicki to Sam Adams dated May 28, 2008. This response completes all requests received to date for SRP Section 3.2. A response for RAI-SRP3.2-EMB2-01 was provided under letter DCP/NRC2120 dated April 14, 2008.

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,

A handwritten signature in black ink, appearing to read "Robert Sisk".

Robert Sisk, Manager
Licensing and Customer Interface
Regulatory Affairs and Standardization

/Enclosure

1. Response to Request for Additional Information on SRP Section 3.2

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ENCLOSURE 1

Response to Request for Additional Information on SRP Section 3.2

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.2.1-EMB2-01
Revision: 0

Question:

DCD Revision 16 includes a number of changes to Tier 2 Table 3.2-3 as well as various changes to subsection 3.2.1, Tier 1 Table 3.7-1, Tier 2 Table 17.4-1 and Chapter 19 regarding the identification and seismic classification of important to safety SSCs, such as risk-significant RTNSS SSCs. The response to RAI-SRP3.2-EMB2-01 clarified that the RTNSS process for seismic events relative to post-72-hour actions identified risk-significant SSCs, such as the onsite AC ancillary power supply, that are to be seismically analyzed and their construction is augmented to Seismic Category II requirements that provide additional margin to support their RTNSS missions. However, the RAI response did not reconcile the omission of these risk-significant RTNSS SSCs and their support systems in Table 3.2-3 with DCD Tier 2 Table 17.4-1 and Tier 1 Table 3.7-1. Also it appears there may be other SSCs that are omitted from Table 3.2-3 that may or may not be site-specific. The number of changes and possible omissions suggests that the seismic classifications based on the final detailed design may not be final and complete. Specifically, Tables 3.2-2 and 3.2-3 do not appear to reflect augmented seismic requirements or include the complete listing of all potentially risk-significant SSCs, such as the ancillary diesel generators. General Design Criterion 2 identifies, in part, that structures, systems and components important to safety shall be designed to withstand the effects of earthquakes. NRC guidance related to SECY-96-128 for AP600 identified that the post-72 hour SSCs are not required to be safety-related, but additional regulatory oversight consistent with RTNSS will be applied. This document further identified that these SSCs should be analyzed, designed and constructed using the method and criteria for seismic Category II building structures. DCD Tables 3.2-2 and 3.2-3 identify there are certain nonsafety-related SSCs classified as NS (Non-seismic) that may be important to safety and have augmented seismic requirements, but these are not all designated as seismic Category II.

Considering the response to RAI-SRP3.2-EMB2-01, the applicant is requested to clarify if there are any other nonsafety-related SSCs within scope of the DCD that are important to safety that have supplemental seismic requirements applied such that they should be classified with augmented seismic requirements and update DCD Tables 3.2-2 and 3.2-3 accordingly. For example, certain risk-significant RTNSS SSCs such as the Passive Containment Cooling System (PCS) Recirculation Pumps and their power source that are required post-72-hr are considered nonsafety-related, but may be important to safety and should be categorized such that they are designed to withstand the effects of earthquakes. Currently DCD Table 3.2-3 does not include the ancillary diesel generators and identifies the PCS pumps and VBS ancillary fans as NS with only equipment anchorage designated as Seismic Category II.

If the seismic classification of all risk-significant SSCs is not final and complete at this time, identify when the entire list will be considered final and complete.

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Response to Request For Additional Information (RAI)

Westinghouse Response:

The minimum augmented seismic requirement for Class D systems and components is that they be located in buildings designed in accordance with uniform building code seismic requirements. In some cases additional requirements are designated.

Westinghouse has determined that the ancillary ac diesel generators and supporting systems should be included in Table 3.2-3 as Class D equipment. This equipment will be added to the Table 3.2-3 of the DCD as shown below. The fuel tanks for the ancillary ac generators are included in the table in the Standby Diesel Fuel Oil System (DOS). Table 3.2-3 will be revised to note that the fuel tanks for the ancillary ac generators are located in the Annex Building. The discussion of ancillary ac generators components in Subsection 8.3.1.1.3 requires that the systems and component be located in a building classified as seismic Category II. The intent of the design is that the anchorage of the ancillary diesels satisfies seismic Category II requirements. The information added to Table 3.2-3 will reflect that.

The designation of NS in Tables 3.2-2 and 3.2-3 indicates that the structure, system, or component is not seismic Category I or seismic Category II. These structures, systems, and components may have other seismic requirements. The response to RAI-SRP3.2.1-EMB2-02 will add a footnote referencing the section of the DCD that defines seismic requirements for structures classified as NS.

