

**Mendiola, Doris**

**Subject:** FW: Palo Verde DG-1248 Comments  
**Attachments:** Palo Verde Comments to NRC DG1248.pdf  
**Importance:** High

5/27/2010  
75 FR 29785

**From:** Warren.Potter@aps.com [mailto:Warren.Potter@aps.com]  
**Sent:** Tuesday, August 10, 2010 4:09 PM  
**To:** Carpenter, Robert  
**Cc:** Vick, Lawrence  
**Subject:** Palo Verde DG-1248 Comments  
**Importance:** High

13

Please accept the attached comments on Draft Guide 1248 from Palo Verde Nuclear Generating Station. If you have any questions please don't hesitate to contact me.

Sincerely,

Warren Potter  
Simulator Support Section Leader  
Palo Verde Nuclear Station  
Phone: 623 393-6165  
Cell: 623 910-1525  
Pager: 877 467-1189  
Fax: 623 393-6164  
E-mail: [wpotter@apsc.com](mailto:wpotter@apsc.com)

RECEIVED

2010 SEP 28 AM 11:11

RULES AND DIRECTIVES  
BRANCH  
USNRC

SUNSI Review Complete  
Template = ADM-013

FRIDS = ADM-03  
Add = R. Carpenter (1902)  
- M. Case (MSC)

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
1	Page 3, 2 <sup>nd</sup> paragraph under; “Plant-Referenced Simulator Performance Testing”	N/A	The commission should state that it recognizes exceptions taken on initial certification of simulation facilities.	Add to the 2 <sup>nd</sup> paragraph: “The commission recognizes exceptions taken on initial certification of simulation facilities; these exceptions may be carried forward and be applicable to the ANS-3.5-2009 Standard.”
2	Page 3, 3 <sup>rd</sup> paragraph under; “Plant-Referenced Simulator Performance Testing”	Additionally, the Commission’s regulations in 10 CFR 55.46(c)(2) require that facility licensees that propose to use a plant-referenced simulator to meet the experience requirements in 10 CFR 55.31(a)(5) ensure that (1) the plant-referenced simulator utilizes models relating to nuclear and thermal-hydraulic characteristics that replicate the most recent core load in the nuclear power reference plant for which a license is being sought, and (2) simulator fidelity has been demonstrated so that significant control manipulations are completed without	<p>This comment implies that the only testing acceptance criteria for experience requirement criteria are items (1) and (2) of this paragraph.</p> <p>The regulator should reference scenario-based testing acceptance criteria in Section 4.4.3.2 or clearly state any additional acceptance criteria in the regulatory guide. This comment also applies to DG 1248 Appendix B, Item 5 for the experience requirement.</p>	Add to the 3 <sup>rd</sup> paragraph: “Facility licensees that propose to use a plant-referenced simulator to meet the experience requirements in 10 CFR 55.31(a)(5) shall validate the performance of the simulator via simulator reactor core performance testing and scenario-based testing utilizing acceptance criteria in sections 4.4.3.2 and 4.4.3.3 of the Standard, respectively.”

Palo Verde Comments  
DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		procedural exceptions, simulator performance exceptions, or deviation from the approved training scenario sequence.		
3	Page 4, 2 <sup>nd</sup> paragraph under; NEI 09-09, “Nuclear Power Plant-Referenced Simulator Scenario Based Testing Methodology”	On December 8, 2009, NEI provided for NRC review and endorsement of its industry guidance document, NEI-09-09, Revision 1, “Nuclear Power Plant-Referenced Simulator Scenario Based Testing Methodology” (Ref. 10), which provides an equitable and consistent approach and methodology for the conduct and documentation of SBT, as described in Section 4.4.3.2, “Simulator Scenario-Based Testing,” of ANSI/ANS-3.5-2009. NEI-09-09, Revision 1, also supports Section 4.4.3.2, “Simulator Scenario-Based Testing,” of ANSI/ANS-3.5-1998.	The last sentence should be deleted from this paragraph. It implies a “back fit” from the proposed revision 4 of Regulatory Guide 1.149 to a previous edition of the ANS-3.5 Standard.	On December 8, 2009, NEI provided for NRC review and endorsement of its industry guidance document, NEI-09-09, Revision 1, “Nuclear Power Plant-Referenced Simulator Scenario Based Testing Methodology” (Ref. 10), which provides an equitable and consistent approach and methodology for the conduct and documentation of SBT, as described in Section 4.4.3.2, “Simulator Scenario-Based Testing,” of ANSI/ANS-3.5-2009. <del>NEI 09-09, Revision 1, also supports Section 4.4.3.2, “Simulator Scenario-Based Testing,” of ANSI/ANS-3.5-1998.</del>
4	Page 5, Section 2.b under; NEI 09-09, “NRC Acceptance	b. In regard to Section 3.1.4, “Malfunctions,” simulation facility licensees should	This paragraph should be deleted from this section. This paragraph is not consistent with	<del>b. In regard to Section 3.1.4, “Malfunctions,” simulation facility licensees should demonstrate that</del>

