



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

May 2, 2019

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 PARTIALLY **CLOSED** MEETING TO DISCUSS  
WESTINGHOUSE ELECTRIC COMPANY ACCIDENT TOLERANT  
FUEL TECHNOLOGY

On February 28, 2019, the U.S. Nuclear Regulatory Commission (NRC) staff met with Westinghouse Electric Company (Westinghouse) to discuss Westinghouse accident tolerant fuel concepts. Summary of the meeting is contained within the enclosure. Westinghouse submitted presentation slides via letter dated February 25, 2019 (Agencywide Documents Access and Management System (ADAMS) via Accession No. ML19058A101). List of attendees can be located in ADAMS via Accession No. ML19101A028.

Docket No. 99902038

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SUBJECT: SUMMARY OF PARTIALLY **CLOSED** MEETING TO DISCUSS WESTINGHOUSE  
ELECTRIC COMPANY ACCIDENT TOLERANT FUEL TECHNOLOGY  
DATE: MAY 2, 2019

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**ADAMS Accession Nos.:**

Package **ML19101A022**  
Summary **ML19101A050**  
Meeting Notice **ML19045A258**

**Attendees List ML19101A028**

**\*concurred via e-mail**

**NRC-001**

OFFICE	NRR/DLP/PLPB/PM	NRR/DLP/PLPB/PM	NRR/DSS/SNPB/BC	NRR/DLP/PLPB/BC	NRR/DLP/PLPB/PM
NAME	ELenning	AProffitt*	RLukes*	DMorey (JRowley <i>for</i> )	ELenning
DATE	4/11/2019	5/1/2019	5/2/2019	5/2/2019	5/2/2019

**OFFICIAL RECORD COPY**

**SUMMARY OF PARTIALLY CLOSED FEBRUARY 28, 2019, MEETING BETWEEN  
WESTINGHOUSE ELECTRIC COMPANY AND THE U. S NUCLEAR REGULATORY  
COMMISSION TO DISCUSS WESTINGHOUSE ELECTRIC COMPANY ACCIDENT  
TOLERANT FUEL TECHNOLOGY**

On February 28, 2019, the U.S. Nuclear Regulatory Commission (NRC) staff met with Westinghouse Electric Company (Westinghouse) to discuss the accident tolerant fuel (ATF) concepts Westinghouse is pursuing. Westinghouse provided detailed overview of both near-term and long-term qualification and licensing plans for ADOPT™ pellets. Westinghouse also provided description of ADOPT™ pellets, and discussed their thoughts on the licensing strategy, qualification data, impact on the previously approved analytical methods, regulatory requirements, long-term development, and licensing activities.

Main takeaways from the discussion were:

- The NRC staff noted that the substrate on which the coating will be applied is important.
- The NRC staff expressed that accurate and timely updated scheduling information is critical for NRC resource planning, especially with the aggressive schedules of ATF.
- Westinghouse/industry may want to consider submitting a petition for rulemaking if planning deviations from the Code of Federal Regulations 50.46 or 50.68.
- Any manufacturing differences between test material and the final production material need to be addressed in the topical report (TR).
- The NRC staff noted that cladding creep down test results were of interest and may be necessary for approval.
- The NRC staff is interested in understanding the effect of the coating on departure from nucleate boiling (DNB).
- The NRC staff noted that diffusion between the coating material and the substrate should be considered in the TR.
- There is a potential that differences in crud buildup could impact DNB calculations and this should be accounted for and addressed.
- The NRC staff is interested in the impact of the coating on fuel rod growth and note that it should be assessed in the TR.
- The NRC staff is interested in understanding testing plans for post quench ductility following a loss-of-coolant accident.
- The NRC staff is interested in understanding any impacts of the coating on severe accident behavior.