

## Comment Response Matrix

### Chapter 14

Comment # (Affiliation: NuScale Power, LLC)	DSRS Section	Paragraph, Item, or Page	Comment / Basis	Commenter Recommendation	NRC Staff Technical Resolution
506	All Chapter 14	General	In conjunction with the NRC, industry and NEI, NEI 15-02, <i>Industry Guideline for the Development of TIER 1 and ITAAC Under 10 CFR Part 52</i> , was developed to provide generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. The document reflects the discussions at NRC public workshops during 2013-2015 concerning the development of standardized ITAAC for light water reactors designs.	Chapter 14 DSRs should reference and reflect the guidance in NEI 15-02.	The NRC disagrees with this comment and no revision is required because NEI 15-02 is not currently endorsed by the NRC.

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507	All Chapter 14	III. Review Procedures Item 1	Item 1 of Section III Review Procedures has been added to DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 as part of the DSRS revision process. The purpose of the added text can be found in the last paragraph of Item 1 which states "It is the responsibility of the technical reviewers to determine whether the information in the application, including the degree to which the applicant seeks to rely on such selected programs and guidance, demonstrates that all acceptance criteria have been met to support the safety finding for a particular SSC."Item 1 is not appropriate for the	Delete Review Procedures Item 1 from DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6 14.3.7, and 14.3.8.Delete DSRS 14.3.4 Acceptance Criteria 8.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1 <sup>1</sup>  The NRC disagrees with this comment and no revisions were made to DSRS 14.3.5. The NRC is using a Risk-Informed and Integrated Review framework, which relies, in part, on inspections, tests, analyses, and acceptance criteria (ITAAC) in supporting a safety finding of the proposed design. NRC considers ITAAC to be Tier 1 material. Therefore, NuScale's comment appears to be irreconcilable with the Risk-Informed and Integrated Review framework the NRC is employing in the DSRSs. Additionally, the NRC agrees that the Commission disapproved of programmatic ITAAC, with the notable exception of emergency planning in SRM-02-0067. However, use of ITAAC in

<sup>1</sup> The NRC Staff determined whether to develop a new DSRS section after considering whether significant differences in the functions, characteristics, or attributes of the NuScale design required major revision of the related SRP section guidance, or whether structures, systems, and components identified in the NuScale design are unique and not addressed by the current SRP. The Staff revisited these criteria after publishing the Draft version of this DSRS section (Issued in June 2015) and determined, based on the most recent NuScale design, that the related SRP section is appropriate to perform the NRC safety review. Therefore, this DSRS section will not be issued as final and the related SRP section will be used for this portion of the NuScale review. Since this comment is on a Draft DSRS Section that is no longer being used, the staff will not provide a specific response to it. In deciding to use the related SRP section, the staff has not necessarily determined that the SRP section is wholly applicable without modification. For example, as the NRC staff gains greater understanding of the NuScale design or if the design changes during the review, the staff would assess whether different or supplemental review criteria are needed.

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			guidance of Tier 1 material. Tier 1 should not be used to "support the safety finding for a particular SSC."Further, standard NRC guidance relating to subjects such as the Operational programs listed in Item 1 is not appropriate for inclusion in guidance relating to ITAAC. The Commission disapproved programmatic ITAAC with the exception of ITAAC required on emergency planning in SRM-02-0067. Similarly, DSRS 14.3.4 Acceptance Criteria 8 contains reference to programs. The acceptance criterion is not appropriate for Tier 1 ITAAC guidance.		DSRS 14.3.5 is not for the verification that operational programs are being properly implemented; ITAAC is being used to support the verification of the NuScale SMR design as acceptable. Therefore, no change is needed to Item 1 of Part III, "Review Procedures," of DSRS Section 14.3.5.
508	All Chapter 14	I. Areas of Review/ For a DC application	DSRS Inconsistency: All NuScale 14.3.x DSRS sections have a section titled " <b>For a DC application</b> " under the heading " <b>The specific areas of review are as follows:</b> " The guidance in the "For a DC application" section should be the	Standardize the guidance under the heading "Areas of Review/ Specific Areas of Review/ For a DC application" for all DSRS 14.3.x sections.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1 No revisions were made to DSRS Section 14.3.5 (item 5B) because it did not modify the original guidance and, because of the determination of NRC articulated in footnote 1, the specified area has been standardized

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			<p>same for all DSRS. However, significant differences exist between the various NuScale 14.3.x DSRS sections.</p> <p>Examples of differences for DSRS guidance under the heading "For a DC application" are:</p> <p>1. DSRS 14.3.2 (item 2.B); DSRS 14.3.7 (item 4B) and 14.3.8 (item 5B) significantly modified the guidance for Tier 1 interface requirements. The changes made in DSRS 14.3.2, 14.3.7, and 14.3.8, are not the same in all of the sections. In contrast, the associated guidance for DSRS 14.3.4 (item 6B); 14.3.5 (item 5B) and DSRS 14.3.6 (item 6B) did not modify the original guidance.</p> <p>2. DSRS item 6B requires the staff to review the method used for verification of interface requirements. This review cannot be accomplished by the staff for the DCA application because the verification method is</p>		<p>Staff notes that 10 CFR 52.47(a)(26) provides for the justification that compliance with the interface requirements of 10 CFR 52.47(a)(25) is verifiable through inspection, tests, or analyses. The method to be used for verification of interface requirements must be included as part of the proposed ITAAC required by 10 CFR 52.47(b)(1)..</p>

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			specified by the COL applicant. This guidance is not contained in other 14.3.xx DSRS.		
509	All Chapter 14	I. Areas of Review/ For a DC application	DSRS Inconsistency: All NuScale 14.3.x DSRS sections have a section titled "For a COL application" under the heading "The specific areas of review are as follows:" The guidance in the "For a COL application" section should be the same for all DSRS. However, this section was deleted in DSRS 14.3.5. Note that the section Areas of Review/ Specific Areas of Review/ For a COL application was revised in DSRS 14.3.2, 14.3.6, 14.3.7, and 14.3.8. The associated section in DSRS 14.3.4 was not revised	Delete the guidance under the heading "Areas of Review/ Specific Areas of Review/ For a COL application" for DSRS 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8. OR Standardize the guidance for this section across all 14.3.x DSRS sections.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1 For DSRS Section 14.3.5, under areas of review, item 5 is titled "For DC and COL reviews." Thus the guidance is the same for both and consistent with the SRP, therefore, no revision required.
510	All Chapter 14	I. Areas of Review/ COL Action Items and Certification Requirements	DSRS Inconsistency: All NuScale 14.3.x DSRS sections have a section titled "COL Action Items and Certification Requirements and	Delete the guidance under the heading "Areas of Review/ Specific Areas of Review/ COL Action Items and Certification Requirements and Restrictions" for DSRS Sections 14.3.2,	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1 For DSRS Section 14.3.5, no revision is required.

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		and Restrictions	Restrictions" under the heading "The specific areas of review are as follows:" The guidance in the ""COL Action Items and Certification Requirements and Restrictions"" section should be the same for all DSRS. However, this section was appropriately deleted in DSRS 14.3.5.	14.3.4, 14.3.6, 14.3.7, and 14.3.8.	
511	All Chapter 14	I. Areas of Review <u>Review Interfaces</u>	<p>DSRS Inconsistency: All NuScale 14.3.x DSRS sections have a section titled "Review Interfaces". The implied intent of the section is for additional reviewers to examine the design for potential interfaces for the given DSRS. This intent is not clear due to the scope of DSRS interfaces specified by DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8.</p> <p>Examples of potential inconsistencies for Review Interfaces are: 1. Structures DSRS 14.3.2 references <i>all</i> 14.3.x sections <i>except</i></p>	Examination of the interfaces may reveal inconsistencies in the application of the "Review Interfaces" section	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1 DSRS Section 14.3.5 was revised to correct previous references to DSRS sections that will now use NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition." DSRS 14.3.5 is consistent with the interfaces identified in SRP 14.3.5.

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			<p>HFE DSRS 14.3.9. No other DSRS specifies the wide scope of review interfaces.</p> <p>2. Structures DSRS 14.3.2 is the only DSRS that has a review interface with Physical Security Hardware DSRS 14.3.11.</p> <p>3. Only Structures DSRS 14.3.2, I&amp;C DSRS 14.3.5 and Radiation Protection 14.3.8 have a review interface with Containment DSRS 14.3.11.</p>		
512	All Chapter 14	II. Acceptance Criteria/ Requirements Item 1	<p>DSRS Inconsistency: DSRS 14.3.2 revised the referenced text to agree with the language contained in 10 CFR 52.47(b)(1). The following revisions were necessary to reflect the language in 10 CFR 52.47(b)(1), but the revisions were not applied consistently in DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8:1. The phrase "Commission's rules and regulations" was substituted for "NRC's regulations". 2. The word</p>	<p>Revise Section II. Acceptance Criteria/Requirements/ Item 1 for DSRS 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 to agree with Section II. Acceptance Criteria/Requirements/ Item 1 of DSRS 14.3.2</p>	<p>For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1 DSRS Section 14.3.5 wording was revised to be consistent with 10 CFR 52.47(b)(1).</p>

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			"facility" was substituted for "plant".3. The phrase "has been constructed" was substituted for "as-built" 4. The word "operated" was substituted for "operate"5. The word "conformity" was substituted for the word "accordance".		
513	All Chapter 14	II. Acceptance Criteria <u>Requirements</u> Item 2	DSRS Inconsistency: DSRS 14.3.2 revised the referenced text to agree with the language contained in 10 CFR 52.80(a). The following revisions were necessary to reflect the language in 10 CFR 10 CFR 52.80(a), but the revisions were not applied consistently in DSRS 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8: 1. The phrase "Commission's rules and regulations" was substituted for "NRC's regulations". 2. The word "operated" was substituted for "operate".	Revise Section II. Acceptance Criteria/Requirements/Item 2 for DSRS 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 to agree with Section II. Acceptance Criteria/Requirements/Item 2 of DSRS 14.3.2.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1 For DSRS Section 14.3.5, no revision is required. The wording is consistent with 10 CFR 52.80(a).