Nonsafety-related structures, systems, and components that directly act to prevent unnecessary actuation of the passive safety systems are classified as Equipment Class D. These systems are sometimes referred to as RTNSS systems. This classification of structures, systems, and components as Class D and the associated seismic classification are considered to be complete for the AP1000. If design finalization identifies changes in individual components, the design change process for the AP1000 should identify changes that would impact the detailed application of the classification to systems and components.

Design Control Document (DCD) Revision:

Revise Table 3.2-3 as follows:

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| TABLE 3.2-3 (SHEET 4 OF 65) | | | | | |
|--|--|--------------|--|-----------------------------|----------------------------------|
| AP1000 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT | | | | | |
| Tag Number | Description | AP1000 Class | Seismic Category | Principal Construction Code | Comments |
| Standby Diesel Fuel Oil System (DOS) | | | Location: Diesel Generator Building and yard | | |
| n/a | Fuel Oil Transfer Package | D | NS | Manufacturer Std. | |
| n/a | Fuel Oil Storage Tanks | D | NS | API 650 | |
| n/a | Fuel Oil Day Tanks | D | NS | ASME VIII | |
| n/a | Valves Providing DOS AP1000 Equipment Class D Function | D | NS | ANSI 16.34 | |
| n/a | Ancillary Diesel Generator Fuel Tank | D | II | UL 142 | <u>Located in Annex Building</u> |
| Balance of system components are Class E | | | | | |

| TABLE 3.2-3 (SHEET 5 OF 65) | | | | | |
|--|--|--------------|--------------------------|------------------------------|--------------------------|
| AP1000 CLASSIFICATION OF MECHANICAL AND FLUID SYSTEMS, COMPONENTS, AND EQUIPMENT | | | | | |
| Tag Number | Description | AP1000 Class | Seismic Category | Principal Construction Code | Comments |
| Balance of system components are Class E | | | | | |
| Electrical Distribution System (ECS) | | | Location: Annex Building | | |
| n/a | <u>Ancillary Diesel Generator Engines</u> | D | NS | <u>Manufacturer Standard</u> | <u>Anchorage is SCII</u> |
| n/a | <u>Ancillary Diesel Generator Radiators</u> | D | NS | <u>CAGI</u> | |
| n/a | <u>Ancillary Diesel Generator Silencers</u> | D | NS | <u>API661</u> | |
| n/a | <u>Valve providing fuel to ECS Ancillary Diesel Generators</u> | D | NS | <u>ANSI 16.34</u> | |
| Balance of system components are Class E | | | | | |

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| | | | | | |
|---|--|--|--|--|--|
| Fuel Handling and Refueling System (FHS) | | | | | |
|---|--|--|--|--|--|

| | | | | | |
|--|--|--|--|---|--|
| | | | | Location: Containment and Auxiliary Building | |
|--|--|--|--|---|--|

PRA Revision:

None

Technical Report (TR) Revision:

None



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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.2.1-EMB2-02
Revision: 0

Question:

The scope of SSCs identified in Subsection 3.2.1 does not appear to be complete and certain SSCs do not appear to be seismically classified in either the DCD or RCOL. The SSCs included in DCD Table 3.2-3 are limited to mechanical and fluid systems and DCD Table 3.2-2 is limited to building structures. DCD Subsection 1.8 identifies that the COL applicant will be required to provide site-specific information, but the scope of SSCs that are considered site-specific is not clearly defined in the application. Section 1.8 of the DCD identifies certain COL items that represent interfaces for the standard design and certain site-specific SSCs that are outside the scope of the AP1000 standard plant, such as the circulating water system and its heat sink. The seismic classification of the circulating water system is not identified in DCD Table 3.2-3 or in the R-COL and DCD Table 1.7-2 identifies the Circulating Water System as partially out of scope. Although COL Item 10.4-1 applies to the Circulating Water Supply, the DCD does not identify any COL Information item for Subsection 3.2. Similarly, nonsafety-related portions of the Fire Protection System (FPS) that have seismic requirements are not included in Table 3.2-3. Since the R-COL identifies no departures or additions from the DCD in regard to scope of SSCs seismically classified, the entire scope of SSCs that are seismically classified appears to be limited to those SSCs identified in Tables 3.2-2 and 3.2-3 of the DCD.

