September 13, 2004

Mr. W. E. Cummins, Director
AP600 & AP1000 Projects
Westinghouse Electric Company
P.O. Box 355
Pittsburgh, PA 15230-0355

SUBJECT: FINAL DESIGN APPROVAL FOR AP1000

Dear Mr. Cummins:

This letter provides the final design approval (FDA) for the AP1000 standard nuclear reactor design (Enclosure 1) and the Nuclear Regulatory Commission's (NRC) Notice of Issuance of an FDA (Enclosure 2). This FDA allows the AP1000 design to be referenced in an application for a construction permit or operating license under 10 CFR Part 50, or an application for a combined license under 10 CFR Part 52.

Issuance of this FDA signifies completion of the technical review phase of Westinghouse's application for certification of the AP1000 design. The NRC staff performed its technical review of the AP1000 Design Control Document (DCD) and Probabilistic Risk Assessment in accordance with the standards for review of design certification applications set forth in 10 CFR 52.48 that were applicable and technically relevant to the AP1000 design or were modified by the exemptions identified in the NRC's final safety evaluation report (FSER). On the basis of its evaluation and independent analyses, as described in the FSER, the NRC staff concludes that Westinghouse's application for design certification meets the applicable portions of 10 CFR 52.47 and the review standards in 10 CFR 52.48. Therefore, the AP1000 application is ready for the rulemaking phase. The NRC staff and Advisory Committee on Reactor Safeguards will utilize the AP1000 DCD and will rely on it in the rulemaking (administrative review) phase of the design certification process pursuant to 10 CFR 52.51.

The duration of this FDA is 5 years, in accordance with the Commission's Standardization Policy Statement of August 1978 and 10 CFR Part 52. If the AP1000 design is subsequently certified, then this FDA will be updated, as needed, to conform to any changes resulting from the design certification rulemaking and will be in effect for the duration of the design certification rule. If you have questions on this document, please contact Lauren M. Quinones-Navarro at 301-415-2007.

Sincerely,

/RA/

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

Docket No. 52-006

Enclosures: as stated

cc: w/encls: see next page

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Dear Mr. Cummins:

This letter provides the final design approval (FDA) for the AP1000 standard nuclear reactor design (Enclosure 1) and the Nuclear Regulatory Commission's (NRC) Notice of Issuance of an FDA (Enclosure 2). This FDA allows the AP1000 design to be referenced in an application for a construction permit or operating license under 10 CFR Part 50, or an application for a combined license under 10 CFR Part 52.

Issuance of this FDA signifies completion of the technical review phase of Westinghouse's application for certification of the AP1000 design. The NRC staff performed its technical review of the AP1000 Design Control Document (DCD) and Probabilistic Risk Assessment in accordance with the standards for review of design certification applications set forth in 10 CFR 52.48 that were applicable and technically relevant to the AP1000 design or were modified by the exemptions identified in the NRC's final safety evaluation report (FSER). On the basis of its evaluation and independent analyses, as described in the FSER, the NRC staff concludes that Westinghouse's application for design certification meets the applicable portions of 10 CFR 52.47 and the review standards in 10 CFR 52.48. Therefore, the AP1000 application is ready for the rulemaking phase. The NRC staff and Advisory Committee on Reactor Safeguards will utilize the AP1000 DCD and will rely on it in the rulemaking (administrative review) phase of the design certification process pursuant to 10 CFR 52.51.

The duration of this FDA is 5 years, in accordance with the Commission's Standardization Policy Statement of August 1978 and 10 CFR Part 52. If the AP1000 design is subsequently certified, then this FDA will be updated, as needed, to conform to any changes resulting from the design certification rulemaking and will be in effect for the duration of the design certification rule. If you have questions on this document, please contact Lauren M. Quinones-Navarro at 301-415-2007.

Sincerely,

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ADAMS ACCESSION NUMBER: ML042430560 Distribution: See next page

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Distribution for Letter from J. Dyer to W. E. Cummins Dated September 13, 2004

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DOCKET NO. 52-006

AP1000 STANDARD DESIGN

FINAL DESIGN APPROVAL (FDA)

PURSUANT TO 10 CFR PART 52, APPENDIX O

(1) Westinghouse Electric Company LLC (Westinghouse) has submitted to the Nuclear Regulatory Commission (NRC) staff, for its review, a standardized design for a major portion of a nuclear power facility of the type described in 10 CFR 50.22. Westinghouse's standard design is described in the AP1000 Design Control Document (DCD), including Revisions 1 through 14 thereto, and the AP1000 Probabilistic Risk Assessment (PRA), including Revisions 1 through 8 thereto.