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514	All Chapter 14	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> 1st paragraph	<p>DSRS Inconsistency: The referenced text in DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 uses the phrase "NRC's regulations". 10 CFR 52.47(b)(1) and 10 CFR 52.80(a) use the phrase "Commission's rules and regulations" instead of "NRC's regulations".</p> <p>NEI 15-02 uses the phrase "Commission's rules and regulations".</p>	<p>Reword the 1st paragraph of Section 11. Acceptance Criteria/DSRS Acceptance Criteria for DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 to be consistent with the wording of the previous paragraph and the language of 52.47(b)(1) and 10CFR 52.80(a). The revised text is in bold font:</p> <p>Specific DSRS acceptance criteria to meet the relevant requirements of the <b>Commission's rules and regulations</b> identified above are set forth below. The DSRS is not a substitute for the Commission's rules and regulations, and compliance with it is not required. As an alternative, and as described in more detail below, an applicant may identify the difference between a DSRS section and the design features (DC and COL applications only), analytical techniques, and procedural measures proposed in an application and discuss how the proposed alternative provides an acceptable method of complying with the <b>Commission's rules and</b></p>	<p>For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1 DSRS Section 14.3.5 revised wording to be consistent with 10 CFR 52.47(b)(1) and 10 CFR 52.80(a). Additionally, the staff revised the phrase "NRC's regulations" to "Commission's rules and regulations" throughout section DSRS Section 14.3.5 as applicable.</p>

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				<b>regulations</b> that underlie the DSRS acceptance criteria.	
515	All Chapter 14	III Review Procedures	DSRS Inconsistency: The first sentence in Section III "The reviewer will select material from the procedures described below, as may be appropriate for a particular case." was deleted from DSRS 14.3.2, 14.3.4 and 14.3.8. The sentence was not deleted from DSRS 14.3.5, 14.3.6, and 14.3.7.	Delete the first sentence in Section III for DSRS 14.3.5, 14.3.6, and 14.3.7	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1. Because the NRC determined that SRP Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8 are applicable, there is no inconsistency between the DSRS sections. Therefore, NRC technical staff did not make the suggested change to 14.3.5.
516	All Chapter 14	III. Review Procedures Item 2	Item 2 of Section III Review Procedures has been added to DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 as part of the DSRS revision process. Because item 2 has been added to multiple DSRS sections it is more appropriate to include this guidance with the general guidance of DSRS 14.3 when the DSRS is developed.  The current Tier 1 guidance in SRP 14.3 General Review Procedures related to	Delete Review Procedures Item 2 from DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8.	NRC technical staff did not make the requested suggestion. NRC technical staff does not anticipate developing a DSRS for section 14.3 and is not amending the current SRP 14.3, which the NRC determined to be applicable. Therefore, NRC technical staff did not make the requested change to SRP 14.3. For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1; therefore, no changes were made to these DSRS sections. Because of the preceding reasons, Item 2 of Section III, "Review Procedures" appears only in DSRS 14.3.5; therefore, no change was made

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			USIs/GSIs, TMI items, and operating experience is found in item 11 which states "Ensure that the ITAAC reflect the resolutions of technically relevant USIs/GSIs, TMI items, and operating experience."		because the item only appears in one DSRS section.
517	All Chapter 14	DSRS Acceptance Criteria	DSRS 14.3.2 Acceptance Criteria item 3 identifies the General Design Criteria (GDC) the staff used to develop top level design requirements and resultant ITAAC requirements for Structural Systems. This GDC basis for ITAAC is not contained in DSRS 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8. The GDC basis for ITAAC requirements would be beneficial to both the NRC staff and NuScale.	Revise DSRS 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 to identify the GDC the staff used to develop top level design requirements and resultant ITAAC requirements for the other design areas.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1  NRC technical staff did not make the requested suggestion to DSRS 14.3.5. GDCs serving as the basis for ITAAC related to I&C systems are stated in either SRP 14.3 or DSRS 14.3.5, Section III, "Review Procedures," Items 10, 11, and 15.

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518	All Chapter 14	I. Areas of Review	DSRS Inconsistency: The content, technical level of detail and scope of the "Areas of Review" sections varies over an extensive range. DSRS 14.3.2, 14.3.7, and 14.3.8 each contain two sentences, all with different content. DSRS 14.3.4 has four paragraphs containing background, technical, strategic and administrative information. DSRS 14.3.5 and DSRS 14.3.6 have similar length with little commonality in content.	Revise DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 to provide consistent scope for Areas of Review.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1  Because the NRC determined that SRP Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8 are applicable, there is no inconsistency between the DSRS sections. Therefore, NRC technical staff did not make the suggested change to 14.3.5
519	All Chapter 14	Technical Rationale	DSRS Inconsistency: The content, technical level of detail and scope of the "Technical Rationale" sections varies over an extensive range. DSRS 14.3.7 and 14.3.8 have two identical items related to 10 CFR 52.47(b)(1) and 10 CFR 52.80(a). 14.3.2 contains the two items located in 14.3.7 and 14.3.8 plus an additional item related to	Revise DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 to provide consistent scope for Technical Rationale.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1  For Section 14.3.5, the NRC revised "NRC rules and regulations" to "Commission's rules and regulations" to be consistent with the wording of 10 CFR 52.47(b)(1) and 52.80(a). Items 1-4 of the "Technical Rationale" are consistent with SRP 14.3.5.

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			contamination. 14.3.6 has two items, one related to 10 CFR 50.49 and one related to GDC 17. 14.3.8 contains 8 items, several which contain elements of acceptance criteria.		
520	14.2	I. Areas of Review Review Interfaces and II. Acceptance Criteria	There is no requirement for the Initial Plant Test (ITP) to be included in ITAAC. There are no ITAAC designated specifically as preoperational test ITAAC. Although satisfying a particular ITAAC may in turn satisfy a specific preoperational test requirement. Therefore, reference to preoperational test ITAAC should be deleted.	Revise affected text throughout the sections as follows: For consistency between the ITP and ITAAC regulations, the NRC staff also reviews preoperational test acceptance criteria under the ITP to verify that they are consistent with <b>ITAAC</b> acceptance criteria <del>under preoperational test ITAAC.</del>	The NRC staff does not agree with the NuScale comment that “there are no ITAAC designated specifically as preoperational test ITAAC.” Therefore, no changes were made. The DC application must contain ITAAC under 10 CFR 52.47(b)(1), which includes preoperational test ITAAC. The NRC staff inspect preoperational test ITAAC under Inspection Chapter (IMC) 2503. The preoperational test ITAAC are identified under column D of the ITAAC matrix. NRC staff, however, updated DSRS 14.2 to clarify that the regulations for the ITP apply only to a COL applicant. The DC applicant develops their portion of the ITP for the COL applicant.

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521	14.2	II. Acceptance Criteria Requirements	Acceptance Criteria, Requirements 1 discusses a Prototype plant. NuScale design does not contain a prototype.	Revise II. Acceptance Criteria Requirement 1, and Acceptance Criteria 4, 5, 8 and 10 to remove reference to a prototype.	NRC technical staff agree that the NuScale reactor is not a prototype plant or demonstration plant like Shipping port, Big Rock Point or Oyster Creek; therefore, use of the term prototype plant was deleted from DSRS 14.2 for NuScale. It is noted, however, that portions of 10 CFR 50.43(e) still apply with respect to unique first of a kind (FOAK) design features in the NuScale Reactor that should be tested. The Acceptance Criteria, Requirement 1 was deleted and the term prototype plant was deleted from Requirement 4 of the draft version of DSRS 14.2, which is now Requirement 3 of the final version of the DSRS, as suggested by NuScale. References to prototype plants were not in II. Acceptance Criteria, Requirements 5, 8, or 10 of the DSRS 14.2 draft; therefore, NRC technical staff did not amend those portions of DSRS 14.2. However, prototype plants were referenced in II. Acceptance Criteria, Technical Rational, Items 1, 4, 5, 8, and 10 of the DSRS 14.2 draft, and NRC technical staff believes this is what NuScale was referring to in its "commenter suggestion." NRC technical staff removed references to prototype

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					plants in these items in the final DSRS 14.2. The term FOAK was not deleted since the NuScale design contain unique design features that are considered FOAK for this reactor. The word "respectively" was deleted from the 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence in Section V. Implementation, page 14.2-18. The sentence now reads: The regulations in 10 CFR 52.17(a)(1)(xii), 10 CFR 52.47(a)(9), and 10 CFR 52.79(a)(41) establish requirements for applications for ESPs, DCs, and COLs; <del>respectively</del> .
522	14.2	II. Acceptance Criteria DSRS Acceptance Criteria Item 2.A	The word "respectively" has been inserted at the end of the sentence "....10 CFR 52.17 (a)(1)(xii) and 79(a)(41) for COL applications, respectively." however reference to 10 CFR 52.17 (a)(1)(xii) has been deleted in the NuScale DSRS markup therefore the word "respectively" does not apply	Delete the word "respectively" sentence should read "....10 CFR 52.79(a)(41) for COL applications."	NRC staff agreed with the edit and the word "respectively" has been deleted.

