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Ms. Cindy Bladey  
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U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

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**SUBJECT:** NuScale Power, LLC (NuScale) comments on draft revisions to Section 19.0, Revision 3, Standard Review Plan (SRP), (Docket ID NRC-2012-0232).

NuScale appreciates the opportunity to provide comments on the draft SRP, as solicited in the U.S. Nuclear Regulatory Commission Federal Register Notice dated December 8, 2014 (79 Fed. Reg. 72709), (Docket ID NRC-2012-0232-0198).

Per the notice, the NRC seeks public comment on proposed revisions to probabilistic risk assessment and severe accident evaluation for new reactors (Section 19.0, Revision 3, "Probabilistic Risk Assessment and Severe Accident Evaluation for New Reactors" of NUREG—0800, "Standard Review Plan (SRP) for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light Water Reactor] Edition."

NuScale's comments on the draft revision to the SRP sections are provided in Enclosure 1 to this letter.

Please feel free to contact me at (301) 770-0472 or at smirsky@nuscalepower.com if you have any questions.

Sincerely,

Steven Mirsky  
Manager, Licensing

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Enclosure 1: NuScale Comments on draft SRP, NUREG—0800, Section 19, Revision 3

**SUNSI Review Complete**  
Template = ADM – 013  
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## NUREG-0800: Chapter 19.0 Probabilistic Risk Assessment and Severe Accident Evaluation for New Reactors

January 21, 2015

Statement	Comments
General	<p>The draft effectively consolidates many risk related topics. There is a recent staff effort "Mitigation of Beyond-Design-Basis Events" to consolidate activities regarding mitigation of beyond design basis events (BDBE). As this effort relates to the principal focus of PRA activities, i.e., BDBE, suggest that there be some reference to these other regulatory initiatives and their relationship to the PRA and new plant application expectations.</p> <p>(Note: Page 19.0-25, Item 1.ii regarding multiple module risk states "These operational strategies should also provide reasonable assurance that there is sufficient ability to mitigate multiple core damages accidents" which appears to have a nexus to the post-Fukushima rulemaking)</p>
Page 19.0-2, Paragraph 3. A seismic PRA cannot be performed ...	If a hazard curve is assumed, a seismic PRA could be performed.
Page 19.0-2, Paragraph 4. DC/COL-ISG-20 discusses post-DC activities...	Is this new revision to Chapter 19, subsuming DC/COL-ISG-20?
Page 19.0-6, Requirements for DC Applicants, 1. States "...and the bases for not incorporating SAMDAs in the design to be certified."	What constitutes acceptable bases for not incorporating SAMDAs in the design? Reference should be provided for guidance for making the value judgment.
Pg. 19.0-7 (Item 6,A) "The PRA and SAMDA evaluations do not need to be included in Tier 2 because they are not part of the design-basis information."	For clarity, suggest rewording, e.g., "The SAMDA evaluation and PRA do not need to be included..." (i.e., The intent appears to be that SAMDA evaluation results need not be in Tier 2, but PRA summary and results do.)
Page 19.0-7, Requirements for DC Applicants, 6B. The NRC expects that, generally, the information that it needs to perform its review of the DC application from a PRA perspective is that information that will be contained in the applicants' FSAR Chapter 19.	Is this a realistic expectation? Examples would be helpful to judge balance between what is contained in chapter 19 vs. PRA.
Page 19.0-7, Requirements for DC Applicants, 7.	Is Requirement 7 redundant? Requirement 7 seems to be contained within Requirement 1, with just a different regulation.
Page 19.0-8, Requirements for COL Applicants, 5. States " 10 CFR 52.79(a)(17) states that ..."	10 CFR 52.79(a)(17) provides exception from 10 CFR 50.34 (f)(2)(xxv) as well. Does exception from 10 CFR 50.34 (f)(2)(xxv) apply to requirement 5 for COL applicants?

