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ADD: Carla Roque-Cruz,  
Carmelita Adams,  
Ekaterina Lenning, Dana  
Harrison, Jenny Majano,  
Brent Ballard, Mary Neely

# PUBLIC SUBMISSION

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Proposed Revision to Standard Review Plan Section 15.0, "Introduction - Transient and Accident Analyses"

**Comment On:** NRC-2023-0079-0005

Proposed Revision to Standard Review Plan Section 15.0, "Introduction—Transient and Accident Analyses"

**Document:** NRC-2023-0079-DRAFT-0007

Comment on FR Doc # 2023-22052

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## Submitter Information

**Email:** atb@nei.org

**Organization:** Nuclear Energy Institute

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## General Comment

See attached file(s)

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## Attachments

10-31-23\_NRC\_SRP Section 15.0 Comments

October 31, 2023

Mr. Bo Pham  
Director, Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** Comments on Proposed Revision to Standard Review Plan Section 15.0, “Introduction - Transient and Accident Analyses” Docket ID NRC-2023-0079

**Project Number: 689**

*Submitted via Regulations.gov*

Dear Mr. Pham:

On behalf of the nuclear energy industry, the Nuclear Energy Institute (NEI)<sup>1</sup> is pleased to submit comments to the Nuclear Regulatory Commission (NRC) on the proposed revision to the Standard Review Plan section 15.0, “Introduction – Transient and Accident Analyses.”

Specific comments and suggested changes are provided in the attachment.

The current version of Chapter 15 has been in place for the last 16 years and the changes proposed could raise backfit concerns if the NRC staff were to require a licensee with an NRC-approved accident analysis method to update its method to be consistent with the revised guidance. The revisions could also raise forward fit concerns if the NRC staff were to condition approval of a licensee-requested modification to an NRC-approved method to adoption of this version of the guidance without the justification of a forward fit analysis. For example, there are significant changes to the use of specific terms in some of the anticipated operational occurrences (AOO)s, different postulated accidents, changes in acceptance criteria and changes in the relevant general design criteria (GDCs).

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<sup>1</sup> The Nuclear Energy Institute (NEI) is responsible for establishing unified policy on behalf of its members relating to matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI’s members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry

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It appears that the changes are part of an effort to include advanced light- and non-light-water reactor designs into the existing framework. To enhance clarity, we recommend that the NRC move these revisions to a new appendix to Chapter 15 and clearly state that this new appendix be used only for new advanced light- and non-light-water reactors.

Thank you for your time and attention to this important matter. Please contact me if you have any questions or require additional information.

Sincerely,



Stewart Yuen

Attachment

cc Gerond A. George, NRR, NRC  
Ekaterina Lenning, NRR, NRC  
Brent Ballard, NRR, NRC

Comment #	Location	Comment	Proposed Change
1	General	The revisions to SRP 15.0 add a significant amount of strict, prescriptive application of deterministic criteria but do not add information about applying risk-informed principles. The NRC should not issue a revision to SRP 15.0 that expands the scope beyond the current established practice and fails to include risk-informed decision-making principles.	<p>In this revision to SRP 15.0, the NRC has an opportunity to implement Commission direction to apply risk-informed decision-making to Chapter 15 safety analysis. This includes implementing the following NRC guidance or industry standards:</p> <ol style="list-style-type: none"> <li>1. NUREG/KM-0016</li> <li>2. Dorman letter (ML19319C832)</li> <li>3. SECY-17-0112</li> <li>4. ANSI/ANS 30.3</li> <li>5. ANSI/ANS 58.14</li> </ol> <p>In addition, the Commission direction in response to SECY-19-0036 (ML19183A408) is that “the staff should apply risk-informed principles when strict, prescriptive application of deterministic criteria ... is unnecessary to provide for reasonable assurance of adequate protection of public health and safety.”</p>
2	General	Section II. Acceptance Criteria (page 15.0-12) in Draft Revision 4 of SRP 15.0 made changes to the listed General Design Criteria (GDC). GDC 2, 4, and 5 have been deleted from the list. GDC 12, 14, 16, 38, and 50 were added to the list.	It is unclear why these changes were made; provide the rationale for the deletion and addition of the identified GDCs.
3	General	Several changes appear to have been made to accommodate new reactor designs. These changes should not be applied to Gen II plants.	Consider a separate set of appendices or clearly stating what part of the revision applies to advanced reactors only.
4	General	The term “most limiting single active failure” has been changed in Section 4.0, “Assumed Protection and Safety Systems Actions,” to “most limiting postulated failure.” This change appears to bring passive failures into consideration which could raise backfitting or forward fitting concerns if the NRC staff imposes these changes on licensed plants.	Leave the term “active” in the context of the term or provide justification for its removal.