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523	14.2	II. Acceptance Criteria DSRS Acceptance Criteria Item 6.C COL Applicant	The sentence "The COL applicant will provides plans." should be revised to read "The COL applicant will provide plans."	Change the word "provides" to "provide."	NRC staff agreed with the edit and the sentence was revised to note use of the word "provide."
524	14.3.2	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 2 Last sentence	The referenced sentence states "The review checklists for fluid systems, electrical systems, and building structures in Appendix C of SRP Section 14.3 should be used as aids for establishing consistency and completeness for the Tier 1 information." These checklists require completion of ITAAC that are not addressed in DSRS 14.3.3. NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each	Reword the last sentence of item 2 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.2, see footnote 1



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			of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
525	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 8 2nd paragraph	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Section 4 of NEI 15-02 provides a discussion of the First Principles for developing ITAAC. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the 2nd paragraph as follows:  For the RXM, ITAAC that verify protective features are installed in accordance with the as-built Pipe Break Hazard Analysis Report require an inspection of the as-built high- and moderate-energy piping systems and protective features to ensure that the as-built areas are protected from the postulated break areas assumed in the analyses.	For DSRS Section 14.3.2, see footnote 1
526	14.3.2	III. Review Procedures Item 10 1st bullet	The SRP requires that top level design requirements be captured as design commitments in Tier 1. Describing how facility design will minimize, to the extent practicable, contamination of the facility and the	It is suggested that items the 1st bullet under item 10 be deleted.	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste does not represent a top level design requirement as delineated in SRP 14.3 and is not consistent with first principles delineated in NEI 15-02.		
527	14.3.2	IV. Evaluation Findings Item 3	The SRP requires that top level design requirements be captured as design commitments in Tier 1. Describing how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste does not represent a top level design requirement as delineated in SRP 14.3 and is not consistent with first principles delineated in NEI 15-02.	It is suggested that item 3 be deleted	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
528	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 7 4th paragraph	Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Add as last sentence to 4th paragraph: "ITAAC for internal and external flooding protection are discussed in Appendix C to NEI 15-02."	For DSRS Section 14.3.2, see footnote 1
529	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 7 5th paragraph	Dimensional information pertaining to divisional walls being 2.5 meters above floor and safety-related electrical, instrumentation, and control equipment being located at least 20 cm above the floor surface and external wall below flood level being 0.6 meters thick is design specific and an ITAAC associated with inspections to verify these specific measurements values should not be required. The referenced text uses the term "RPV". The NuScale design does not include a traditional reactor pressure vessel (RPV) as used in a large light water reactor. The NuScale RPV and containment are an	Reword the 5th paragraph as follows: ITAAC should require inspections to verify that water-tight doors, locations of penetrations in the division walls, and locations of safety-related electrical, instrumentation and control equipment meet their specified design commitments associated with flood protection. In addition, for the safety-related reactor and control buildings, ITAAC should verify that design commitments for external walls and external wall penetrations associated with flood protection features are provided to protect against water seepage. ITAAC for internal and external flooding protection are discussed in Appendix C to NEI 15-02.	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			<p>integral component called the reactor module (RXM). Also other major structures are limited to the reactor building, control building, radwaste building, diesel generator building, and the turbine building. NEI 15-02, page 13, states:</p> <p>“Dimensions are often not important to the function of SSC, and wide variations in dimensions can often be accommodated without adverse impact on the function. Similarly, wide variations in material properties are generally acceptable. Therefore, in general, dimensions and material properties typically are not addressed in ITAAC, because it would unnecessarily restrict changes that have no adverse impact on safety. Exceptions to this principle include specified dimensions of critical sections of Seismic Category I Structures and the reactor pressure</p>		

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			vessel beltline Charpy upper-shelf energy, because these attributes are essential to a top-level safety-related function. Where dimensions are important to the top-level design features or performance characteristics, they are verified by appropriate ITAAC."Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
530	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 10 2nd paragraph 3rd sentence	1. The ASME Section III Code of record for the NuScale design is the 2007 Edition, no addenda. In the Code edition, the term "stress report" has been replaced with "Design Report". 2. The 2nd paragraph references SRP Section 14.3.3. Section 14.3.3 was not provided as a DSRS. As stated in the General Comments, "A complete and proper	Reword the 3rd sentence of 2nd paragraph as follows:  Similarly for piping systems, an as-built analysis should be performed using the as-designed and as-built information. ITAAC should verify the existence of acceptable final as-built ASME Design Reports that conclude the as-built piping systems are adequately designed. See DSRS Section 14.3.3 for additional information.	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			review of NuScale Power 14.3.x series DSRS cannot be performed until a NuScale Power DSRS is provided for Sections 14.3, 14.3.3, and 14.3.11." 3. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
531	14.3.2	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 10 3rd paragraph	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Section 4 of NEI 15-02 provides a discussion of the First Principles for developing ITAAC. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of	Delete 3rd paragraph.	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			NEI 15-02. An ITAAC for the check of dimensions of the RPV does not meet the First Principles of NEI 15-02 nor is a Standard ITAAC included in Appendix C to NEI 15-02.		
532	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 10 4th paragraph	<p>The 4th paragraph references SRP Section 14.3.3. Section 14.3.3 was not provided as a DSRS. As stated in the General Comments, "A complete and proper review of NuScale Power 14.3.x series DSRS cannot be performed until a NuScale Power DSRS is provided for Sections 14.3, 14.3.3, and 14.3.11."</p> <p>Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.</p>	<p>Reword the 4th paragraph as follows: For component qualification, tests, analyses, or a combination of tests and analyses should be performed for seismic Category I mechanical and electrical equipment (including connected instrumentation and controls) to demonstrate that the as-built equipment and associated anchorages are qualified to withstand design basis dynamic loads without loss of safety function. These test and analyses should be performed as a part of a specific ITAAC associated with verification of seismic qualification to verify the component including associated anchorages. See DSRS Section 14.3.3 for additional information. ITAAC for component qualification are discussed in Appendix C to NEI 15-02.</p>	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
533	14.3.2 14.3.4 14.3.8	Acceptance Criteria	The addition of 10 CFR 20.1406, RG 4.21, and DC/COL-ISG-06 to acceptance criteria in DSRS 14.3 subsections seems inappropriate. This regulation and associated guidance seek to minimize contamination to the extent practical. ITAAC must be written to meet specific acceptance criteria in order to be completed. It is uncertain how an ITAAC could be written or completed with the subjective acceptance criteria to "minimize contamination." The scope of NuScale ITAAC was increased with respect to the SRP when DSRS 14.3.2, DSRS 14.3.4, and DSRS 14.3.8 introduced the NRC regulation of 10 CFR 20.1406 and the guidance of RG 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life- Cycle Planning." The increased ITAAC scope is reflected	Delete the following DSRS Acceptance Criteria and their associated discussion in the DSRS: 1. DSRS 14.3.2 Acceptance Criteria #112. DSRS 14.3.4 Acceptance Criteria #6, References 1 and 173. DSRS 14.3.8 Acceptance Criteria #24. DSRS 14.3.8 Acceptance Criteria #3, References 1, 15, 16, 17	For DSRS Sections 14.3.2, 14.3.4, and 14.3.8, see footnote 1



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			<p>in DSRS14.3.2 Acceptance Criteria #11; DSRS 14.3.4 Acceptance Criteria #7; and DSRS14.3.8 Acceptance Criteria #2 and #3. ITAAC associated with Minimization of Contamination and Radioactive Waste Generation does not meet the first principles of NEI 15-02, Industry Guideline for the Development of Tier 1 and ITAAC Under 10 CFR Part 52. The guidance provided in RG 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life Cycle Planning." is appropriate for verification that Tier 2 material is adequate to obtain an SER, but is not appropriate for Tier 1 ITAAC. Examples of inappropriate Tier 2 type of guidance in the DSRS are contained in the following DSRS statements: 1. In accordance with 10 CFR 20.1406</p>		

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			<p>applications must describe how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.</p> <p>2. Regulatory positions C.1 through C.4 of RG 4.21 describe concepts to be implemented to provide reasonable assurance that inadvertent spills, leaks, and discharges of liquid, gaseous, and solid radioactive effluents are prevented, detected, and corrected.</p> <p>3. In accordance with 10 CFR 20.1406 applications must describe how contamination and generation of radioactive waste are minimized.</p> <p>4. 10 CFR 20.1406 requires the design of a nuclear power plant to address the minimization of contamination of the facility and the environment. This is</p>		

