Proprietary Markings for NRC Meeting Summary of PAD5 Implementation Meeting (Non-Proprietary)

November 2016

Westinghouse Electric Company
1000 Westinghouse Drive
Cranberry Township, PA 16066

SUMMARY OF SEPTEMBER 1, 2016, CLOSED MEETING TO DISCUSS IMPLEMENTATION PLAN FOR THE WESTINGHOUSE ELECTRIC COMPANY TOPICAL REPORT WCAP-17642-P/NP, REVISION 1, "WESTINGHOUSE PERFORMANCE ANALYSIS AND DESIGN MODEL (PAD5)"

PROJECT NO. 700

The meeting was a follow-on to a prior closed meeting held between Westinghouse Electric Company (Westinghouse) and the NRC on July 28, 2016 (LTR-NRC-16-57 dated August 2, 2016). The purpose of the meeting was for Westinghouse to discuss its PAD5 implementation plans in greater detail with the NRC staff, and for the NRC staff to provide feedback regarding the implementation plan.

At the meeting, Westinghouse reviewed its PAD5 implementation plan, which primarily consisted of [

]^{a,c}

During the meeting, the NRC staff provided feedback that [ ]^{a,c} would be acceptable.

However, the NRC staff also communicated several items related to transitioning from a prior fuel performance code, like PAD4 or FATES-3B, to PAD5. The NRC staff noted that neither of these legacy codes contain models that account for thermal conductivity degradation (TCD) in nuclear fuel, which can cause safety analyses based on those methods to produce results that are less conservative than previously understood. PAD5, by contrast, does contain such models. Thus, the NRC staff communicated its belief that PAD5 should be implemented on a reasonably expeditious schedule.

Since the [ ]^{a,c} suggested by WEC is dependent, to an extent, on whether some licensees must, or choose to, [ ]^{a,c}, the [ ]^{a,c} could encounter delays due to external factors, such as a delay in or discontinuation of the ongoing 10 CFR 50.46c rulemaking effort.[1] Therefore, the NRC staff communicated to WEC that, while the [ ]^{a,c} appears to be appropriate, stronger consideration should be given to [ ]^{a,c}, so as to provide a more timely, permanent resolution to issues associated with using legacy fuel thermal-mechanical codes in downstream safety analysis, especially for those NRC licensees that do not intend to implement a new ECCS EM in the nearer term.

ATTACHMENT

[1] Many PWR licensees have regulatory commitments to implement new ECCS EMs and fuel performance models that are based, in part, on Commission promulgation of 10 CFR 50.46c.

The NRC staff also stated that the staff would look into ways to facilitate efficient implementation of PAD5, by developing appropriate safety evaluation templates. Westinghouse agreed that license amendment request submittal templates could also be developed in order to facilitate more efficient, plant-specific PAD5 review efforts.

Finally, noting the above issues with legacy codes such as PAD4 and FATES-3B, the NRC staff noted that it would, on an appropriate time scale, begin to consider withdrawing the NRC approval of the licensing topical reports associated with those methods. Such an effort could provide a means to communicate the NRC's expectations that licensees implement newer fuel performance methods on a timely basis. Generally, the NRC staff anticipates that PAD5 would be implemented, [ ]^{a,c}, within 1-2 fuel cycles following generic approval of PAD5, with some justifiable exceptions.