<p>Page 19.0-8, Requirements for COL Applicants, 8A. The NRC expects that, generally, the information that it needs to perform its review of the COL application from a PRA perspective is that information that will be contained in the applicants' FSAR Chapter 19.</p>	<p>Is this a realistic expectation? Examples would be helpful to judge balance between what is contained in chapter 19 vs. PRA.</p>
<p>Page 19.0-9, Requirements for COL Applicants, 8.B. States "... qualitative description of insights and uses, but also acknowledges that some quantitative PRA results should be submitted."</p>	<p>What is the balance between quantitative and qualitative insights for chapter 19?</p>
<p>Page 19.0-10, SRP Acceptance Criteria, Document 6, 7, 10, 11, 12, 13</p>	<p>What are the expectations for meeting the acceptance criteria, as some aspects of the documents are only relevant for large LWR designs and are not relevant for smaller designs or issues specific to the AP600 design.</p>
<p>Pg. 19.0-10 (Item 9) "A PRA-based SMA will consider sequence level HCLPFs and fragilities for all sequences leading to core damage or containment failure..."</p>	<p>Suggest replacing "all" with "significant", "dominant" or "key". Or, does the word "consider" allow the applicant to limit HCLPF determination based on exceedingly low likelihood scenarios?</p>
<p>Pg. 19.0-12, Acceptance Criteria, "Specific subsets of the criteria apply to individual elements of the applicant's analyses (e.g., Level 1 shutdown PRA, severe accident management)."</p>	<p>For clarity, should "severe accident management" be replaced with "severe accident analysis"? I.e., severe accident management guidelines (SAMGs) are not currently included in the DCD.</p>
<p>Focused PRA Pg. 19.0-13 (Item 8) and Pg. 19.0-24 (Item 2.A)</p>	<p>a.) The discussion on Pg. 19.0-13 (Item 8) refers to sensitivity studies "without credit for nonsafety-related defense-in-depth systems". This seems to require classifying a nonsafety-related system as "defense-in-depth". Does the wording "without credit for nonsafety-related systems" have the same meaning? If so, suggest deleting "defense-in-depth" (Note: The discussion on Pg. 19.0-24 (Item 2.A) refers to nonsafety-related SSCs that will require regulatory treatment (i.e., RTNSS). This appears to be the same group of SSCs referred to on Pg. 19.0-13 (Item 8)).</p> <p>b.) Note that SRP 19.3, Rev. 0 (Pg. 19.3-9, Item 4) refers to "focused PRA sensitivity studies as described in SRP Section 19.0, 'Probabilistic Risk Assessment and Severe Accident Evaluation for New Reactors,' Revision 3. However, the only discussion of focused PRA in the draft SRP 19.0 is on Pg. 19.0-24 (Item 2.A) which refers back to SRP 19.3 for the description. Suggest clarifying this apparently circular reference.</p> <p>c.) The description in SRP 19.3, Rev. 0 (Pg. 19.3-9, Item 4) implies that only those nonsafety systems needed to meet the CDF/LRF safety goals, as credited in a focused PRA, need be RTNSS C. Is it correct to say that a focused PRA is one that uses only those systems needed to meet safety goals? If so, perhaps this definition could be</p>

	added to SRP 19.0 to clarify the intent of the 19.3 statement the staff "reviews the results of the focused PRA sensitivity studies as described in SRP Section 19.0"
19.0-16 Acceptance Criteria (Items 14, 15)	The section provides useful information. Examples of specific information that is not required in the DCD (but would be in the PRA) would also be helpful. E.g., Basic event probabilities, fault trees need not be in the DCD, although would be in the PRA.
Page 19.0-16, Item 17. The term "significant" is intended to be consistent with its definition provided in RG 1.200.	Use of the word consistent is ambiguous in this context. Since the expectation is that the applicants will adhere to 1.200, then the SRP does not need to restate this point. This is not necessarily appropriate since new reactors are expected to have significantly lower CDFs? For a new reactor with a CDF of 1E-8/yr, a RAW of 2 would result in an increase in CDF of 1E-08/yr, which is orders of magnitude below the RG 1.174 Region III acceptance guidelines for permanent changes in CDF.
19.0-23, Design-Specific PRA (Level I PRA Technical Adequacy), Paragraph 1.	Should ISG-028 be referenced at all, with respect to technical adequacy?
19.0-23, Design-Specific PRA (Level I PRA Technical Adequacy), Paragraph 2. If a certain aspect of the PRA deviates from accepted good practices, the applicant should justify this deficiency does not impact the PRA results or risk insights. Otherwise, applicants need to correct the deficiency and resubmit the PRA results and risk insights.	Consider keeping the term deviation, rather than using deficiency; For example, we would not want to have to state that the PRA technical adequacy is deficient.