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			accomplished by considering the design features and operation of SSCs that contain or handle radioactive material as described in the COL technical submittal.		
534	14.3.2 14.3.4 14.3.5 14.3.6 14.3.7 14.3.8	DSRS Acceptance Criteria	DSRS Inconsistency: DSRS 14.3.4 and DSRS 14.3.7 contain a list of items that the reviewer must use to "ensure comprehensive and consistent treatment of Tier 1". The list has some review items that are applicable to all DSRS. Some review items are applicable to multiple, but not necessarily all, DSRS. However, the lists are only contained in DSRS 14.3.4 and DSRS 14.3.7.	Revise DSRS 14.3.2, 14.3.4, 14.3.5, 14.3.6, 14.3.7, and 14.3.8 to consistently apply the review items contained in the review lists of DSRS 14.3.4 and 14.3.7.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1  For DSRS Section 14.3.5, under DSRS Acceptance Criteria, Item 3 refers to SRP Section 14.3, Appendix A. No revision required.
535	14.3.2 14.3.4 14.3.6 14.3.7 14.3.8	14.3.2 Evaluation Findings 14.3.4 DSRS Evaluation Findings 14.3.6 Evaluation Findings	The following sentence is found in Evaluation Findings section of DSRS 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8. "A finding similar to that in the Evaluation Findings section of SRP Section 14.3 should be provided in	Delete the sentence "A finding similar to that in the Evaluation Findings section of SRP Section 14.3 should be provided in a separate section of the SER." from DSRS 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8.	For DSRS Sections 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
		14.3.7 Evaluation Findings 14.3.8 Evaluation Findings	a separate section of the SER."  The sentence has been deleted from 14.3.5, and should be deleted from DSRS 14.3.2, 14.3.4, 14.3.6, 14.3.7, and 14.3.8.		
536	14.3.2 14.3.8	14.3.4 Acceptance Criteria 14.3.8 Acceptance Criteria	DSRS 14.3.4 Acceptance Criteria item 7 and DSRS 14.3.8 Acceptance Criteria item 4 are similar acceptance criteria that are not written in the standard format of acceptance criteria, but are just paraphrases of 10 CFR 52.47(b)(1) and 10 CFR 52.97(b). The acceptance criteria do not provide any value to the Tier 1 guidance. These acceptance criteria do not appear in DSRS 14.3.2, 14.3.5, 14.3.6 or 14.3.7.	Delete the following DSRS Acceptance Criteria and their associated discussion in the DSRS: 1. DSRS 14.3.4 Acceptance Criteria #7 2. DSRS 14.3.8 Acceptance Criteria #4	For DSRS Sections 14.3.2, 14.3.4, and 14.3.8, see footnote 1
537	14.3.2 14.3.4 14.3.8	14.3.2 Review Procedures 14.3.4 Review Procedures 14.3.8 Review Procedures	The referenced items contain an instruction for the reviewer to use the guidance of Interim Staff Guidance to review the design. This guidance is appropriate for Tier 2 review to ensure the	Delete the following DSRS Review Procedures and their associated discussion in the DSRS: 1. DSRS 14.3.2 Review Procedures #10 2. DSRS 14.3.4 Review Procedures #21	For DSRS Sections 14.3.2, 14.3.4, and 14.3.8, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			design is adequate for a safety determination. This guidance is not appropriate for review of Tier 1 system ITAAC because the safety determination is based on Tier 2 material only. Interim staff guidance is only contained in DSRS sections 14.3.2, 14.3.4, and 14.3.8.	2. DSRS 14.3.8 Review Procedures #10	
538	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 11	The SRP requires that top level design requirements be captured as design commitments in Tier 1. Describing how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste does not represent a top level design requirement as delineated in SRP 14.3 and is not consistent with first principles delineated in NEI 15-02.	It is suggested that item 11 be deleted	For DSRS Section 14.3.2, see footnote 1

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539	14.3.2	III. Review Procedures Item 3	This item references SRP Section 14.3 for general review criteria. Section 14.3 was not provided as a DSRS. As stated in the General Comments, "A complete and adequate review of NuScale Power 14.3.x series DSRS cannot be performed until a NuScale Power DSRS is provided for Sections 14.3, 14.3.3, and 14.3.11." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52.	Reword Item 3 as follows: 3. Follow the general procedures for review of Tier 1 contained in the Review Procedures section of DSRS Section 14.3. Ensure that Tier 1 is consistent with NEI 15-02.	For DSRS Section 14.3.2, see footnote 1
540	14.3.2	III. Review Procedures Item 4	NEI 15-02, page 13, states: "Dimensions are often not important to the function of SSC, and wide variations in dimensions can often be accommodated without adverse impact on the function. Similarly, wide variations in material	Reword Item 4 as follows: 4. Ensure that all Tier 1 information is consistent with Tier 2 information. Figures and diagrams, if provided, should be reviewed to ensure that they accurately depict the functional arrangement and requirements of the systems, including definitions, general provisions, and legends	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			<p>properties are generally acceptable. Therefore, in general, dimensions and material properties typically are not addressed in ITAAC, because it would unnecessarily restrict changes that have no adverse impact on safety. Exceptions to this principle include specified dimensions of critical sections of Seismic Category I Structures and the reactor pressure vessel beltline Charpy upper-shelf energy, because these attributes are essential to a top-level safety-related function. Where dimensions are important to the top-level design features or performance characteristics, they are verified by appropriate ITAAC. This item references SRP Section 14.3 for general review criteria. Section 14.3 was not provided as a DSRS. As stated in the General Comments, "A complete</p>	<p>for figures. Reviewers should use guidance in DSRS Section 14.3 and NEI 15-02 as an aid in establishing consistent and comprehensive treatment of issues.</p>	

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			and adequate review of NuScale Power 14.3.x series DSRS cannot be performed until a NuScale Power DSRS is provided for Sections 14.3, 14.3.3, and 14.3.11." Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
541	14.3.2	III. Review Procedures Item 5	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. NEI 15- 02 consistently uses the term "top-level design features and performance characteristics".	Replace "key performance characteristics and safety functions" with "top-level design features and performance characteristics".	For DSRS Section 14.3.2, see footnote 1



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542	14.3.2	I. Areas of Review Item 2.B 1st paragraph 2nd sentence	The referenced text uses the phrase "The interface requirements define the significant attributes and performance characteristics". NEI 15- 02 uses the term "design features and performance characteristics". DSRS should be consistent with NEI 15-02.	Change "significant attributes" to "design features"	For DSRS Section 14.3.2, see footnote 1
543	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 2 1st sentence	The referenced text uses the phrase "key dimensions". The term is undefined.	Provide a definition or discussion for the term "key dimension."	For DSRS Section 14.3.2, see footnote 1
544	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 3 1st paragraph	The referenced paragraph contains ITAAC guidance for generic structural buildings and generic major components. The major NuScale buildings are limited to the reactor building, control building, radwaste building, diesel generator building, and the turbine building.	Reword the 1st paragraph as follows:  3. <u>Review of the Standard Design Structural Integrity</u> . The scope of structural design covers the major structural systems in the NuScale plant which include the reactor building, ASME Code Class 1, 2, and 3 piping systems, the safety-related building structures (reactor building and control building), radwaste building, diesel generator building, and the turbine building. The reactor building and piping	For DSRS Section 14.3.2, see footnote 1

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				systems are included because they provide the defense-in-depth principle for the NuScale plant. The safety-related control building and the safety-related reactor building contain all NuScale safety-related and non-safety-related, risk-significant systems.	
545	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 3 9th paragraph List Bullet E	The discussion for GDC 2 was revised by the NRC to add "tsunami and seiches" in the 4th paragraph.	For consistency within the DSRS, add "tsunami and seiches" to List Bullet E.	For DSRS Section 14.3.2, see footnote 1
546	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 3 9th paragraph List Bullet I	Item I of the list requires verification of containment integrity. This guidance should be in DSRS 14.3.11, which has not been provided. The guidance is located in SRP 14.3.11. SRP 14.3.11, <i>Containment Systems - Inspections, Tests, Analyses, and Acceptance Criteria</i> (and the NuScale DSRS 14.3.11 when provided by NRC), AREAS OF REVIEW	For consistency with SRP 14.3.11, delete List Bullet I.	For DSRS Section 14.3.2, see footnote 1