The applicant is requested to identify the seismic classification for any non-site-specific SSCs within scope of the DCD that are not included in the DCD tables and identify a COL item for the applicant to identify the seismic classification of any site-specific SSCs. For example, the seismic classification for electrical components such as the ancillary diesel generators and systems such as the circulating water system or FPS and miscellaneous items such as the reactor vessel insulation are not included in the tables.

The applicant is also requested to clarify if there are there any site-specific SSCs outside the scope of the DCD that are not classified in DCD Tables 3.2-2 or 3.2-3 that are to be seismically classified in the COL. If site-specific SSCs are to be classified by the COL applicant, identify a specific action item for the COL applicant to identify the seismic classification of such SSCs as a COL Item.

Westinghouse Response:

Table 3.2-3 contains classification for mechanical and fluid system components and equipment. This is consistent with the guidance of the Standard Review Plan Section 3.2.2. The Table does not include information on electrical equipment or instrumentation. The table also does not include information on architectural elements. This scope of information and level of detail was reviewed and approved as part of the AP1000 Design Certification.

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Table 3.2-3 is intended to include the equipment classification and seismic categorization for the mechanical and fluid system components in the scope of the Design Certification. Equipment classification and seismic categorization of components and equipment within the scope of the Design Certification is not the responsibility of the COL applicant. As noted in the response to RAI-SRP-3.2.1-EMB2-01 the ancillary ac diesels and supporting systems should be in Table 3.2-3 and the addition of this information to the DCD is shown in the response to RAI-SRP3.2.1-EMB2-01. Also the classification information in Table 3.2-3 for the fire protections system is being corrected and expanded in the response to RAI-SRP3.2.2-EMB2-04

Several of the site specific structures, systems, and components are classified and categorized in Table 3.2-3. Although the design of these systems is the responsibility of the COL applicant, the equipment classification and seismic categorization information is provided as part of the Design Certification. For example, the circulating water system (CWS) and the raw water system (RWS) are classified as equipment Class 1 and non-seismic. A change to this information would require a departure from the DCD in the COL application. The COL Information Item in Section 1.8 includes the requirement that site specific information is to be provided. No additional COL Information Item to specify classification of site specific systems is required in Section 3.2.

The designation of NS in Tables 3.2-2 and 3.2-3 indicates that the structure, system, or component is not seismic Category I or seismic Category II. This is consistent with the Standard Review Plan guidance. These structures systems and components may have other seismic requirements. DCD Table 3.2-2 will be revised as shown below to indicate the seismic requirements for the Turbine Building, Radwaste Building, Annex Building, and Diesel-Generator Building .

Design Control Document (DCD) Revision:

Revise Table 3.2-2 as follows:

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| TABLE 3.2-2 | |
|--|------------------------------|
| SEISMIC CLASSIFICATION OF BUILDING STRUCTURES | |
| Structure | Category ¹ |
| Nuclear Island Basemat Containment Interior Shield Building Auxiliary Building Containment Air Baffle | C-I |
| Containment Vessel | C-I |
| Plant Vent and Stair Structure | C-II |
| Turbine Building | NS ² |
| Annex Building Area Outlined by Columns A - D and 8 - 13 Area Outlined by Columns A - G and 13 - 16 | NS ² |
| Annex Building Area Outlined by Columns E - I.1 and 2 - 13 | C-II |
| Radwaste Building | NS ² |
| Diesel-Generator Building | NS ³ |
| Circulating Water Pumphouse and Towers | NS |

C-I – Seismic Category I
 C-II – Seismic Category II
 NS – Non-seismic

Note:

1. Within the broad definition of seismic Category I and II structures, these buildings contain members and structural subsystems the failure of which would not impair the capability for safe shutdown. Examples of such systems would be elevators, stairwells not required for access in the event of a postulated earthquake, and nonstructural partitions in nonsafety-related areas. These substructures are classified as non-seismic.
2. The NS designation for the Turbine Building, Radwaste Building, and a portion of the Annex Building indicates that the buildings are not seismic Category I or seismic Category II. The seismic requirements for these buildings are outlined in Subsection 3.7.2.8.
3. The NS designation for the Diesel-Generator Building indicates that the building is not seismic Category I or seismic Category II. The seismic requirements for buildings containing Class D equipment including the Diesel Generator Building are outlined in Subsection 3.2.2.6.