(2) The DCD and its references contain design information required by 10 CFR Part 52, Appendix O, Paragraph 3, for a standard plant design. The AP1000 standard design, whose scope is defined in DCD Section 1.8, is a nuclear power facility with a rated reactor core power level of 3400 megawatts thermal.

(3) The NRC staff and the Advisory Committee on Reactor Safeguards (ACRS) have reviewed the AP1000 standard design. The findings of the staff's evaluation of the AP1000 standard design are presented in the Final Safety Evaluation Report (FSER), dated September 2004 (NUREG-1793). The ACRS reported on the application for design certification in a letter dated July 20, 2004, as required by 10 CFR Section 52.53.

(4) On the basis of its review and the findings reported in the FSER, the staff concludes that the information in the DCD and PRA, with respect to the AP1000 design described in paragraph 2 above, complies with the requirements of 10 CFR Part 52, Appendix O.

(5) The AP1000 standard design is acceptable for use as a reference design for construction permit and operating license applications and combined license applications for facilities that are located at sites whose characteristics are within the envelope of site parameters given in the DCD and the out-of-scope portions of the plant that interface with the approved design conform to the interface requirements given in the DCD.

(6) This FDA and all applications for operating licenses incorporating it by reference are subject to all applicable provisions of the Atomic Energy Act, as amended, and the rules, regulations, and orders of the Commission now or hereafter in effect. In addition, licensees who reference the AP1000 standard design shall comply with the operational requirements in the DCD, including the technical specifications and availability controls in Chapter 16 of the DCD.

(7) This FDA does not constitute a commitment to issue a permit, design certification, or license, or in any way affect the authority of the Commission, the Atomic Safety and Licensing Board, and other presiding officers, in any proceeding pursuant to 10 CFR Part 2.

(8) This FDA is effective on the date it is issued and will expire on September 13, 2009, unless the NRC staff extends the date. The expiration of the FDA shall not affect its use in applications docketed before such date.

Dated in Rockville, Maryland, this 13th day of September 2004.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

UNITED STATES NUCLEAR REGULATORY COMMISSION

NOTICE OF ISSUANCE OF FINAL DESIGN APPROVAL

PURSUANT TO 10 CFR PART 52, APPENDIX O

WESTINGHOUSE ELECTRIC COMPANY

AP1000 STANDARD DESIGN

The U.S. Nuclear Regulatory Commission has issued a final design approval (FDA) to Westinghouse Electric Company for the AP1000 standard design pursuant to 10 CFR Part 52, Appendix O. This FDA allows the AP1000 standard design to be referenced in an application for a construction permit or operating license under 10 CFR Part 50, or an application for a combined license under 10 CFR Part 52. In addition, the Commission has issued the Final Safety Evaluation Report (FSER) that supports issuance of the FDA.

Issuance of this FDA signifies completion of the technical review phase of the application for certification of the AP1000 design under Subpart B of 10 CFR Part 52. The NRC staff performed its technical review of the AP1000 Design Control Document (DCD) and Probabilistic Risk Assessment in accordance with the standards for review of design certification applications set forth in 10 CFR 52.48 that were applicable and technically relevant to the AP1000 design or were modified by the exemptions identified in Section 1.8 of the NRC's FSER (NUREG-1793).

On the basis of its evaluation and independent analyses, as described in the FSER, the NRC staff concludes that Westinghouse's application for design certification meets the applicable portions of 10 CFR 52.47 and the review standards in 10 CFR 52.48. Therefore, the AP1000 application is ready for the rulemaking phase. The NRC staff and Advisory Committee on Reactor Safeguards will utilize the AP1000 DCD and will rely on it in the rulemaking phase of the design certification review process pursuant to 10 CFR 52.51.

A copy of the AP1000 FSER and FDA have been placed in the NRC's Public Document Room, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, for review and copying by interested persons.

Dated at Rockville, Maryland, this 13th day of September 2004.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William D. Beckner, Program Director
New Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

AP 1000

cc:

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