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			states that "The specific areas of review are as follows: 1. Tier 1 information is reviewed for issues regarding containment design including containment isolation provisions, containment leakage testing, hydrogen generation and control, containment heat removal, suppression pool hydrodynamic loads, and sub-compartment analysis."		
547	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 3 10th paragraph Last sentence	The last sentence is an incomplete sentence.	Editorial correction.	For DSRS Section 14.3.2, see footnote 1
548	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 5 3rd paragraph	Other major structures are limited to the reactor building, control building, radwaste building, diesel generator building, and the turbine building. The referenced paragraph discusses the ITAAC for structural analysis of	Reword the 3rd paragraph as follows:  Similarly, for the safety-related reactor and control buildings, ITAAC should require an analysis for reconciling the as-built plant with the structural design basis loads (which include the	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			safety-related buildings. The NuScale design contains two safety-related buildings: the reactor building and the control building. The proposed rewording of the paragraph makes the text specific to NuScale's design.	combination of normal and accident loads with the effects of natural phenomena). The analysis results should be documented in a structural analysis report, the scope and contents of which must be described in Tier 2. The staff may determine that the design of certain structures does not require verification by ITAAC, based on their safety significance. In particular, these ITAAC should apply only to the safety-related reactor and control buildings, and are not applicable to other non-safety related structures. However, ITAAC for other design aspects of structures may be appropriate.	
549	14.3.2	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 6 2nd paragraph	The 2nd paragraph references SRP Section 14.3.3. Section 14.3.3 was not provided as a DSRS. As stated in the General Comments, "A complete and adequate review of NuScale Power 14.3.x series DSRS cannot be performed until a NuScale Power DSRS is provided for Sections 14.3, 14.3.3, and 14.3.11."	Replace reference "SRP Section 14.3.3" with "DSRS Section 14.3.3".	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
550	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 6 3rd paragraph	The referenced text uses the term "RPV". The NuScale design does not include a traditional reactor pressure vessel (RPV) as used in a large light water reactor. The NuScale RPV and containment are an integral component called the reactor module (RXM). Also other major structures are limited to the reactor building, control building, radwaste building, diesel generator building, and the turbine building.	Reword the 3rd paragraph as follows: For the safety-related reactor and control buildings, ITAAC require an analysis for reconciling the as-built plant with the structural design-basis loads (which include seismic loads). The analysis results are to be documented in a structural analysis report, as discussed above. These ITAAC apply only to the safety-related reactor and control buildings, and are not applicable to other non-safety related structures. However, ITAAC should be established to verify that, under seismic loads, the collapse of non-safety related SSCs will not impair the safety- related functions of any safety-related SSCs located adjacent to or within the non-safety related SSCs. An ITAAC for design reconciliation is discussed in Appendix C to NEI 15-02.	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
551	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 7	The discussion for GDC 2 was revised by the NRC to add "tsunami and seiches" in the 4th paragraph of Item 3.	For consistency within the DSRS, add "tsunami and seiches" to Item 7 at the appropriate locations.	For DSRS Section 14.3.2, see footnote 1
552	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 7 2nd paragraph	Other major structures are limited to the reactor building, control building, radwaste building, diesel generator building, and the turbine building.	Reword the 2nd paragraph as follows:  These loadings do not apply to the reactor building nor the ASME Code Class 1, 2, and 3 piping systems and components because they are all housed within the safety-related reactor and control buildings. For the safety-related reactor and control buildings, ITAAC should require an analysis for reconciling the as-built plant with the structural design basis loads (which include the flood, wind, tornado, hurricane, tsunami, seiche, rain, and snow loads). Based on their safety significance, these ITAAC apply to the safety-related reactor and control structures. An ITAAC for design for natural phenomena is discussed in Appendix C to NEI 15-02.	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
553	14.3.2	VI. References Item 17	The correct title of 2007 edition of the ASME Code Section III is "Rules for Construction of Nuclear Facility Components."	Revise title of Section III.	For DSRS Section 14.3.2, see footnote 1
554	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 6 4th paragraph	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Add as last sentence:"An ITAAC for impact zone is discussed in Appendix C to NEI 15-02."	For DSRS Section 14.3.2, see footnote 1
555	14.3.2	II. Acceptance Criteria <u>Technical Rationale</u> Item 3	The SRP requires that top level design requirements be captured as design commitments in Tier 1. Describing how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate	It is suggested that item 3 be deleted	For DSRS Section 14.3.2, see footnote 1

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			eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste does not represent a top level design requirement as delineated in SRP 14.3 and is not consistent with first principles delineated in NEI 15-02.		
556	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 4 2nd paragraph	The referenced text refers to a separate hydrostatic test ITAAC which is no subsumed in an ITAAC for the ASME Code Data Report. NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02. Additionally, the NuScale design does	Reword 2nd paragraph as follows:  For the RXM including associated piping, pressure boundary integrity is assured by compliance with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code ("the Code"), Section III, requirements, which include pressure testing of components. Because the requirements of GDC 14, 16, and 50 do not apply to the reactor, control, and radwaste buildings, ITAAC are not required to verify the pressure integrity for these buildings.	For DSRS Section 14.3.2, see footnote 1



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			not include a many of the traditional components used in a large light water reactor.		
557	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 6 1st paragraph	<p>The DSRS 14.3.2 revision deleted the referenced the reference to SRP 14.3 Appendix D for seismic loads ITAAC. An ITAAC for seismic design is discussed in Appendix C to NEI 15-02, and can be used as a reference.</p> <p>The 1st paragraph references SRP Section 14.3.3. Section 14.3.3 was not provided as a DSRS. As stated in the General Comments, "A complete and proper review of NuScale Power 14.3.x series DSRS cannot be performed until a NuScale Power DSRS is provided for Sections 14.3, 14.3.3, and 14.3.11."</p>	<p>Replace reference "SRP Section 14.3.3" with "DSRS Section 14.3.3".</p> <p>Add as last sentence: "An ITAAC for seismic design is discussed in Appendix C to NEI 15-02."</p>	For DSRS Section 14.3.2, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
558	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 3 9th paragraph List Bullet D	The NuScale design does not include a suppression pool.	Delete Item D from list.	For DSRS Section 14.3.2, see footnote 1
559	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 7 5th paragraph	Dimensional information pertaining to divisional walls being 2.5 meters above floor and safety-related electrical, instrumentation, and control equipment being located at least 20 cm above the floor surface and external wall below flood level being 0.6 meters thick is design specific and an ITAAC associated with inspections to verify these specific measurements values should not be required.	It is suggested that the text be revised as follows: "ITAAC should also require inspections to verify that water-tight doors, locations of penetrations in the division walls, and locations of safety-related electrical, instrumentation and control equipment meet their specified design commitments associated with flood protection. In addition, for safety-related buildings, ITAAC should verify that design commitments for external walls and external wall penetrations associated with flood protection are provided."	For DSRS Section 14.3.2, see footnote 1

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560	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 8 2nd paragraph	The reference to “basic configuration” is only applicable to ITAAC included in the ABWR Design Certification. No other DC or COL has used the “basic configuration” ITAAC because of its broad scope and difficulty for close-out. Any reference to “basic configuration” ITAAC should only be for historical purposes and specific to ABWR. The “basic configuration” ITAAC concept is no longer used and has no further practical application.	Revise text as follows:  For the RPV, ITAAC that verify the critical locations that establish the bounding loads in the loss-of-coolant accidents (LOCA) analyses for the RPV ensure that the as-built areas do not exceed the postulated break areas assumed in the LOCA analyses	For DSRS Section 14.3.2, see footnote 1
561	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 8 3rd paragraph	The NuScale design does not include a service building.	Delete "service building" from 3rd paragraph.	For DSRS Section 14.3.2, see footnote 1

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562	14.3.2	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 10 1st paragraph 3rd sentence	The NuScale design does not include a traditional containment building or other major components used in a large light water reactor. The NuScale containment is an ASME Class 1 vessel and is an integral component of the reactor module.	Reword the 3rd sentence of 1st paragraph as follows:  Structural analysis reports should be verified in conjunction with ITAAC for the reactor and control buildings	For DSRS Section 14.3.2, see footnote 1
563	14.3.4	I. Areas of Review 1st sentence	The referenced text uses the phrase "This section provides". DSRS 14.3.2 uses the phrase "This Design-Specific Review Standard (DSRS) section provides".	For consistency with DSRS 14.3.2, reword 1st sentence to:  "This Design-Specific Review Standard (DSRS) section provides".	For DSRS Section 14.3.4, see footnote 1
564	14.3.4	II. Acceptance Criteria <u>Requirements</u> Item 1	The wording in item 1, 10 CFR 52.47 (b)(1), which requires..." is not consistent with the wording of the regulation. The regulation uses the word "facility" whereas the DSRS uses "plant," the regulation uses "conformity" the DSRS uses "accordance," the regulation uses "has been constructed," the DSRS uses "is built," the regulation uses "be	Reword the affected text to be consistent with the wording of the regulation as noted below: 1. 10 CFR 52.47(b)(1), which requires that a DC application contain the proposed ITAAC that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a facility that incorporates the design certification has been constructed and will be operated in accordance conformity with the	For DSRS Section 14.3.4, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			operated” and the DSRS uses “operate.”	design certification, the provisions of the AEA, and the NRC's regulations.	
565	14.3.4	II. Acceptance Criteria <u>Requirements</u> Item 2	See General Comment 8		For DSRS Section 14.3.4, see footnote 1
566	14.3.4	II. Acceptance Criteria <u>Requirements</u> Item 2	The wording in item 2, “10 CFR 52.80(a) which requires that a COL....” is not consistent with the wording of the regulation. For example the regulation uses the words “be operated” whereas the DSRS uses the word “operate.”	Reword the affected text to be consistent with the wording of the regulation as noted below:  2. 10 CFR 52.80(a), which requires that a COL application contain the proposed inspections, tests, and analyses, including those applicable to emergency planning, that the licensee shall perform, and the acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will be operated in conformity with the combined license, the provisions of the AEA, and the NRC's regulations.	For DSRS Section 14.3.4, see footnote 1

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567	14.3.4	II. Acceptance Criteria <u>Technical Rationale</u> Item 5 2nd sentence	Item 5 states "Those active systems classified as non-safety systems are potentially the first line of defense to reduce challenges to the passive systems in the event of transients or plant upsets. While the passive systems are designed to perform their safety functions independently of operator action or off-site support for 72 hours after an event, these non-safety or active systems are capable of supplying water to the passive systems or directly performing core and containment heat removal functions and, therefore, should be considered as Tier 1."The phrase "non-safety or active systems" is in error. The "or" should not be included.	Revised the phrase "non-safety or active systems" in the 2nd sentence to read phrase "non-safety active systems".	For DSRS Section 14.3.4, see footnote 1