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PRA Revision:

None

Technical Report (TR) Revision:

None

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.2.1-EMB2-03
Revision: 0

Question:

SSCs classified as Seismic Category II have an important safety function to prevent adverse interaction with other important to safety SSCs when subjected to a seismic event. Regulatory Guide 1.29 Position C.4 identifies that the pertinent quality assurance requirements of Appendix B to 10 CFR Part 50 should be applied to all activities affecting the safety-related functions of those portions of SSCs covered under regulatory Positions 2 and 3 above that includes SSCs classified as seismic Category II. Although DCD Appendix 1A identifies that AP1000 conforms to RG 1.29 Regulatory Position C.4, supplemental quality assurance (QA) requirements for AP1000 Class D seismic Category II SSCs do not appear to be adequately defined in Subsection 3.2.2 of DCD Rev. 16. DCD Subsection 3.2.1.1.2 identifies that pertinent portions of 10 CFR 50 Appendix B apply to seismic Category II SSCs, but DCD Table 3.2-3 does not identify specific augmented QA program requirements that apply to seismic Category II SSCs. DCD Subsection 1.8 identifies COL Item 17.5-1 for QA in the design phase. DCD COL Item 17.5.2 further identifies that the COL applicant will address its QA program and the QA program will include provisions for seismic Category II SSCs.

The applicant is requested to clarify to what extent the pertinent QA requirements of Appendix B to 10 CFR Part 50 apply to non-site-specific seismic Category II SSCs and identify the DCD subsection or other document that describes those requirements. If these specific QA requirements are under development, identify when such information will be available.

Westinghouse Response:

DCD Subsection 3.2.1.1.2 requires that pertinent portions of 10 CFR 50 Appendix B apply to seismic Category II structures, systems, and components. Pertinent portions are those required to provide that unacceptable structural failure or interaction with seismic Category I items does not occur. This commitment is consistent with NRC guidance in Regulatory Guide 1.29 and was previously approved as part of the AP1000 Design Certification.

The design activities and procurement of structures, systems, and components with a seismic categorization of seismic Category II are covered by the same quality programs and procedures as seismic Category I. The extent of design activities included and which quality assurance provisions are required for specific seismic Category II structures, systems, and components are determined by the responsible engineers and are identified in design specifications and design criteria documents. Seismic Category II structures, systems, and components are not designed or procured as safety-related.

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Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None



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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.2.2-EMB2-01

Revision: 0

Question:

General Design Criterion 1 identifies, in part, that structures systems and components important to safety shall be designed, fabricated, erected and tested to quality standards commensurate with the importance of the safety functions to be performed. Where generally recognized codes and standards are used, they shall be supplemented or modified as necessary to assure a quality product in keeping with the required safety function. Supplemental quality standards and QA program (special treatment) applicable to passive SSCs used in nonsafety-related RTNSS systems that may be important to safety are not clearly defined in the application (Note 1).

The applicant is requested to clarify what supplemental quality standards and QA program are applied to nonsafety-related passive SSCs that are important to safety and risk significant to ensure that all SSCs important to safety are designed, fabricated, erected, and tested to quality standards commensurate with the safety function to be performed. For example, the response to RAI-TR-103-EMB2-02 concerning HDPE piping used in risk-significant service water applications did not identify supplemental quality standards. (Note 2)

Note 1:

NUREG/CR-6752 concluded that commercial codes and standards were not judged to provide a level of rigor equivalent to that provide by the nuclear special treatment rules. GDC 1, RG 1.26 and SRP 3.2.2 identify that plant systems and components important to safety should be designed, fabricated, erected and tested to quality standards commensurate with the safety function to be performed. Subsection 3.1.1 of the AP1000 DCD identifies that AP1000 complies with the intent of Criterion 1 and states that safety-related items are designed, procured, fabricated, inspected and tested to quality standards commensurate with the safety-related functions to be performed. DCD Subsection 3.1.1 refers to Section 3.2 for principal design criteria, design bases, codes and standards. DCD Subsection 17.5 identifies that the Combined License applicant or holder will address its design phase QA program and the COL applicant will address failures of nonsafety-related risk-significant SSCs. NRC memo dated 7/18/94 identified that the IRP (important by the RTNSS process) systems have a quality assurance program comparable to GL 85-06 for ATWS and Regulatory Position 3.5 and Appendix A of RG 1.155 for station blackout nonsafety-related equipment. Part 3 to NEI 06-14A dated July 23, 2007 identifies general nonsafety-related SSC quality control for nonsafety-related SSCs that are significant contributors to plant safety and DCD subsection 17.3 also identifies general quality requirements in Table 17-1 for investment protection systems that are also considered RTNSS systems. The quality program for nonsafety-related SSCs that may be important to safety is not consistent with pertinent elements of 10 CFR 50 Appendix B and neither Subsection 3.2 nor Chapter 17 of the DCD and COLA clearly identify what supplemental quality standards or special treatment apply to SSCs, such as RTNSS systems, that may not be considered safety-related, but are considered important to safety. DCD Table 3.2-1 note 11 identifies that Class D SSCs have selected reliability assurance programs and procedures to provide availability when needed. The D-RAP addressed in DCD Subsection 17.4 identifies risk-significant SSCs for inclusion in the Maintenance Rule Program, but the Table 17.4-1 list of risk-significant SSCs within scope of the D-RAP is primarily limited to active components. For example, the program descriptions do not clearly define what augmented seismic and quality standards or QA program apply to passive components such