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
	and Endorsement of ANSI/ANS-3.5-2009”	<p>demonstrate that they have conducted performance testing of the malfunctions listed in the standard, as applicable to the design of the reference plant, at least once in the life of the simulation facility and that the associated test documentation includes the completed test results. If performance testing of a malfunction has been completed more than once, then the licensee need only retain the latest test results. The staff recognizes that simulator malfunction test results may be retained longer than 4 years after the completion of each malfunction test. Therefore, regardless of how long it has been since the malfunction test has been performed, the NRC expects simulation facility licensees to make the results of these malfunction</p>	<p>the records retention requirement in 10CFR55.46(d)(1) which states that “The results of performance tests must be retained for four years after the completion of each performance test or until superseded by updated test results.”</p> <p>The CFR reference allows malfunction tests to be discarded after four years. There is no requirement to maintain performance tests records longer than four years.</p>	<p><del>they have conducted performance testing of the malfunctions listed in the standard, as applicable to the design of the reference plant, at least once in the life of the simulation facility and that the associated test documentation includes the completed test results. If performance testing of a malfunction has been completed more than once, then the licensee need only retain the latest test results. The staff recognizes that simulator malfunction test results may be retained longer than 4 years after the completion of each malfunction test. Therefore, regardless of how long it has been since the malfunction test has been performed, the NRC expects simulation facility licensees to make the results of these malfunction performance tests available for NRC review, either before, or concurrent with, the preparation for each operating test or requalification program inspection.</del></p>

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		performance tests available for NRC review, either before, or concurrent with, the preparation for each operating test or requalification program inspection.		
5	Page 6, Section 2.d under; NEI 09-09, “NRC Acceptance and Endorsement of ANSI/ANS-3.5-2009”	d. In regard to Section 3.4.3.2, “Simulator Scenario-Based Testing,” simulation facility licensees should meet the requirements of the standard with respect to the following type of SBTs for inclusion as simulator performance tests: (1) NRC initial license examination (operating test) scenarios, (2) licensed operator requalification annual examination (operating test) simulator scenarios, and (3) scenarios used for performing applicant control manipulations that affect reactivity to establish eligibility for an operator’s license. All other	Delete “(such as just-in time training and routine plant system and equipment startup and shutdown training)”.  The perceived intent of this sentence was to provide examples when operator and senior operator training simulator scenarios are excluded from SBT for purposes of meeting the standard’s SBT requirements; however, the examples provided within the parentheses is not all inclusive when operator and senior operator training simulator scenarios may excluded from SBT for purposes of meeting the standard’s SBT requirements. It could be perceived by licensees and inspectors that these are the only occasions when operator	d. In regard to Section 3.4.3.2, “Simulator Scenario-Based Testing,” simulation facility licensees should meet the requirements of the standard with respect to the following type of SBTs for inclusion as simulator performance tests: (1) NRC initial license examination (operating test) scenarios, (2) licensed operator requalification annual examination (operating test) simulator scenarios, and (3) scenarios used for performing applicant control manipulations that affect reactivity to establish eligibility for an operator’s license. All other operator and senior operator training simulator scenarios <del>(such as just-in time training and routine plant system and equipment startup and shutdown training)</del> are excluded from SBT for purposes of meeting the standard’s SBT requirements.