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568	14.3.4	III. Review Procedures Item 3 1st sentence	Item 3 references SRP Section 14.3 for general review criteria. DSRS 14.3 was not provided. As stated in the General Comments, "A complete and proper review of NuScale Power 14.3.x series DSRS cannot be performed until a NuScale Power DSRS is provided for Sections 14.3, 14.3.3, and 14.3.11."	Replace reference "SRP Section 14.3" with "DSRS Section 14.3".	For DSRS Section 14.3.4, see footnote 1
569	14.3.4	III. Review Procedures Item 18	DSRS Inconsistency: DSRS 14.3.2 revised the 1st sentence in the equivalent item to read: "For review of a DC application, the reviewer should follow the above procedures to verify that the design, including requirements and restrictions (e.g., interface requirements and site parameters), set forth in the technical submittal meet the acceptance criteria." The 2nd sentence in the equivalent item was deleted in DSRS 14.3.2.	Revise Item 18 to match DSRS 14.3.2.	For DSRS Section 14.3.4, see footnote 1

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570	14.3.4	III. Review Procedures Item 20	DSRS Inconsistency: DSRS 14.3.2 deleted the equivalent item.	Delete Item 20 to match DSRS 14.3.2.	For DSRS Section 14.3.4, see footnote 1
571	14.3.4	I. Areas of Review 2nd paragraph	The referenced text uses the phrase "design features and performance standards". NEI 15-02 uses the term "design features and performance characteristics". DSRS should be consistent with NEI 15-02.	Change "performance standards" to "performance characteristics"	For DSRS Section 14.3.4, see footnote 1
572	14.3.4	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 1 1st sentence	The 1st sentence states "Appendix A of SRP 14.3 describes and provides guidance relative to the content of the DCD for a design certification application and defines Tier 1 and Tier 2 design- related information that is to be ultimately incorporated by reference into the design certification rules." These checklists require completion of ITAAC that are not addressed in DSRS 14.3. NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections,	Reword the 1st sentence of item 1 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.4, see footnote 1



<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
573	14.3.4	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 1 4th paragraph List item c	List item c is "Key design features of the system". NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. NEI 15- 02 consistently uses the term "top-level design features and performance characteristics".	Replace "key design features" with "top-level design features and performance characteristics".	For DSRS Section 14.3.4, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
574	14.3.4	II. Acceptance Criteria <u>DSRS Acceptance Criteria Item 3</u> 5th paragraph	The referenced sentence states that Appendix C to SRP 14.3 provides "checklists" for the fluid systems as an aid for establishing consistency and comprehensiveness in the review of the system." These checklists require completion of ITAAC that are not addressed in DSRS 14.3.4. NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the 5th paragraph as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.4, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
575	14.3.4	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 5 1st paragraph	The referenced sentence states "Appendix D of SRP 14.3 lists acceptable "Standard ITAAC Entries" in the standard three-column format for ITAAC entries for configuration of systems, hydrostatic tests, net positive suction head for pumps, divisional power supply, etc., that should be contained in the overall set of ITAAC entries, as appropriate." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the 1st paragraph as follows: "NEI 15-02 lists acceptable "Standard ITAAC Entries" in the standard three-column format for ITAAC entries for configuration of systems, valve performance, etc., that should be contained in the overall set of ITAAC entries, as appropriate."	For DSRS Section 14.3.4, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
576	14.3.4	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 6	The SRP requires that top level design requirements be captured as design commitments in Tier 1. Describing how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste does not represent a top level design requirement as delineated in SRP 14.3 and is not consistent with first principles delineated in NEI 15-02.	It is suggested that item 6 be deleted	For DSRS Section 14.3.4, see footnote 1
577	14.3.4	III. Review Procedures Item 3 2nd sentence	The 2nd sentence states "Ensure that the DCD is consistent with the guidance and definitions as presented in Appendix A to SRP Section 14.3." These checklists require completion of ITAAC that are not addressed in DSRS 14.3.4. NEI 15-02 provides generic guidance for design certification	Reword the 2nd sentence of item 3 as follows:"NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15- 02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.4, see footnote 1

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			applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
578	14.3.4	III. Review Procedures Item 5	The 2nd sentence states "Reviewers should use the review checklists in Appendix C to SRP Section 14.3 as an aid in establishing consistent and comprehensive treatment of systems." These checklists require completion of ITAAC that are not addressed in DSRS 14.3.4. NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear	Reword the 2nd sentence of item 5 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.4, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
579	14.3.4	III. Review Procedures Item 6	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. NEI 15- 02 consistently uses the term "top-level design features and performance characteristics".	Replace "key performance characteristics and safety-related functions" with "top-level design features and performance characteristics".	For DSRS Section 14.3.4, see footnote 1
580	14.3.4	III. Review Procedures Item 7	Item 7 states "Ensure that appropriate ITAAC are specified for those SSCs performing safety-related functions for Tier 1 Reactor Systems in the prescribed format as presented in Appendix A to SRP Section 14.3."	Reword Item 7 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the	For DSRS Section 14.3.4, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			These checklists require completion of ITAAC that are not addressed in DSRS 14.3.4. NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	standardized ITAAC types identified in Appendix B."	
581	14.3.4	III. Review Procedures Item 13 1st sentence	The referenced sentence states "Ensure that standard ITAAC entries in Appendix D to SRP Section 14.3 related to reactor systems are included, where appropriate, in the systems of the standard design." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections,	Reword the 1st sentence as follows:"NEI 15-02 lists acceptable ""Standard ITAAC Entries" in the standard three-column format for ITAAC entries for configuration of systems, valve performance, etc., that should be contained in the overall set of ITAAC entries, as appropriate."	For DSRS Section 14.3.4, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
582	14.3.4	III. Review Procedures Item 17	Item 17 states "Review Appendix C.II.2-A of RG 1.206 to understand the guidance and related rationale provided to applicants in developing ITAAC for fluid, I&C, and electrical systems as might be applicable to Reactor Systems." These checklists require completion of ITAAC that are not addressed in DSRS 14.3.4. NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under	Reword Item 17 as follows: "Review NEI 15-02 to understand the guidance and related rationale provided to applicants in developing ITAAC for fluid, I&C, and electrical systems as might be applicable to Reactor Systems."	For DSRS Section 14.3.4, see footnote 1



<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
583	14.3.4	I. Areas of Review Item 6.B	Typically, the interface requirements state that a COL applicant must develop ITAAC to verify the interface requirements are met. In addition, the methods for verification of the interface requirements are not specified by the DC applicant but are the responsibility of a COL applicant that references the DC. As such, in a DC application the staff cannot review the method to be used for verification of interface requirements because that is specified by the COL applicant.	It is recommended that Item 6.B under Areas of Review be revised as follows:  “The staff reviews the interface requirements to ensure that they are accurately identified, outside the scope of the DC application, and properly assigned to a COL applicant referencing the DC. In addition, staff review ensures that the interface requirements specify that a COL applicant referencing the DC must propose ITAAC to verify the interface requirements.”	For DSRS Section 14.3.4, see footnote 1

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584	14.3.4	III. Review Procedures Item 13	Item 13 of the NuScale DSRS states:"The reviewer should ensure consistent application and treatment of the standard ITAAC, and in particular for the basic-configuration ITAAC and the net- positive-suction-head ITAAC (for safety-related pumps)."The reference to "basic configuration" is onlyapplicable to ITAAC included in the ABWR Design Certification. No other DC or COL has used the "basic configuration" ITAAC because of its broad scope and difficulty for close-out. Any reference to "basic configuration" ITAAC should only be for historical purposes and specific to ABWR. The "basic configuration" ITAAC concept is no longer used and has no further practical application. Furthermore NuScale design does not employ safety-related pumps.	It is recommended that the statement in item 13 be revised as follows:"The reviewer should ensure consistent application and treatment of the standard ITAAC."	For DSRS Section 14.3.4, see footnote 1

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585	14.3.5	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 3 1st paragraph 2nd sentence	The 2nd sentence states "Tests, analyses, and acceptance criteria associated with each design commitment should, when taken together, be sufficient to provide reasonable assurance that the final as-built I&C system fulfills NRC requirements." "Inspections" is missing from sentence.	Add "Inspections" to 2nd sentence.	NRC Staff agrees, and DSRS Section 14.3.5 was revised to add "Inspections."

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586	14.3.5	II. Acceptance Criteria Technical Rationale Item 5	The intent of deleting the Technical Rationale for the design acceptance criteria is unclear. Even if the NRC was trying to delete the term "DAC," it seems reasonable that Technical Rationale #5 would have been kept and DAC would have been replaced with ITAAC. Please clarify.	Clarify the deletion of Technical Rationale, as indicated	No Revision Required - Although, the Commission's Policy allows for the use of Design Acceptance Criteria (DAC); the DSRS provides guidance for providing the level of design details, specifications, plans, and procedures necessary for demonstrating regulatory compliance and conformance to fundamental design principles independent of the digital I&C technology. Emphasis is placed on review of the complete I&C architecture for conformance to the fundamental design principles that address design basis, independence, redundancy, determinism, and defense-in-depth and diversity. Reviews of I&C systems performed in accordance with chapter 7 of the NuScale DSRS allows for reaching the reasonable assurance of safety finding and determining compliance with the applicable regulatory requirements without any reliance on digital I&C technology selection thereby eliminating the needs for digital I&C DAC.
587	14.3.5	II. Acceptance Criteria	Item 4 uses the terms "Tier 1 Design Descriptions and ITAAC design commitments".	Replace "Tier 1 Design Descriptions and ITAAC design commitments" with "Tier 1 Design Descriptions and ITAAC".	NRC Staff agrees and revised DSRS 14.3.5, Item 4 to "Tier 1 design descriptions and ITAAC."