Comment #	Location	Comment	Proposed Change
5	General	<p>In several locations within the draft update, the NRC has expanded the scope of the Chapter 15 analysis beyond the current established practice. This expansion is contrary to Commission direction to apply risk-informed decision-making in regulatory processes.</p> <p>The justification for the revision is given as, “The guidance in this draft SRP is updated to ensure alignment of the acceptance criteria with the regulations and provide staff guidance related to the Commission’s policies for new passive light-water power reactors.” 88 F.R. 50919 (Aug. 2, 2023). This justification is insufficient to explain the breadth and scope of the changes, many of which make the SRP more restrictive, less risk-informed, and are counter to decades of NRC practice.</p> <p>Instead, in this revision to SRP 15.0, the NRC has an opportunity to implement Commission direction to apply risk-informed decision-making to Chapter 15 safety analysis. The Commission direction in response to SECY-19-0036 (ML19183A408) is that “the staff should apply risk-informed principles when strict, prescriptive application of deterministic criteria ... is unnecessary to provide for reasonable assurance of adequate protection of public health and safety.” The revisions to SRP 15.0 add a significant amount of “strict, prescriptive application of deterministic criteria” but do not add information about applying risk-informed principles. The NRC should not issue a revision to SRP 15.0 that expands the scope beyond the current established practice and fails to include risk-informed decision-making principles.</p>	<p>The proposed SRP 15.0 revision should be withdrawn until the NRC has an opportunity to implement Commission direction to apply risk-informed decision making to Chapter 15 safety analysis.</p>
6	15.0-2	<p>The deletion of the discussion from revision 3 on ANS 51.1 and its categorization process using Condition II, Condition III, and Condition IV as opposed to Anticipated Operational Occurrences (AOOs) and postulated accidents is</p>	<p>The inclusion of a reference to the previous ANS standard, which was used by many of the Generation II PWR operating plants when developing their FSAR Safety Analysis Section, would provide the</p>

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		<p>understandable as it better aligns with the regulations. However, many of the operating Generation II PWRs utilized ANS 51.1 (or an earlier version) categorizations in their Final Safety Analysis Reports (FSARs). It is recommended that a reference to ANS 51.1 be retained in the SRP 15.0 guidance to aid future reviewers in understanding the different categorization schemes that have been utilized by many of the Generation II PWR operating plants in their FSAR Safety Analysis Section.</p>	<p>reviewer with a document to aid in their understanding of one such different categorization scheme.</p> <p>“Note the regulations and the SRP use the term AOO while RG 1.70 (Ref. 2) uses the terms incidents of moderate frequency (i.e., events that are expected to occur several times during the plant’s lifetime) and infrequent incidents (i.e., events that may occur during the lifetime of the plant). For facilities that were licensed using different categorizations (e.g., ANS 51.1), the reviewer will continue to evaluate applications according to their licensing bases, unless the licensee proposes to adopt the categorizations and acceptance criteria of this SRP section. The reviewer will evaluate new applications (i.e., those pertaining to plants that are not yet constructed) according to the categorizations and acceptance criteria of this SRP section.”</p>
7	15.0-2	<p>SRP 15.0 Draft Revision 4 contains a new paragraph providing review guidance on the need to consider additional criteria beyond those specified General Design Criteria (GDC) in 10 CFR 50, Appendix A. This guidance introduces regulatory uncertainty and circumvents the rule making process by allowing a reviewer to add another criterion without rulemaking to revise 10 CFR 50, Appendix A. This guidance does not ensure clear, transparent, and consistent regulatory guidance to ensure public safety.</p>	<p>Delete the identified paragraph from the guidance.</p> <p>Deletion of the paragraph eliminates the potential to circumvent rulemaking and ensures clear, transparent, and consistent regulatory guidance to ensure public safety.</p>
8	Table 15.0-1, 15.0-7	<p>In the current SRP wording, the escalation criteria acceptance criteria for both AOOs and postulated accidents included the term “consequential” when discussing the effects. In the proposed Table 15.0-1 entry, the word “consequential” is omitted. In the current SRP wording,</p>	<p>Revise the Table 15.0-1 escalation criteria to clarify the criteria but still include consideration of magnitude or significance where an AOO or PA results in a loss of function of the RCS or containment barriers. For example: “An AOO must not</p>

