



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 19, 2016

Mr. James A. Gresham, Manager
Regulatory Compliance and Plant Licensing
Westinghouse Electric Company
1000 Westinghouse Drive
Cranberry Township, PA 16066

SUBJECT: FINAL SAFETY EVALUATION FOR WESTINGHOUSE ELECTRIC COMPANY
TOPICAL REPORT WCAP-16996-P/WCAP-16996-NP, VOLUMES I, II, AND III,
REVISION 1, "REALISTIC LOSS-OF-COOLANT ACCIDENT
EVALUATION METHODOLOGY APPLIED TO THE FULL SPECTRUM OF
BREAK SIZES" (TAC NO. ME5244)

Dear Mr. Gresham:

By letter dated November 23, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML103610186), Westinghouse Electric Company (Westinghouse) submitted for U. S. Nuclear Regulatory Commission (NRC) staff review Topical Report (TR) WCAP-16996-P/ WCAP-16996-NP, Volumes I, II, and III, Revision 1, "Realistic Loss-Of-Coolant Accident [(LOCA)] Evaluation Methodology Applied to the Full Spectrum of Break Sizes (FULL SPECTRUM™ LOCA (FSLOCA™) Methodology)." As a result of the NRC staff requests for additional information, Westinghouse submitted Revision 1 of Volumes I, II, and III, by letters dated April 14, June 29, and October 1, 2015, that supersedes TR WCAP-16996-P/ WCAP-16996-NP, Volumes I, II, and III, Revision 0, "Realistic Loss-Of-Coolant Accident Evaluation Methodology Applied to the Full Spectrum of Break Sizes (FULL SPECTRUM™ LOCA (FSLOCA) Methodology)," for NRC review and approval (ADAMS Accession Nos. ML15112A377, ML15202A078, and ML15292A351). By letter dated March 14, 2016, an NRC draft safety evaluation (SE) regarding our approval of TR WCAP-16996-P/ WCAP-16996-NP, Volumes I, II, and III, Revision 1, was provided for your review and comments. By letter dated April 14, 2016 (ADAMS Accession No. ML16131A660), Westinghouse commented on the draft SE. The NRC staff's disposition of Westinghouse's comments on the draft SE are discussed in the attachment to the final SE enclosed with this letter. In addition, the NRC staff has made minor editorial changes.

The NRC staff has found that TR WCAP-16996-P/WCAP-16996-NP, Volumes I, II, and III, Revision 1, is acceptable for referencing in licensing applications for use of the FSLOCA™ evaluation methodology described in WCAP-16996-P/WCAP-16996-NP, Volumes I, II, and III, Revision 1, for performing best-estimate analyses for the entire spectrum of LOCAs including small break LOCA, intermediate break LOCA, and large break LOCA scenarios in Westinghouse designed three- and four-loop pressurized-water reactor plants with cold leg injection only provided that the limitations and conditions stipulated in the Section 5.0 and applicability defined in Sections 1.3.3 and 6.0 of the enclosed NRC final SE are met along with the proper documentation.

NOTICE: Enclosure 2 and Attachment 2 transmitted herewith contains proprietary information. When separated from Enclosure 2 and Attachment 2, this document is decontrolled.

J. Gresham

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Our acceptance applies only to material provided in the subject TR. In accordance with the guidance provided on the NRC website, we request that Westinghouse publish accepted proprietary and non-proprietary versions of this TR within three months of receipt of this letter. The accepted versions shall incorporate this letter and the enclosed final SE after the title page. Also, they must contain historical review information, including NRC requests for additional information (RAIs) and your responses. The accepted versions shall include an "-A" (designating accepted) following the TR identification symbol.

As an alternative to including the RAIs and RAI responses behind the title page, if changes to the TR were provided to the NRC staff to support the resolution of RAI responses, and the NRC staff reviewed and approved those changes as described in the RAI responses, there are two ways that the accepted version can capture the RAIs:

1. The RAIs and RAI responses can be included as an Appendix to the accepted version.
2. The RAIs and RAI responses can be captured in the form of a table (inserted after the final SE) which summarizes the changes as shown in the approved version of the TR. The table should reference the specific RAIs and RAI responses which resulted in any changes, as shown in the accepted version of the TR.

If future changes to the NRC's regulatory requirements affect the acceptability of this TR, Westinghouse will be expected to revise the TR appropriately or justify its continued applicability for subsequent referencing. Licensees referencing this TR would be expected to justify its continued applicability or evaluate their plant using the revised TR.

Sincerely,

/RA/

Kevin Hsueh, Chief
Licensing Process Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Project No. 700

Enclosures:

1. Final SE (Non-proprietary version)
2. Final SE (Proprietary version)

J. Gresham

- 2 -

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Sincerely,
/RA/

Kevin Hsueh, Chief
Licensing Process Branch
Division of Policy and Rulemaking
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Project No. 700

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2. Final SE (Proprietary version)

DISTRIBUTION:

PUBLIC (Cover Letter, Enclosure 1, and Attachment 1 ONLY)

NON-PUBLIC (Enclosure 2 and Attachment 2)

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ADAMS Accession Nos.: Pkg: ML16142A001; Cover letter: ML16143A001; Enc. 1: ML16236A175; Enc. 2: ML16143A002; Att. 1: ML16236A016; Att. 2: ML16148A098 * via email NRR-106

OFFICE	NRR/DPR/PLPB	NRR/DPR/PLPB*	DSS/SNPB	NRR/DPR/PLPB
NAME	ELenning	DHarrison	RLukes (JDean for)	KHsueh
DATE	10/12/2016	9/14/2016	10/6/2016	10/19/16

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