March 19, 2018

MEMORANDUM TO: Dennis C. Morey, Chief
Licensing Processes Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

FROM: Ekaterina Lenning, Project Manager ***/RA/***
Licensing Processes Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF **CLOSED** MEETING TO DISCUSS IMPLEMENTATION PLAN FOR THE WESTINGHOUSE ELECTRIC COMPANY TOPICAL REPORT WCAP-17642-P-A/WCAP-17642-NP-A, REVISION 1, "WESTINGHOUSE PERFORMANCE ANALYSIS AND DESIGN MODEL (PAD5)" (EPID NO.: L-2018-LRO-0002)

On January 29, 2018, a closed meeting was held between U.S. Nuclear Regulatory Commission (NRC) staff and Westinghouse Electric Company (Westinghouse) staff at the NRC headquarters in Rockville, Maryland. The Westinghouse staff presented proprietary information regarding the PAD5 implementation plan for Topical Report, WCAP-17642-P-A/ WCAP-17642-NP-A, Revision 1, "Westinghouse Performance Analysis and Design Model (PAD5)." The summary of the meeting is enclosed.

Docket No. 99902038

CONTACT: Ekaterina Lenning, NRR/DLP/PLPB
301-415-3151
Ekaterina.Lenning@nrc.gov

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DMorey	ELenning

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SUMMARY OF CLOSED MEETING TO DISCUSS IMPLEMENTATION PLAN FOR THE

WESTINGHOUSE ELECTRIC COMPANY TOPICAL REPORT

WCAP-17642-P-A/WCAP-17642-NP-A, REVISION 1,

"WESTINGHOUSE PERFORMANCE ANALYSIS AND DESIGN MODEL (PAD5)"

On January 29, 2018, the U.S. Nuclear Regulatory Commission (NRC) staff held a closed meeting with representatives of Westinghouse Electric Company (Westinghouse). There were two purposes for the meeting. The first was to learn about Westinghouse's plans for implementation of its recently approved fuel performance code, PAD5, and how those plans translate into licensing actions that would require staff resources to review. The second was to consider whether Westinghouse's plans could inform the NRC's ongoing actions with regard to addressing thermal conductivity degradation (TCD) in nuclear fuel.

The NRC staff opened the meeting with slides that listed the regulations applicable to the previously identified non-conservatism in legacy fuel thermal mechanical codes, due to their lack of models that accurately account for TCD as a function of fuel burnup.[1]

During the meeting, Westinghouse representatives reviewed the technical differences between their current codes, FATES-3B and PAD4, and PAD5, indicating that PAD5 is the only currently NRC-approved Westinghouse fuel performance code that accurately accounts for TCD. Westinghouse representatives also discussed the ways in which PAD5 may affect existing analyses, as well as the necessary steps for PAD5 to be implemented by the customers with respect to both loss-of-coolant accident (LOCA) and non-LOCA analyses. The NRC staff asked questions about the continued use of the legacy Westinghouse fuel performance codes that do not adequately account for TCD, and Westinghouse's proprietary evaluations of the effects of TCD in existing analyses. The NRC staff also inquired how the Westinghouse corrective action program was utilized for the earlier fuel performance codes like PAD4. The Westinghouse staff agreed to share with the NRC staff how the corrective actions related to accounting for TCD in earlier fuel performance codes were closed out.

The NRC staff is evaluating whether further public engagement is warranted. The Westinghouse staff indicated that they and the NRC licensees that Westinghouse supports would be willing to participate in a broader-scope public meeting with regards to addressing TCD and PAD5 implementation if the NRC staff hosted one.

[1] The impact of TCD on legacy fuel performance codes is discussed in NRC Information Notice 2009-23, "Nuclear Fuel Thermal Conductivity Degradation," Agencywide Documents Access and Management System Accession No. ML091550527.

Enclosure