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		<p>“consequential” means “significant,” such that losses of RCS or containment barrier functions that are not of meaningful consequence (not significant) are acceptable. By removing the word “consequential,” the new Table 15.0-1 entry imposes stricter acceptance criteria for the escalation criteria.</p>	<p>generate a postulated accident or result in a significant loss of function of the RCS or reactor containment barriers without other faults occurring independently,” and “A postulated accident must not, by itself, cause a significant loss of credited function of systems needed to cope with the fault, including those of the RCS and the reactor containment system.”</p>
9	15.0-10	<p>The statement that I&amp;C component “failure[s] may be postulated to occur at any time during the event.” can result in disagreement between NRC staff and licensees as to what I&amp;C component failure should be postulated to occur when. The licensing basis of most licensees limit single failures, be they I&amp;C components or others components, to 1) time zero, 2) time of reactor trip/turbine trip, or 3) time of component demand or actuation and any change will raise backfit or forward fit concerns.</p>	<p>Remove the statement associated with I&amp;C components that “failures may be postulated to occur at any time during the event.”</p>
10	15.0-11	<p>Footnote 8: Definition of “suitably conservative” could be misinterpreted to cause significant excess conservatism by analyzing every input with conservative bias. More modern best estimate methodologies have shown that often, the compounding effect of conservatism in individual parameters is significantly more than the overall intended conservatism in the application.</p>	<p>Recommend placing focus on the overall intended conservatism and on the right figure of merit (instead of individual parameters)</p>
11	15.0-14	<p>The proposed text (shown below) should be revised to reflect Backfit, Forward Fit, and Issue Finality concerns and staff direction defined in MD 8.4. As written, this section could be interpreted as putting the burden on the licensee to justify continued application of existing licensing bases.</p> <p><i>Except when the applicant proposes an alternative method for complying with specified portions of the Commission’s regulations, the staff will use the</i></p>	<p>Please include the following text, much of which was taken from the standard RG implementation content (e.g., RG 1.236).</p> <p>“For facilities that were licensed using different event sequences, event categorizations, credited systems and operator actions, and acceptance criteria, the reviewer will continue to evaluate</p>

Comment #	Location	Comment	Proposed Change
		<p><i>method described herein to evaluate conformance with Commission regulations. If an application proposes an alternative to a method described herein, the staff will evaluate whether the alternative demonstrates compliance with Commission regulations.</i></p>	<p>applications according to their licensing bases, unless the licensee proposes to adopt the new guidance. The NRC staff does not intend to use the guidance in this document to support NRC staff actions in a manner that would constitute backfitting as that term is defined in 10 CFR 50.109, "Backfitting," and as described in NRC Management Directive 8.4 (Ref. XX), "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests," nor does the NRC staff intend to use the guidance to affect the issue finality of an approval under 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." The staff also does not intend to use the guidance to support NRC staff actions in a manner that constitutes forward fitting as that term is defined and described in Management Directive 8.4. If a licensee believes that the NRC is using this guidance in a manner inconsistent with the discussion in this Implementation section, then the licensee may file a backfitting or forward fitting appeal with the NRC in accordance with the process in Management Directive 8.4."</p> <p>Add a Reference to Chapter 15.0</p>



Comment #	Location	Comment	Proposed Change
			VII References "NRC Management Directive 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests."