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Your ref: Docket No. 52-006  
Our ref: DCP/NRC2266

September 22, 2008

Subject: Update to Westinghouse's Application to Amend the AP1000 Design Certification Rule

Westinghouse is submitting this update to its application to amend the AP1000 Design Certification (10 CFR 52 Appendix D) submitted on May 26, 2007. This update is being provided in accordance with the requirements of 10 CFR 52.63. This update provides necessary changes to address NRC comments raised during the review of the amendment to the certified design and to address engineering changes necessary to:

- *Enhance safety, reliability, or security of facility design, construction, or operation*
- *Increase standardization of the certification information*
- *Correct material errors in the certification information*

Pursuant to 10 CFR 50.30 (b), electronic files providing APP-GW-GL-700, AP1000 Design Control Document, Revision 17 are submitted as Enclosures 1 and 2 under Oath and Affirmation (Attachment 1).

Enclosure 1 contains sensitive unclassified non-safeguards information relative to the physical protection of an AP1000 Nuclear Plant that should be withheld from public disclosure pursuant to 10 CFR 2.390(d). Enclosure 2 is the redacted version of Enclosure 1 with the sensitive unclassified non-safeguards information relative to the physical protection of an AP1000 Nuclear Plant withheld from public disclosure pursuant to 10 CFR 2.390(d). The files for the two versions are provided on separate CD-ROMS to facilitate handling by the public document room. The files and directory structure on the CD-ROMS are intended to satisfy the NRC requirements for electronic submittals.

Westinghouse has included a roadmap in DCD Revision 17 that identifies the appropriate 10 CFR 52.63(a)(1) criteria that justifies the updated information's inclusion in the amendment currently under review. The following is a summary of the types of technical changes and additions that are included:

- Supplemental information directed at generically addressing COL Information Items that are related to AP1000 design. The criterion in 10 CFR 52.63(a)(1)(vii) (contributes to increased standardization of the certification information) is identified as the rationale for including these items in the amendment update.

- Supplemental information directed at addressing NRC Requests for Information (RAI) for those items responded to by Westinghouse prior to September 19, 2008.
- Supplemental information directed at generically resolving Design Acceptance Criteria in the areas of Piping, Instrumentation and Control Systems (both Safety Related and Non-Safety Related), and the Human-Factors Engineering Program. The criterion in 10 CFR 52.63(a)(1)(iv) (allows for generic resolutions of Design Acceptance Criteria) is the rationale for including these items in the updated amendment.
  - DCD Revision 17 includes the removal of the piping Design Acceptance Criteria (DAC). Westinghouse expects that completion of the piping analysis and the results of the NRC reviews of the piping analyses will support the removal of the piping DAC and will not be required when the Design Certification amendment is approved. The piping DAC was previously included as a table in the introduction to the AP1000 Design Control Document. The changes to remove the piping DAC include deletion of Table 1-2 of the DCD Introduction. A table containing the summary of analysis methods and criteria previously identified as the piping DAC has been added to Section 3.9.
  - DCD Revision 17 also includes the removal of Design Acceptance Criteria (DAC) from both Chapter 7 (Instrumentation and Control [I&C]) and Chapter 18 (Human Factors Engineering [HFE]).
    - The following Non-Safety Related DAC have been removed from Chapter 7 (I&C):
      - Diverse Actuation System (DAS) Design Requirements Phase DAC
      - Diverse Actuation System (DAS) System Definition Phase DAC
    - The following Safety-Related DAC has been removed from Chapter 7 (I&C):
      - Protection and Safety Monitoring System (PMS) System Definition Phase DAC
    - The DAS DAC were listed in Tier 1, Section 2.5.1., Diverse Actuation System Design Description, Items 4a) and 4b), as well as in Tier 1 Table 2.5.1-4, Items 4a) and 4b). The PMS DAC was listed in Tier 1, Section 2.5.2, Protection and Safety Monitoring System Design Description Item 11a), as well as Table 2.5.2-8, Item 11a).
    - The following DAC have been removed from Chapter 18 (Human Factors Engineering [HFE]):
      - Integration of Human Reliability Analysis with HFE Design
      - Task Analysis
      - Human System Interface (HSI) Design
      - HFE Program Verification and Validation Implementation Plans
    - The HFE DAC were previously included in DCD Revision 15, Tier 1, Section 3.2 Human Factors Engineering Design Description Items 1, 2, 3 and 4. They were also listed in DCD Revision 15, Tier 1 Table 3.2-1, Items 1, 2, 3, and 4. Item 1 was deleted from both of these locations by DCD Revision 16.
    - Westinghouse believes that the technical reviews of these designs will demonstrate that the DAS, PMS, and HFE DAC identified above are not required



and, as such, do not need to be included in the AP1000 Design Control Document when the Design Certification Amendment is approved.