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		operator and senior operator training simulator scenarios (such as just-in time training and routine plant system and equipment startup and shutdown training) are excluded from SBT for purposes of meeting the standard's SBT requirements.	and senior operator training simulator scenarios are excluded from SBT for purposes of meeting the standard's SBT requirements, despite the fact that the three requirements are listed in this section.	
6	Page 6, Section 2.e under; NEI 09-09, "NRC Acceptance and Endorsement of ANSI/ANS-3.5-2009"	e. In regard to Section 4.4.3.1, "Simulator Operability Testing," Footnote 6, as referenced to Appendix A, "Guideline for Documentation of Simulator Design and Test Performance," simulation facility licensees should note that Appendix A provides examples that are applicable to Section 4.4.3.1.	Delete this section in its entirety. It does not clarify or add any additional guidance than that already noted in the Standard and could only add to confusion.	<del>e. In regard to Section 4.4.3.1, "Simulator Operability Testing," Footnote 6, as referenced to Appendix A, "Guideline for Documentation of Simulator Design and Test Performance," simulation facility licensees should note that Appendix A provides examples that are applicable to Section 4.4.3.1.</del>
7	Page 6, Section 2.f under; NEI 09-09, "NRC Acceptance and Endorsement of ANSI/ANS-3.5-2009"	f. In regard to Section 4.4.3.2, "Simulator Scenario-Based Testing," simulation facility licensees should also adhere to the NEI standardized approach for the conduct,	Editorial; delete words "other" and "such as that" from the last sentence.	f. In regard to Section 4.4.3.2, "Simulator Scenario-Based Testing," simulation facility licensees should also adhere to the NEI standardized approach for the conduct, performance, and documentation of simulator SBT, as described in NEI

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>performance, and documentation of simulator SBT, as described in NEI 09-09, Revision 1. The NRC expects licensees to perform other simulator performance testing, such as that described in Section 4.4.3.1, “Simulator Operability Testing”; Section 4.4.3.3, “Simulator Reactor Core Performance Testing”, and Section 4.4.3.4, “Post-Event Simulator Testing,” separately and independently from the testing described in Section 4.4.3.2.</p>		<p>09-09, Revision 1. The NRC expects licensees to perform <del>other</del> simulator performance testing, <del>such as that</del> described in Section 4.4.3.1, “Simulator Operability Testing”; Section 4.4.3.3, “Simulator Reactor Core Performance Testing”, and Section 4.4.3.4, “Post-Event Simulator Testing,” separately and independently from the testing described in Section 4.4.3.2.</p>
8	Page 6, Section 2.g under; NEI 09-09, “NRC Acceptance and Endorsement of ANSI/ANS-3.5-2009”	<p>g. In regard to Section 4.4.3.3, “Simulator Reactor Core Performance Testing,” simulation facility licensees should meet the requirements of the standard with respect to real time and the conduct of core evolutions involved. The NRC expects a facility</p>	<p>First sentence:</p> <ol style="list-style-type: none"> <li>1. Add “within the scope of simulation” to be consistent with Section 3.4.3.3 of Standard.</li> <li>2. Delete “with respect to real time”; there are some simulator performance tests</li> </ol>	<p>g. In regard to Section 4.4.3.3, “Simulator Reactor Core Performance Testing,” simulation facility licensees should meet the requirements of the standard within the scope of simulation <del>with respect to real time</del> and the conduct of core evolutions involved. The NRC expects a facility licensee’s plant-referenced simulator to utilize models relating to nuclear</p>

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>licensee's plant-referenced simulator to utilize models relating to nuclear and thermal-hydraulic characteristics that replicate a core load in the nuclear power reference plant. If the plant-referenced simulator is used to meet NRC applicant experience requirements, as described in 10 CFR 55.31(a)(5), then the most recent core load (e.g., the current reference plant core load, or if the reference plant is in a refueling outage, the core load just previous to the outage) in the nuclear power reference plant for which a license is being sought must be utilized.</p>	<p>that would require an eight hour run time (such as a peak xenon test). Simulation facilities appreciate the use of the fast time simulation feature to conduct tests that would require an extensive amount of run time in an age where simulator utilization by the operations training programs is very high.</p> <p>3. Clarify "and the conduct of core evolutions involved". This appears to be an incomplete sentence.</p> <p>The third sentence references "the most recent core load". License classes may run through more than one fuel operating cycle, so reactivity manipulations may be conducted on core loads that precede and follow a refueling outage, therefore, reactivity manipulations may not be performed in the same fuel cycle.</p>	<p>and thermal-hydraulic characteristics that replicate a core load in the nuclear power reference plant. If the plant-referenced simulator is used to meet NRC applicant experience requirements, as described in 10 CFR 55.31(a)(5), then the most recent core load (e.g., the core load(s) that existed during the time of the NRC applicant's initial training program) <del>the current reference plant core load, or if the reference plant is in a refueling outage, the core load just previous to the outage)</del> in the nuclear power reference plant for which a license is being sought must be utilized.</p>