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Response to Request For Additional Information (RAI)

as nonmetallic piping used in risk-significant RTNSS systems to ensure that their availability and reliability are consistent with the assumptions in the PRA.

Note 2:

The use of non-metallic piping has been proposed for nonsafety-related risk-significant systems in ASME B31.1 applications, such as plant service water, that may be considered important to safety. The applicant's response dated February 22, 2008 to RAI-TR103-EMB2-02 identified that the use of HDPE piping for RTNSS systems is limited to underground service. This response also identified various industrial specifications and investment protection short term availability controls applied to this piping and noted that, based on WCAP-15985, it was concluded that there was sufficient regulatory oversight of the SWS functions. The AP1000 Design Reliability Assurance Program APP-GW-GRR-009 is referenced in this response, but this document is not currently available for NRC review and may not include passive SSCs. The response did not identify any supplemental QA requirements or other special treatment requirements that would apply to this piping. ASME Code Case N-755, although not currently approved by the NRC, applies extensive design, construction and QA requirements for similar HDPE piping used in important to safety underground applications. Although the AP1000 HDPE application is for nonsafety-related risk-significant piping constructed to ASME B31.1 rather than safety-related ASME Section III piping addressed in the Code Case, similar appropriate special treatment requirements may be needed for HDPE RTNSS piping systems that may be considered important to safety and have limited operating experience in sizes and service conditions similar to service water.

Westinghouse Response:

Westinghouse has identified structures, systems, and components that directly act to prevent unnecessary actuation of the passive safety systems. These nonsafety-related structures, systems, and components are classified as Equipment Class D. Structures, systems and components which support those which directly act to prevent the actuation of passive safety systems are also Class D. The Class D systems are primarily active systems. The NRC has previously reviewed and approved the application of Equipment Class D to these systems in the AP600 Design Certification and the AP1000 Design Certification.

The industrial codes and standards applicable to Class D are identified in DCD Subsection 3.2.2.6. These codes and standards provide an appropriate level of integrity and functionality. These codes and standard represent the supplemental quality standards provided for Equipment Class D and are consistent with the guidelines of NRC Quality Group D. The use of the codes and standards listed in the DCD to provide the supplemental quality assurance standards for Class D structures, systems, and components has been previously reviewed and approved by the NRC in the AP1000 Design Certification.

For the particular case of the use of HDPE piping for Class D systems the ASME Code, ASME B31.1 "Power Piping" is applicable to the piping. This was noted in the response to RAI-TR-103-EMB2-02. ASME B31.1 is one of the codes and standards identified in Subsection 3.2.2.6 as providing requirements for Class D system integrity and functionality.

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Response to Request For Additional Information (RAI)

Westinghouse is not requesting a change to the quality assurance or codes and standards used for Class D structures, systems, and components as part of the Design Certification amendment.

The PRA reliability assumptions for Class D systems and components are based on the use of codes and standards identified in the DCD. The PRA did not identify structures, systems, or components that needed a more rigorous code or standard than identified in the DCD to provide improved reliability.

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.2.2-EMB2-02
Revision: 0

Question:

DCD Section 3.2.2.2 identifies that the specific classifications in industry standards are based on a nuclear power plant with active safety systems and are not necessarily appropriate for the passive safety systems of the AP1000. Industry consensus standards ANS 51.1 and ANS 58.14 referenced in the DCD have not been endorsed by the NRC and these standards can not be used as a basis for acceptability of classifications. This concern was identified during the review of the ABWR design certification in Subsection 3.2.2 of the ABWR FSER (NUREG-1503) and during the review of the ESBWR design certification in RAI 3.2-3 that resulted in reference to ANS 58.14-1993 being removed in the ESBWR DCD. Revision 16 to the AP1000 DCD revised Subsection 3.2.2.1 to include withdrawn and outdated standard ANS 58.14-1993 as a reference and in Subsection 3.2.2.2 withdrawn and outdated ANS/ANSI 51.1-1983 continues to be referenced. Staff is concerned that these standards have not been endorsed by the NRC and application of withdrawn and outdated standards to AP1000 is not a recommended practice.