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
		<u>DSRS Acceptance Criteria</u> Item 4	NEI 15-02 uses the terms "Tier 1 Design Descriptions and ITAAC".		
588	14.3.5	III. Review Procedures Item 3	Item 3 uses the term "ITAAC Design Descriptions". NEI 15-02 uses the terms "Tier 1 Design Descriptions and ITAAC".	Replace "ITAAC Design Descriptions" with "Tier 1 Design Descriptions and ITAAC".	NRC staff agrees with the commenter suggestion that the language at III. Review Procedures, Item 3 should be changed. However, contrary to NuScale's suggestion, NRC technical staff amended the language to "assure that the Tier 1 information, including ITAAC, are consistent with SRP Section 4.3, Appendix A."
589	14.3.5	III. Review Procedures Item 5	The 1st sentence uses the term "Design Descriptions and ITAAC design commitments". NEI 15-02 uses the terms "Tier 1 Design Descriptions and ITAAC".	Replace "Design Descriptions and ITAAC design commitments" with "Tier 1 Design Descriptions and ITAAC".	NRC Staff agrees and revised DSRS 14.3.5, Item 5 to "Tier 1 Design Descriptions and ITAAC."
590	14.3.5	III. Review Procedures Item 5	DSRS Inconsistency: "Equipment qualification" was deleted from Item 2 in the DSRS Acceptance Criteria, but remains in this item.	Revise Review Procedures section to be consistent within the DSRS.	NRC Staff agrees and revised DSRS 14.3.5, Item 5 to delete "equipment qualification."

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591	14.3.5	III. Review Procedures Item 11 1st sentence	Item 11 refers to GDC 41. GDC 41 is related to Containment Atmosphere Cleanup systems to control hydrogen and oxygen. NuScale does not have a Containment Atmosphere Cleanup system.	Delete reference to GDC 41.	No Revision Required - See resolution for public comment 342 (Chapter 7 interfaces with Chapter 1 to identify compliance with conformance issues.) Additionally, this comment for item 11 pertains to the coordination with the organization responsible for plant systems, which would make the evaluation of whether GDC 41 was applicable or not.
592	14.3.5	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 2	The 1st and 3rd paragraphs use the terms "Tier 1 material and ITAAC Design Descriptions". NEI 15-02 uses the terms "Tier 1 Design Descriptions and ITAAC".	Replace "Tier 1 material and ITAAC Design Descriptions" with "Tier 1 Design Descriptions and ITAAC".	Revised DSRS 14.3.5 to state "Tier 1 Design Descriptions." Additionally, 3rd paragraph of item 2 was revised to "SRP Section 14.3, Appendix A provides additional guidance on the content of Tier 1 information."

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593	14.3.5	III. Review Procedures Item 7	Item 7 refers to SRP 14.3, Appendix D. NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the beginning of the 1st sentence of item 7 as follows: "The reviewer should assure that standard ITAAC entries in NEI 15-02 Appendix C related to I&C items"	The NRC disagrees with this comment and no revision is required because NEI 15-02 is not currently endorsed by the NRC.
594	14.3.6	I. Areas of Review Item 1	Last sentence of item 1, paragraph 1; there will be no ITAAC associated with grounding and lightning protection.	Revise text as follows: It also includes portions of the plant lighting systems.	For DSRS Section 14.3.6, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
595	14.3.6	I. Areas of Review Item 1 3rd paragraph	Insert (RTNSS) after Safety Systems, Delete parentheses, in title and insert the word "for" before "Passive	Revise to read as follows: The criteria for classifying non-safety- related systems that perform risk significant or important functions (defense-in-depth) as RTNSS are provided by Standard Review Plan SRP Section 19.3, "Regulatory Treatment of Non-Safety Systems (RTNSS) for Passive Advanced Light Water Reactors," as well as the general regulatory requirements for RTNSS SSCs.	For DSRS Section 14.3.6, see footnote 1
596	14.3.6	I. Areas of Review	The 3rd sentence states "This DSRS section primarily involves the station electrical system, including Class 1E portions of the system, equipment qualification (EQ), major portions of the non-Class 1E system, and portions of the plant lightning protection, grounding, and lighting systems. "In conjunction with the NRC, industry and NEI, NEI 15-02, Industry Guideline for the Development of TIER 1 and ITAAC Under 10 CFR Part 52, was developed to provide generic guidance	Delete "plant lightning protection and grounding systems".	For DSRS Section 14.3.6, see footnote 1



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			for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. The document reflects the discussions at NRC public workshops during 2013-2015 concerning the development of standardized ITAAC for light water reactors designs. During the NRC workshops, the "plant lightning protection and grounding systems" were not judged to meet the First Principles of NEI 15- 02.		
597	14.3.6	I. Areas of Review Item 1 3rd sentence	The referenced sentence states "Review guidance for developing ITAAC is provided in Appendix A, "Information on Prior Design Certification Reviews," to Standard Review Plan (SRP) Section 14.3." NEI 15-02 provides generic guidance for design certification applicants to develop	Reword the 3rd sentence of item 1 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.6, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
598	14.3.6	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 1 2nd paragraph 2nd sentence	The referenced sentence states "EQ treatment in the ITAAC would then be discussed in the General Provisions section of Tier 1 (see SRP Section 14.3 Appendix A)." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2	Reword the 2nd sentence as follows: "EQ treatment in the ITAAC would then be discussed in the General Provisions section of Tier 1 (see NEI 15-02)."	For DSRS Section 14.3.6, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
599	14.3.6	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 3 4th paragraph	The 4th paragraph states "ITAAC should be included to analyze the as-built electrical power system for its response to a LOCA, LOOP, combinations of LOCA and LOOP, degraded voltage, and the loss of one or two of the three phases of the offsite power circuit (Reference 13) including tests to demonstrate the actuation of the electrical equipment in response to postulated events." "Inspections" is missing from sentence. In conjunction with the NRC, industry and NEI, NEI 15- 02, Industry Guideline for the Development of TIER 1 and ITAAC Under 10 CFR Part 52, was developed to provide generic guidance for	Delete "and the loss of one or two of the three phases of the offsite power circuit (Reference 13)".	For DSRS Section 14.3.6, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. The document reflects the discussions at NRC public workshops during 2013-2015 concerning the development of standardized ITAAC for light water reactors designs. During the NRC workshops, ITAAC to address IE Bulletin 2012- 12 were not judged to meet the First Principles of NEI 15-02.		
600	14.3.6	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 1 Interface (Offsite Power)	The 3rd paragraph states "In addition, ITAAC should be included to analyze and inspect the main generator rated power factor that permits plant output to the transmission system via the main step-up transformer, and to provide power to station auxiliary loads via the unit auxiliary transformer (UAT) and switchyard.	Delete "In addition, ITAAC should be included to analyze and inspect the main generator rated power factor that permits plant output to the transmission system via the main step-up transformer, and to provide power to station auxiliary loads via the unit auxiliary transformer (UAT) and switchyard. ITAAC should also be included to verify that the main generator circuit breaker is designed to supply power to the	For DSRS Section 14.3.6, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			ITAAC should also be included to verify that the main generator circuit breaker is designed to supply power to the plant loads if the unit trips; however, this feature may not be included in the NuScale design." In conjunction with the NRC, industry and NEI, NEI 15- 02, Industry Guideline for the Development of TIER 1 and ITAAC Under 10 CFR Part 52, was developed to provide generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. The document reflects the discussions at NRC public workshops during 2013- 2015 concerning the development of standardized ITAAC for light water reactors designs. During the NRC workshops, ITAAC relating to the main	plant loads if the unit trips; however, this feature may not be included in the NuScale design."	

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			generator were not judged to meet the First Principles of NEI 15-02.		
601	14.3.6	III. Review Procedures Item 3 3rd sentence	The referenced sentence states "The reviewer should use the electrical review checklists provided in Appendix C, "Detailed Review Guidance," to SRP Section 14.3 as an aid for establishing consistency and comprehensiveness in the review of the systems." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the 3rd sentence of item 3 as follows:"NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.6, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
602	14.3.6	III. Review Procedures Item 4 2nd sentence	The referenced sentence states "Ensure that the DCD is consistent with Appendix A to SRP Section 14.3." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the 2nd sentence of item 4 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.6, see footnote 1
603	14.3.6	III. Review Procedures Item 5 2nd sentence	The referenced sentence states "Reviewers should use the electrical systems review checklist shown in Appendix C to SRP Section 14.3 as an aid in establishing consistent and comprehensive treatment of issues." NEI 15-02 provides generic guidance for	Reword the 2nd sentence of item 5 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.6, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
604	14.3.6	III. Review Procedures Item 6	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. NEI 15- 02 consistently uses the term "top-level design features and performance characteristics".	Replace "key performance characteristics and safety functions" with "top-level design features and performance characteristics".	For DSRS Section 14.3.6, see footnote 1