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
			<p>Additional clarification is required in the third sentence taking into account the preceding comment. Consider defining the “most recent core load” as “the core load(s) that existed during the time of the NRC applicant’s initial training program”.</p>	
9	Page 6, Sect 2.g	<p>ANSI 3.5, 2009 section 3.4.3.3 Simulator reactor core performance testing requires that "Simulator reactor core performance testing shall be conducted to confirm that the simulator nuclear and thermal-hydraulic models replicate the reference unit core response within the scope of simulation.</p> <p>Section 4.4.3.3 Simulator reactor core performance testing requires that "Testing shall be performed in accordance with the reference unit procedures and shall be compared and demonstrated to replicate</p>	<p>Issue/Concern; Reactor Core Testing in the plant is very limited depending on whether initial criticality is attained as expected. Additionally, reactor engineering utilizes a reactivity meter to measure reactivity changes. This requirement in the ANSI standard reduces the quality of reactor core testing currently being implemented by most facilities. A reactivity meter does not exist in the simulator modeling which means it is not within the scope of simulation (section 3.4.3.3) and therefore prevents the ability to utilize the reference plants procedures for core testing. These two sections seem to contradict each other when</p>	<p>Recommendation for DRAFT REGULATORY GUIDE DG-1248</p> <p>In regard to 2g, add a statement at the end that says;</p> <p>If the scope of simulation prevents performance of simulator reactor core testing using reference plant procedures as required by section 4.4.3.3 of ANSI 3.5, 2009, then the utility should document an exception to the standard and establish simulator reactor core testing methodologies (including acceptance criteria) that demonstrate the simulator response replicates the response of the reference unit.</p>

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>the response of the reference unit." Additionally, this section requires the simulator to meet the reference unit procedures acceptance criteria.</p>	<p>considering what "within the scope of simulation" actually means.</p>	
10	<p>Page 6, Section 2.h under; NEI 09-09, "NRC Acceptance and Endorsement of ANSI/ANS-3.5-2009"</p>	<p>h. In regard to Section 4.4.3.4, "Post-Event Simulator Testing," simulation facility licensees should meet the requirements of the standard with respect to demonstrating that the plant-referenced simulator performance and response compares favorably to the reference plant's performance and response without significant deviation from the sequence of events for the reference plant event. As a minimum, a licensee should demonstrate on the plant-referenced simulator those reference plant events that result in (1) the automatic initiation of an</p>	<p>Second sentence:</p> <ol style="list-style-type: none"> <li>1. Delete "As a minimum" to place focus on demonstrating simulator performance for items 1 through 4.</li> <li>2. Delete "reference plant events" and "such as" and add "relevant unplanned or unexpected (off-normal) events-deemed appropriate by the facility licensee"; this language provides some degree of flexibility to the licensee and is consistent with the intent of Sections 3.4.3.4 and 4.4.3.4 in the Standard. The items listed in Section 2.h can occur during normal plant evolutions and routine</li> </ol>	<p>h. In regard to Section 4.4.3.4, "Post-Event Simulator Testing," simulation facility licensees should meet the requirements of the standard with respect to demonstrating that the plant-referenced simulator performance and response compares favorably to the reference plant's performance and response without significant deviation from the sequence of events for the reference plant event. <del>As a minimum,</del> a licensee should demonstrate on the plant-referenced simulator those relevant unplanned or unexpected (off-normal) <del>events-reference plant events</del> deemed appropriate by the facility licensee, such as <del>that result in</del> (1) the automatic initiation of an engineered safety system, (2) the manual or automatic trip of the nuclear reactor, (3) a significant <del>unplanned or unexpected</del> reactivity change, and (4) the manual</p>

