



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

September 13, 2016

Ms. Nancy L. Ranek
Sr. Project Manager, Plant Life Extension
Nuclear Energy Institute
1201 F Street, NW, Suite 1100
Washington, DC 20004

Dear Ms. Ranek:

On July 25, 2016, you, on the behalf of the Nuclear Energy Institute (NEI) License Renewal Environmental Task Force, submitted a draft white paper titled “Model [Subsequent License Renewal (SLR)] New and Significant Assessment Approach for [Severe Accident Mitigation Alternatives (SAMA)]” to share with the U.S. Nuclear Regulatory Commission (NRC) (Agencywide Documents Access & Management System (ADAMS) Package ML16211A221). The draft white paper describes NEI’s proposed approach for an applicant to evaluate new and significant information regarding SAMAs as part of the environmental review associated with an application for SLR. The NRC staff has read the white paper and is providing comments in the enclosure.

The NRC staff would like to thank the task force, not only for sharing this draft white paper on the new and significant information assessment regarding the SAMA analysis, but also for its continued support on all current SLR efforts at the NRC. Should you or your staff have any questions or concerns regarding the enclosed comments, please contact Mr. Jerry Dozier of the Division of Risk Assessment at (301) 415-3925.

Sincerely,

/RA/

Kevin T Folk, Chief (Acting)
Environmental Review and Projects Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

Enclosure: As stated

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ADAMS Accession No: ML16228A448

***via email**

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NRC COMMENTS ON NEI DRAFT WHITE PAPER TITLED “MODEL SLR NEW AND SIGNIFICANT ASSESSMENT APPROACH FOR SAMA”

Section	Page	Comment/Recommendation
List of Acronyms, Abbreviations and Initialisms; 3.2.2;	iii;12;	NRC staff (Staff) recommends NEI change all references to the MELCOR Accident Consequences Code System from MACCS2 to MACCS, as the NRC now refers to all software versions as MACCS without the version number attached.
2.1	2	Staff recommends that applicants consider providing the generic new information (Updated Level 3 Model consequence results, NUREG/BR-0058 cost benefit methodology updates, etc.) contained in this section in their Environmental Report (ER).
2.1	3	Staff recommends that applicants consider providing the site specific new information (The identification of a new hazard, an updated plant risk model, and non-modeled modifications/changes to the plant) discussed in section 2.1 in their ER. This will help the NRC address public comments regarding the new information considered.
3.0	7	Staff has a general comment on footnote 8 located in this section. Staff notes that any SAMA which could reduce the Maximum Averted Cost Risk (MACR) by 50 percent or more and was not implemented would need a justification as to why it does not need to be implemented. See, CLI-16-10 (directing the staff to screen and/or pursue backfit for any cost beneficial SAMAs).
3.0	7	Staff has a general comment on this section. Staff notes that the applicant's ER should discuss how any SAMAs that were previously determined to be cost beneficial have been dispositioned (e.g., implemented or not, and if not, why not).
3.1.1	8	Staff has a general comment on this section. Staff notes that it would be beneficial to discuss the process for estimating the release categories for the Level 1 and 2 PRA models with the staff prior to submitting the applicant's ER.
3.1.2	10	Staff has a general comment on the last paragraph of this section. Staff notes that the pre-screening criteria listed, which have been adopted with slight modifications from NEI 05-01, would be beneficial in the applicant's ER because it would show the staff that the applicant has made efforts to reduce risk since the original license renewal.

Section	Page	Comment/Recommendation
3.4	13	<p>Staff recommends that the following bullets be added to section 3.4:</p> <ul style="list-style-type: none"> • Provide a reason for no SAMA analysis. See 10 CFR 51.53(c)(3)(ii)(L) • Provide the assessment of new and significant information required by 10 CFR 51.53(c)(3)(iv) • Provide the process used to identify new information (i.e., how the new information was identified and how it was dispositioned as significant or not significant) • Describe the new information considered (i.e., uprates, \$/person rem, PRA updates, CDF trend, etc.) • Provide whether or not the information was significant and why <p>This will help the NRC address public comments, which often ask for details on how the new and significant information assessment was conducted and what was considered.</p>
3.4	13	<p>Staff has a general comment on the sub-bullet:</p> <ul style="list-style-type: none"> ○ List of PRA revisions <p>Staff recommends that the list of PRA revisions be included in the applicant's ER with a summary similar to what is found in the Limerick FSEIS.</p>
3.4	13	<p>Staff has a general comment on the sub-bullet:</p> <ul style="list-style-type: none"> ○ Include a discussion of the changes made at the plant that have reduced risk <p>Staff recommends that the information also be included in the applicant's ER to docket the new information regarding changes made at the plant that have reduced risk.</p>
3.4	13	<p>Staff has a general comment on the bullet:</p> <ul style="list-style-type: none"> • The pre-screening criterion used to exclude any of the Stage 1 SAMA candidates from further consideration, including if applicable, the rationale for excluding potentially cost beneficial SAMAs identified in U.S. license renewal applications after submittal of the SAMA analysis for the analyzed plant (i.e., industry SAMAs). <p>The staff notes that industry may request staff to document the first evaluation in interim staff guidance to improve efficiency of future reviews.</p>