The applicant is requested to replace the outdated standards and classification criteria by either referencing new updated industry consensus standards that reflect new passive reactor designs and recent criteria such as RTNSS or alternatively delete reference to the standards and sufficiently describe the criteria in the application or in a topical report.

Westinghouse Response:

The equipment classification for the AP1000 described in Subsection 3.2.2.2 is unique to Westinghouse passive designs. The documents referenced in the DCD provided guidance for the development of the AP1000 classification approach but the AP1000 equipment classification does not rely on the endorsement of any particular standard as the basis of the classification approach. The referenced documents provide background information for the equipment classification and should remain in the DCD.

This equipment classification methodology and application has been reviewed and approved by the NRC as part of the AP600 and AP1000 Design Certifications. The AP1000 Design Certification amendment is not revising the basis of the classification.

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.2.2-EMB2-03
Revision: 0

Question:

SRM dated July 21, 1993 concerning SECY-93-087 identified that the staff will review passive plant design applications using the newest codes and standards endorsed by the NRC and unapproved revisions to the codes will be reviewed on a case by case basis. Editions of various codes and standards referenced in DCD Subsection 3.2.6 are not current.

The applicant is requested to clarify which code editions referenced are currently endorsed by the NRC and clarify if current editions of codes and standards will be applied to the detailed design and procurement of AP1000 SSCs so that these editions may be reviewed on a case by case basis.

Westinghouse Response:

The use of the Codes and Standards specified in the Design Control Document (DCD) was approved by the NRC by reference to the DCD in the Design Certification Rule. The codes and standards specified in the DCD are generally those in effect six month prior to the submittal of the application for the AP1000 Design Certification. The codes and standards specified in the DCD will be applied to the detailed design and procurement of AP1000 structures, systems, and components.

Westinghouse has not generally requested updating to later codes and standards as part of the Design Certification amendment. In a limited number of cases Westinghouse is updating the revision of codes or standards and Regulatory Guides to address emerging issues and code and standard application issues. Where a code, standard, or Regulatory Guide is to be updated this change is specifically identified in a DCD revision.

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.2.2-EMB2-04
 Revision: 0

Question:

Subsection 3.2.2.7 of DCD Revision 16 has been revised to identify that both Class F and G are used for Fire Protection Systems (FPS), but Table 3.2-3 does not identify FPS SSCs that are classified as Class F or G. The FPS shown in Table 3.2-3 is limited to Class B.

The applicant is requested to submit the classifications for the entire FPS.

Westinghouse Response:

Table 3.2-3 in Revision 16 of the AP1000 Design Control Document (DCD) will be revised as shown below to reflect classifications for the entire Fire Protection System (FPS).

Design Control Document (DCD) Revision:

Revise DCD Rev.16 Tier 2 Table 3.2-3 as follows:

| Fire Protection System (FPS) | | | | | Location: Various |
|--|---|----------|-----------|-------------------|--|
| FPS-PL-V050 | Fire Water Containment Supply Isolation | B | I | ASME III-2 | |
| FPS-PL-V051 | Fire Water Containment Test Connection Isolation | B | I | ASME III-2 | |
| FPS-PL-V052 | Fire Water Containment Supply Isolation - Inside | B | I | ASME III-2 | |
| FPS-PY-C01 | Fire Protection Containment Penetration | B | I | ASME III, MC | |
| FPS-PL-V441 | <u>Auxiliary Connection to CCS Isolation</u> | <u>D</u> | <u>NS</u> | <u>ANSI B31.1</u> | |
| <u>Containment standpipe and suppression system components</u> | <u>Includes all FPS components inside Containment with the exception of those used for containment isolation and containment spray.</u> | <u>F</u> | <u>NS</u> | <u>ANSI B31.1</u> | <u>Seismic analysis consistent with ASME Section III Class 3 systems</u> |
| <u>Various</u> | <u>Auxiliary Building Standpipe and Non-1E Equipment Penetration Room Preaction Sprinkler System components</u> | <u>F</u> | <u>NS</u> | <u>ANSI B31.1</u> | <u>Seismic analysis consistent with ASME Section III Class 3 systems</u> |
| Balance of system components are Class E and G | | | | | |

PRA Revision: None

Technical Report (TR) Revision: None