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>engineered safety system, (2) the manual or automatic trip of the nuclear reactor, (3) a significant unplanned or unexpected reactivity change, (4) the manual or automatic trip of the main turbine-generator while online with the electrical grid, and (5) any other event deemed appropriate by the facility licensee within 60 calendar days following the event to ensure that fidelity is being met and maintained.</p>	<p>surveillance testing, the scope of testing could be very great. Therefore, it should be clarified that the unplanned, unexpected, and off-normal events should be the focus of post event simulator testing.</p> <p>3. Delete item 5 from the list and add the following clarification: "The comparison should be performed and any significant deviations identified within 60 days of the event." This is to clarify that resolutions to noted deviations are not required to be resolved within 60 days; depending on scope of deviation, efforts to resolve could take longer than 60 days.</p>	<p>or automatic trip of the main turbine-generator while online with the electrical grid, <del>and (5) any other event deemed appropriate by the facility licensee within 60 calendar days following the event to ensure that fidelity is being met and maintained.</del> The comparison should be performed and any significant deviations identified within 60 days of the event.</p>
11	Page 6, Section 3 under; "NRC Acceptance and Endorsement of NEI-09-09, Revision 1"	The NRC staff has reviewed NEI-09-09, Revision 1, and finds the implementation guidance an acceptable method for simulation facility licensees to	The reference to ANS-3.5-1998 should be deleted from the second sentence. It implies a "back fit" from the proposed revision 4 of Regulatory Guide 1.149 to a previous edition of	The NRC staff has reviewed NEI-09-09, Revision 1, and finds the implementation guidance an acceptable method for simulation facility licensees to demonstrate their compliance with the requirements of

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>demonstrate their compliance with the requirements of Sections 3.4.3.2 and 4.4.3.2 of ANSI/ANS-3.5-2009 regarding simulator SBT. Therefore, the NRC accepts and endorses NEI-09-09 as an acceptable method for an equitable and consistent approach and methodology for the conduct and documentation of SBT, as described in ANSI/ANS-3.5-2009 (and ANSI/ANS-3.5-1998, which NEI-09-09, Revision 0, supported). Implementation of NEI-09-09, Revision 1, ensures that simulation facility licensees will demonstrate expected plant response to operator input and to normal, transient, and accident conditions to which the simulator has been designed to respond, so that significant control manipulations are completed without</p>	<p>the ANS-3.5 Standard.</p> <p>Delete third sentence in its entirety. The NEI 09-09 document does not, by itself, satisfy the 10CFR55.46 requirements to: (1) demonstrate expected plant response to operator input and to normal, transient, and accident conditions to which the simulator has been designed to respond (10CFR55.46(c)), and (2) that significant control manipulations are completed without procedural exceptions, simulator performance exceptions, or deviation from the approved training scenario sequence (10CFR55.46(c)(2)(ii)). The simulator's testing program as described in Sections 3.4 and 4.4 of the Standard is designed to meet the requirements in 10CFR55.46.</p>	<p>Sections 3.4.3.2 and 4.4.3.2 of ANSI/ANS-3.5-2009 regarding simulator SBT. Therefore, the NRC accepts and endorses NEI-09-09 as an acceptable method for an equitable and consistent approach and methodology for the conduct and documentation of SBT, as described in ANSI/ANS-3.5-2009 <del>(and ANSI/ANS-3.5-1998, which NEI-09-09, Revision 0, supported).</del> <del>Implementation of NEI-09-09, Revision 1, ensures that simulation facility licensees will demonstrate expected plant response to operator input and to normal, transient, and accident conditions to which the simulator has been designed to respond, so that significant control manipulations are completed without procedural exceptions, simulator performance exceptions, or deviation from the approved training scenario sequence.</del></p>