Section	Page	Comment/Recommendation
3.4	13	<p>Staff has a general comment on the bullet:</p> <ul style="list-style-type: none"> • Stage 2 averted cost-risk calculation and results for the “potentially significant” SAMAs (if applicable) <p>Staff recommends that if SAMAs get to stage 2 or 3 that they should be provided in the applicant’s ER with sufficient information for staff to confirm the applicant’s calculations.</p>
3.4	14	<p>The staff has a general comment on the bullet:</p> <ul style="list-style-type: none"> • Conclusions <p>Staff recommends that the applicant’s ER include the information identified in the sub-bullets associated with the “Conclusions” bullet.</p>
2.2; 3.2.2	3; 12	<p>The NRC requests clarification on the proposed process. The current proposal does not appear to assess items/issues that would impact the consequences of accidents and affect the MACR value but would not change the PRA frequencies of events. Therefore, how will the process identify and assess these issues potentially altering the MACR value, such as EPUs, increased fuel burnup, population increases, guidance revisions, etc., that could affect the results of the Stage 1 assessment?</p>
3.1.3	11	<p>The NRC requests clarification on the proposed process. The current proposal appears to propose that all SAMAs can undergo an evaluation of risks reduction through the Level 1 and Level 2 PRA. However, there are likely to be potential unscreened SAMAs that cannot have a risk achievement worth (RAW), risk reduction worth (RRW), or Fussell-Vesely (FV) value set for them since they are outside of the Level 1 and Level 2 PRA. This could principally apply to SAMAs that only mitigate the release of material from containment or the spread of contamination/exposure to the surrounding area (i.e., has no part in reducing the probability of core damage and is also beyond the coverage of the Level 2 PRA). There is discussion at the top of page 11 that appears to address this issue; however, it appears not to focus on risk a SAMA would reduce.</p> <p>How would this process identify such SAMAs and assess them in a risk-informed manner outside of the Level 1 and Level 2 PRAs? Is the process at the top of page 11 about why the risk reduction for only a fraction of the release categories would also reduce the MACR by more than 50 percent?</p>

Section	Page	Comment/Recommendation
2.2	5	<p>Staff noted that in the second paragraph on page 5 of the document, MACR is not defined nor is a methodology cited or referenced as to how this parameter is to be determined. Is this the maximum averted cost or the maximum benefit as presented in Section 4.5 of NEI 05-01A?</p> <p>Staff recommendation: Clearly define in the main report what MACR is and how it is determined. Add an appendix to the white paper that clearly sets forth the methodology for determining the value of MACR based on the best information available at the time of the subsequent license renewal submission based on all new information.</p>
3.2.1	11	Staff recommends that the last sub-bullet on page 11 include a citation to NUREG-1530 as the document that sets the value for the dollar per person-rem.
NA	NA	<p>General Recommendations:</p> <ul style="list-style-type: none"> • The staff will be looking at the new and significant information assessment related to SAMA in the Limerick license renewal FSEIS as a template for the comparable assessment in the SLR application. • Indicate in the guidance to identify any new information that was evaluated by the applicant because staff will discuss it in the applicant's SLR FSEIS. The Limerick license renewal FSEIS evaluated much more information than just the previously identified SAMAs for initial plant licensing. The staff provides examples of other information evaluated for the GEIS in GEIS Table 4.9-5 and the Limerick License Renewal FSEIS. Note that in Limerick's case, even though there was some new information that would increase the value of a SAMA, the reduction in CDF would offset it. • The staff would like to have a write-up of the activities that the applicant performed to reduce CDF and LERF since the SAMA analysis. Activities could include upgrades due to Fukushima and 9/11, etc.)