- DCD Revision 17 includes those changes to the certified design information that have resulted from the detailed design activities performed during First-of-a-Kind Engineering (FOAKE). The majority of these types of changes identify 10 CFR 52.63(a)(1)(vii) (contributes to increased standardization of the certification information) as the rationale for including these items in the updated amendment application. A small subset of these changes identify 10 CFR 52.63(a)(1)(v) (generic resolutions of material errors in the certification). These material errors surfaced in either the identification of errors in Tier 1 information or areas where existing certified design information was invalidated by detailed design efforts in another design area.
- DCD Revision 17 includes those changes to the certified design information that have resulted from inputs provided by the COL applicants that will reference the AP1000 Design Certification Rule (DCR). These changes have all been confirmed by the consensus group of AP1000 COL applicants. 10 CFR 52.63(a)(1)(vii) (contributes to increased standardization of the certification information) is identified as the rationale for including these changes in the updated amendment application.

Although many of the DCD Revision 17 changes and supplemental information identify 10 CFR 52.63(a)(1)(vii) (contributes to increased standardization of the certification information) as the rationale for inclusion in the amendment, it is expected that inclusion of these supplements and changes in Revision 17 will also often result in reducing unnecessary regulatory burden while maintaining protection to the public health and safety and the common defense and security. This is consistent with the Statement of Considerations (SOC) section discussing 10 CFR 52.63(a)(1)(vii) which states:

“This paragraph will allow applicants and licensees to request corrections or changes to certification information through a generic process rather than through individual licensing actions.”

The SOC also indicates that:

“In determining whether to codify a proposed amendment under this paragraph, the Commission will give special consideration to comments from applicants or licensees who referenced the DCR...”

The changes and supplemental information included in updated amended certified design (DCD Revision 17) have been prepared in conjunction with NuStart including those COL applicants that have reference D the AP1000 DCR.

In addition to the technical changes and supplements, DCD Revision 17 includes editorial changes. These editorial changes include typographical errors and consistency reconciliations. These editorial changes are included for completeness and are not expected to impact the existing Final Safety Evaluation Report.

As a result of this update, Westinghouse requests a detailed update to the NRC Review schedule for the design certification amendment. To facilitate this action, NRC is requested to schedule a meeting in early to mid October to discuss the schedule going forward.

Westinghouse looks forward to continued NRC progress reviewing the amendment to the AP1000 Design Certification Rule, as well as the successful generation of the NRC Final Safety Evaluation Report.

Please direct any questions related to this amendment application to Robert Sisk, Manager, AP1000 Licensing and Customer Interface.

Very truly yours,



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

/Attachment

1. "Oath of Affirmation," dated September 22, 2008

/Enclosures

1. CD-ROM Containing APP-GW-GL-700, AP1000 Design Control Document, Revision 17, Sensitive Version
2. CD-ROM Containing APP-GW-GL-700, AP1000 Design Control Document, Revision 17, Public Version

cc:	D. Jaffe	- U.S. NRC	1E	1A
	E. McKenna	- U.S. NRC	1E	1A
	S. Coffin	- U.S. NRC	1E	1A
	A. Sterdis	- TVA	1E	1A
	P. Hastings	- Duke Power	1E	1A
	R. Kitchen	- Progress Energy	1E	1A
	A. Monroe	- SCANA	1E	1A
	G. Madden	- Florida Power & Light	1E	1A
	C. Pierce	- Southern Company	1E	1A
	G. Zinke	- NuStart/Entergy	1E	1A
	R. Grumbir	- NuStart	1E	1A
	E. Cummins	- Westinghouse	1E	1A
	E. Schmiech	- Westinghouse	1E	1A
	D. Lindgren	- Westinghouse	1E	1A

ATTACHMENT 1

“Oath of Affirmation”

ATTACHMENT 1  
UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of: )  
AP1000 Design Certification Amendment Application )  
NRC Docket Number 52-006 )

APPLICATION FOR REVIEW OF  
"AP1000 GENERAL INFORMATION"  
FOR AP1000 DESIGN CERTIFICATION AMENDMENT APPLICATION REVIEW


W. E. Cummins, being duly sworn, states that he is Vice President, Regulatory Affairs & Standardization, for Westinghouse Electric Company; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission this document; that all statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.



W. E. Cummins  
Vice President  
Regulatory Affairs & Standardization

Subscribed and sworn to  
before me this 22 day  
of September 2008.

COMMONWEALTH OF PENNSYLVANIA  
Notarial Seal  
Donna M. Whiteside, Notary Public  
Murrysville Boro, Westmoreland County  
My Commission Expires May 7, 2010  
Member, Pennsylvania Association of Notaries

  
Notary

ENCLOSURE 1

APP-GW-GL-700, Revision 17

“AP1000 Design Control Document”

Sensitive Version

*Contains sensitive material relative to the physical protection of an AP1000 Nuclear Plant  
That should be withheld from public disclosure pursuant to 10 CFR 2.390(d)*

ENCLOSURE 2

APP-GW-GL-700, Revision 17

“AP1000 Design Control Document”

Public Version

*Redacted version of Enclosure 1 with sensitive material relative to the physical protection of an AP1000 Nuclear Plant withheld from public disclosure pursuant to 10 CFR 2.390(d)*