<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
605	14.3.7	I. Areas of Review <u>Review Interfaces</u>	An additional review interface should be included under the heading "review Interfaces" that addresses DSRS section 14.3.8.	The following text is added to the Review Interfaces as a separate number item.  "Acceptability of ITAAC information associated with radiation protection is reviewed under DSRS Section 14.3.8."	For DSRS Section 14.3.7, see footnote 1
606	14.3.7	I. Areas of Review <u>Review Interfaces</u> Item 8	The statement pertaining to RTNSS does not mention ITAAC	Clarify review interface requirements with respect to ITAAC.	For DSRS Section 14.3.7, see footnote 1
607	14.3.7	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 7	The text needs to be revised to address development of ITAAC relative to radioactive waste systems. In addition, this section addresses operational programs which are not to be included as part of ITAAC.	The text needs to be revised to address its applicability to the review of Tier 1 and ITAAC.	For DSRS Section 14.3.7, see footnote 1

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608	14.3.7	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 1 1st paragraph	The referenced sentence states "The reviewer should also use the review checklists provided in Appendix C to SRP Section 14.3 as an aid for establishing consistency and comprehensiveness in the review of the systems." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the sentence of item 3 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.7, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
609	14.3.7	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 2 List bullet C	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. NEI 15-02 consistently uses the term "top-level design features and performance characteristics".	Replace "key design features" with "top- level design features and performance characteristics".	For DSRS Section 14.3.7, see footnote 1
610	14.3.7	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 2 List bullet N	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Section 4 of NEI 15-02 provides a discussion of the First Principles for developing ITAAC. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the	Delete List Bullet N.	For DSRS Section 14.3.7, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			standardized ITAAC types identified in Appendix B of NEI 15-02. ITAAC relating to functional arrangement do not meet the First Principles of NEI 15-02 nor is a Standard ITAAC included in Appendix C to NEI 15-02.		
611	14.3.7	III. Review Procedures Item 3 2nd sentence	The referenced sentence states "Ensure that the DCD is consistent with Appendix A to SRP Section 14.3." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the 2nd sentence of item 4 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.7, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
612	14.3.7	III. Review Procedures Item 4	The referenced sentence states "Reviewers should use the Review Checklists in Appendix C to SRP Section 14.3 as an aid in establishing consistent and comprehensive treatment of issues." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword the 3rd sentence of item 3 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.7, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
613	14.3.7	III. Review Procedures Item 5	NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. NEI 15-02 consistently uses the term "top-level design features and performance characteristics".	Replace "key performance characteristics and safety and/or defense-in-depth functions" with "top-level design features and performance characteristics".	For DSRS Section 14.3.7, see footnote 1
614	14.3.7	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 7	Item 7 states (in part): "identification of all expected releases of radioactive effluents, methods of treatment, methods used in calculating effluent source terms and releases of radioactive materials in the environment, and operational programs in controlling and monitoring effluent releases and for assessing associated doses to members of the public." "In addition, the review includes an evaluation of the process and effluent radiological	Delete: "identification of all expected releases of radioactive effluents, methods of treatment, methods used in calculating effluent source terms and releases of radioactive materials in the environment, and operational programs in controlling and monitoring effluent releases and for assessing associated doses to members of the public. "In addition, the review includes an evaluation of the process and effluent radiological monitoring instrumentation and sampling systems (PERMISS) which are used to monitor liquid and gaseous process streams and	For DSRS Section 14.3.7, see footnote 1

<b>Comment #</b> <i>(Affiliation: NuScale Power, LLC)</i>	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			<p>monitoring instrumentation and sampling systems (PERMISS) which are used to monitor liquid and gaseous process streams and effluents and solid wastes generated by these systems. The PERMISS includes subsystems used to collect process and effluent samples during normal operation, anticipated operational occurrences, and under post-accident conditions."The lead branch responsible in implementing the review should coordinate the review of these systems <u>and operational programs</u> and ..."NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Section 4 of NEI 15-02 provides a discussion of the First</p>	<p>effluents and solid wastes generated by these systems. The PERMISS includes subsystems used to collect process and effluent samples during normal operation, anticipated operational occurrences, and under post-accident conditions."And delete "operational programs and" from the last sentence.</p>	

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			Principles for developing ITAAC. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02 .ITAAC relating to the subjects quoted above do not meet the First Principles of NEI 15-02 nor is a Standard ITAAC included in Appendix C to NEI 15- 02. Further, standard NRC guidance relating to subjects such as the Operational programs listed in Item 1 is not appropriate for inclusion in guidance relating to ITAAC. The Commission disapproved programmatic ITAAC with the exception of ITAAC required on emergency planning in SRM-02-0067.		



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615	14.3.7	II. Acceptance Criteria <u>DSRS</u> <u>Acceptance</u> <u>Criteria</u> Item 1	<p>The following text shown under DSRS Acceptance Criteria item 1 should be revised to clarify expectations for performing a consistency review of Tier 1 ITAAC relative to the ITP.</p> <p>“In particular, the NRC reviewer should perform a consistency review between the Tier 1 preoperational ITAAC and the applicable Tier 2 system preoperational test abstract to confirm that the test acceptance criteria are consistent with the test requirements for the system test. The Tier 1 ITAAC may have specific numerical test acceptance criteria values while the Tier 2 system test abstract may only have a verbal description of the test acceptance criteria. The NRC technical reviewer would need to confirm that the numerical and verbal description of the test acceptance criteria are the same as the test</p>	<p>Revise text as noted below: In particular, the NRC reviewer should perform a consistency review between the Tier 1 <del>preoperational</del> ITAAC and the applicable Tier 2 system preoperational test abstract to confirm that the <b>ITAAC</b> acceptance criteria are consistent with the <b>preoperational</b> test acceptance criteria requirements for the system test. The Tier 1 ITAAC may have specific numerical test acceptance criteria values while the Tier 2 system test abstract may only have a verbal description of the test acceptance criteria. The NRC technical reviewer would need to confirm that the numerical and verbal description of the <b>ITAAC</b> acceptance criteria are the same as the <b>preoperational</b> test acceptance criteria information that would need to be verified during the preoperational test phase of the Initial Test Program.</p>	For DSRS Section 14.3.7, see footnote 1

<b>Comment #</b> (Affiliation: NuScale Power, LLC)	<b>DSRS Section</b>	<b>Paragraph, Item, or Page</b>	<b>Comment / Basis</b>	<b>Commenter Recommendation</b>	<b>NRC Staff Technical Resolution</b>
			acceptance criteria information that would need to be verified during the preoperational test phase of the Initial Test Program.		
616	14.3.8	I. Areas of Review	Under the Area of Review heading, first paragraph, second sentence. This sentence should be revised to clearly express that ITAAC are based on information contained in the FSAR and provided in a separate part of the combined license (COL) application.	Revise the second sentence of this paragraph as follows: "ITAAC are based on information contained in the final safety analysis report (FSAR) of a combined license (COL) application and are provided in a separate part of the COL application. In addition, ITAAC are included in the Tier 1 portion of the design control document (DCD) of a design certification (DC) application."	For DSRS Section 14.3.8, see footnote 1
617	14.3.8	I. Areas of Review Item 4	The 2nd sentence in Item 4 states "1. These ITAAC include buildings, ventilation and filtration systems, and the process sampling systems." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear	Reword the 2nd sentence in Item 4 as follows: "These ITAAC include buildings, ventilation and filtration systems."	For DSRS Section 14.3.8, see footnote 1

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			plants licensed under 10 CFR Part 52. Section 4 of NEI 15-02 provides a discussion of the First Principles for developing ITAAC. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02. Process sampling systems do not meet the First Principles described in NEI 15-02. Therefore, ITAAC should not be required for verification of design features related to process sampling systems.		
618	14.3.8	III. Review Procedures Item 4	The 2nd sentence states "Reviewers should use the review checklists in Appendix C to SRP Section 14.3 as an aid in establishing consistent and comprehensive treatment of issues." These checklists require completion of ITAAC that are not addressed in DSRS 14.3.8.	Reword the 2nd sentence of item 5 as follows: "NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15-02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.8, see footnote 1

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			NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.		
619	14.3.8	II. Acceptance Criteria <u>DSRS Acceptance Criteria</u> Item 3	The SRP requires that top level design requirements be captured as design commitments in Tier 1. Describing how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste does not represent a top level	Text associated with 10 CFR 20.1406 as it pertains to ITAAC should be deleted.  <del>"In accordance with 10 CFR 20.1406(a) and (b) and as relevant to this DSRS section, GOL and DC applications..... if verifiable through ITAAC, and methods proposed to verify compliance with the interface requirement."</del>	For DSRS Section 14.3.8, see footnote 1

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			design requirement as delineated in SRP 14.3 and is not consistent with first principles delineated in NEI 15-02.		
620	14.3.8	III. Review Procedures Item 3	Item 3 states (in part) "Ensure that the DCD is consistent with Appendix A to SRP Section 14.3." NEI 15-02 provides generic guidance for design certification applicants to develop Tier 1 and the inspections, tests, analyses, and acceptance criteria (ITAAC) for new nuclear plants licensed under 10 CFR Part 52. Appendix C of NEI 15-02 provides standardized ITAAC and Tier 2 Section 14.3 discussion for each of the standardized ITAAC types identified in Appendix B of NEI 15-02.	Reword Item 3 as follows: "The reviewer should follow the general procedures for review of Tier 1 contained in the Review Procedures section of DSRS Section 14.3. NEI 15-02 should be used as aid for establishing consistency and completeness for the Tier 1 information, NEI 15- 02 Appendix C provides standardized ITAAC and Tier 2 Section 14.3 provides a discussion for each of the standardized ITAAC types identified in Appendix B."	For DSRS Section 14.3.8, see footnote 1