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LTR-NRC-18-45

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Subject: Transmittal of Comments on "Draft Letter to the Nuclear Energy Institute Regarding the Clarification of Regulatory Paths for Lead Test Assemblies," ADAMS Accession No. ML18100A045, 83 Federal Register 26503, 6/7/2018, Docket ID: NRC-2018-0109.

Westinghouse Electric Company LLC (Westinghouse) appreciates the opportunity to provide comments to the Nuclear Regulatory Commission on the "Draft Letter to the Nuclear Energy Institute Regarding the Clarification of Regulatory Paths for Lead Test Assemblies," as issued in 83 Federal Register 26503 (Docket ID: NRC-2018-0109).

Westinghouse is appreciative of the efforts of the NRC staff to prepare this much needed guidance to the nuclear industry to support the development of new fuel technologies and designs. Westinghouse fully supports the intent of the guidance and agrees with the regulatory paths outlined in the guidance. Westinghouse has comments, which are included in the attached table, that it feels will improve the clarity of the draft guidance. Westinghouse remains supportive of the NRC staff's efforts to provide a regulatory pathway to the development of accident tolerant fuel technologies that will result in improved safety throughout the industry.

Westinghouse also recognizes the considerable efforts of the Nuclear Energy Institute (NEI) in requesting guidance from the NRC, as well as coordinating comments on the draft guidance from industry. Westinghouse agrees with and supports the comments submitted by NEI with Westinghouse input.

If you need additional information, please contact Edmond Mercier at 412-374-5541 or merciecej@westinghouse.com.

SUNSI Review Complete
Template = ADM-013
E-RIDS=ADM-03
ADD= Sihan Ding, Kimberly Green &
Jan Burkhardt

A handwritten signature in black ink, appearing to read 'Edmond J. Mercier', with a long horizontal flourish extending to the right.

Edmond J. Mercier, Manager
Fuel Licensing and Regulatory Support

Attachment:
Westinghouse Comments on "Draft Letter to the Nuclear Energy Institute Regarding the Clarification of Regulatory Paths for Lead Test Assemblies," (Non-Proprietary)

COMMENT (9) PUBLICATION
DATE: 6/7/2018 CITATION # 83
FR 26503

**Westinghouse Comments on “Draft Letter to the Nuclear Energy Institute
Regarding the Clarification of Regulatory Paths for Lead Test Assemblies,”
(Non-Proprietary)**

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Westinghouse Comments on “Draft Letter to the Nuclear Energy Institute Regarding the Clarification of Regulatory Paths for Lead Test Assemblies,”

<u>Comment No.</u>	<u>Source / Reference</u>	<u>Comment</u>	<u>Recommendation</u>
1.	General	The guidance document clearly indicates that exemption from the requirements of 10 CFR 50.46, and by extension (based on industry precedent) 10 CFR 50 Appendix K, is not required for LTA materials that are outside of the zirconium-based cladding and uranium oxide pellet system. However, the guidance for performing the 10 CFR 50.59 review does not clearly indicate that the same latitude for determining NRC review engagement is applicable to fuel materials outside of the zirconium-based cladding and uranium oxide pellet fuel materials. Further, some of the guidance seems to indicate that it cannot be used when relevance to existing regulatory limits cannot be demonstrated (i.e., regulatory limits based on zirconium cladding materials and uranium oxide pellets).	Clarify that the guidance is applicable to all LTA materials, including those that are not zirconium-based cladding and uranium oxide fuel pellets.
2.	Page 6, excerpt from NEI 96-07, Rev 1	The discussion states broadly that the licensee must meet applicable regulatory requirements, other acceptance criteria to which they are committed, and performance standards outlined in the General Design Criteria. It is recognized that existing regulatory requirements, acceptance criteria, and General Design Criteria performance requirements are not directly applicable to materials that are not zirconium-based cladding and uranium oxide pellets. The guidance should reflect this.	State that the use of good engineering judgement, well-established engineering practices, and the most current state of knowledge of the LTAs can be used to assure that the LTAs meet the STS LTA provision of “limited number” and “nonlimiting core regions” which provides confirmation that the existing COLR limits and Chapter 15 analyses remain conservative and bounding for LTA operation.

<p>3.</p>	<p>Page 7, second paragraph</p>	<p>The criterion of 10 CFR 50.59(c)(2)(vii) asks if the change results in a design basis limit for a fission product barrier as described in the FSAR (as updated) being exceeded or altered (emphasis added). As noted previously, the existing design basis limits for fission product barriers are not applicable to material concepts that are not zirconium-based cladding or uranium oxide-based pellets. The guidance does not address the fact that for these material concepts, the design basis limits for fission product barriers are not yet known and would be expected to be different than those already established for the plant. The guidance also does not provide a means to demonstrate how the existing COLR limits and Chapter 15 analyses could be concluded to remain applicable and bounding in light of the different materials compositions, nor would core-wide generalizations directly apply to localized phenomena that could challenge a fission product barrier.</p>	<p>State that use of LTA materials does not constitute an alteration of the licensed design basis limits for fission product barriers provided that good engineering judgement, well-established engineering practices, and the most current state of knowledge of the LTAs are used to confirm that the LTAs meet the STS LTA provision of “limited number” and “nonlimiting core regions” defined previously.</p>
<p>4.</p>	<p>Page 7, fifth paragraph</p>	<p>The criterion for 10 CFR 50.59(c)(2)(viii) asks if the change results in a departure from a method of evaluation described in the FSAR (as updated) used in establishing the design bases or in the safety analyses. As acknowledged in the guidance document, performance of the LTAs will necessitate the use of not yet licensed codes and methods, which equates to a change to the method of analysis specific to analyses performed for the LTAs.</p>	<p>State that the method of analysis used to assess performance of the LTAs need not be NRC-approved, provided that good engineering judgement, well-established engineering practices, and the most current state of knowledge of the LTAs are used to confirm that the LTAs meet the STS LTA provision of “limited number” and “nonlimiting core regions” defined previously.</p>