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		procedural exceptions, simulator performance exceptions, or deviation from the approved training scenario sequence.		
12	Page 6, Section 4 under; “Acceptability of Licensee’s Simulation Facility”	Licensees who maintain simulation facilities certified under previous editions of ANSI/ANS-3.5 (-1998, -1993, and -1985) endorsed by the NRC are encouraged to, but are not required to, revise the software and testing documentation to maintain the simulation facility in accordance with ANSI/ANS-3.5-2009. The NRC staff recognizes that it will take some time for these simulation facility licensees to transition to ANSI/ANS-3.5-2009. Therefore, the NRC staff anticipates that simulation facility licensees will voluntarily move to ANSI/ANS-3.5-2009 following the date of the final regulatory	<p>First sentence:</p> <ol style="list-style-type: none"> <li>1. Substitute “testing documentation” with “testing methodology”. It is not perceived that previous simulator documentation would be revised to transition to ANS-3.5-2009.</li> <li>2. The idea that “the NRC encourages simulation facilities to, but do not require simulation facilities to...” and “the NRC staff anticipates that simulation facility licensees will voluntarily move to ANSI/ANS-3.5-2009” appears to be contradictory.</li> </ol> <p>There is a recommendation, followed by a soft requirement; there is direction, but no direction.</p>	<p>4. Acceptability of Licensee’s Simulation Facility</p> <p>Licensees who maintain simulation facilities certified under previous editions of ANSI/ANS-3.5 (-1998, -1993, and -1985) endorsed by the NRC are encouraged to, but are not required to, revise the software and testing <del>documentation</del> methodology to maintain the simulation facility in accordance with ANSI/ANS-3.5-2009. The NRC staff recognizes that it will take some time for these simulation facility licensees to transition to ANSI/ANS-3.5-2009. <del>Therefore, the NRC staff anticipates that simulation facility licensees will voluntarily move to ANSI/ANS 3.5 2009 following the date of the final regulatory</del> guide (e.g., Regulatory Guide 1.149, Revision 4).</p>

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		guide (e.g., Regulatory Guide 1.149, Revision 4).	Recommend either: (1) deletion of last sentence, or (2) absolute direction to the industry regarding transition to one Standard.	
13	Page 6, Section 5, second paragraph under; "Use of Simulation Facility for Multiple Plants"	The NRC will only administer operating tests on a plant-referenced simulator that meets the Commission's requirements, as described in 10 CFR 55.46. In addition, a licensee must request Commission approval if it plans to administer the NRC operating test using other than a -plant-referenced simulator or the plant.	This statement should be applicable to single/multiple unit plants.  Correct typo "plant-referenced".	The NRC will only administer operating tests on a single/multiple plant-referenced simulator that meets the Commission's requirements, as described in 10 CFR 55.46. In addition, a licensee must request Commission approval if it plans to administer the NRC operating test using other than a--plant-referenced simulator or the plant.
14	Page 8, Section D, third paragraph under; "Implementation"	The NRC staff recognizes that a commitment to ANSI/ANS-3.5-2009 is voluntary on the part of simulation facility licensees. Since its last revision to Regulatory Guide 1.149, the NRC staff has worked closely with simulation	The WESTRAIN Simulator Subcommittee disagrees that "such a movement will be seamless and transparent with minimal burden".  See comments associated with Item 4 above.	N/A

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>facility licensees and other interested stakeholders through the NEI LOFG to facilitate voluntary movement to a single industry consensus standard. The NRC has determined that movement to a single consensus standard is in the best interest of simulation facility licensees, as well as NRC inspectors and examiners and the general public. The NRC is confident that such a movement will be seamless and transparent with minimal burden, if any. As a result, NRC review and inspection of plant-referenced simulators for compliance with the requirements of 10 CFR 55.46 will be more uniform and consistently implemented when the staff carries out the Reactor Oversight Process baseline Inspection Procedure, IP-</p>	<p>Producing malfunction test documentation to satisfy Section 2.b will be a significant burden and cost if the licensee will be required to conduct old malfunction tests.</p> <p>Also, additional documentation associated with NEI0909 is considered excessive and an unnecessary burden.</p>	

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		71111.11, "Licensed Operator Requalification Program."		
15	Page 9, 5 <sup>th</sup> paragraph under; "Regulatory Analysis"	Revision of Regulatory Guide 1.149 is necessary for (1) the NRC to endorse the use of ANSI/ANS-3.5-2009 as a technical standard to ensure compliance with the Commission's simulation facility scope and fidelity requirements, (2) simulation facility licensees to voluntarily move to a single consensus standard and carry out its requirements, (3) the NRC to communicate its expectations, and (4) facilitation of a common approach and methodology for conducting and documenting simulator scenario-based performance testing.	Is this revision of Regulatory Guide 1.149 necessary for simulation facility licensees to voluntarily move to a single consensus standard and carry out its requirements?  Item 2 does not meet the intent of DG 1248, whereas the other three items do; delete item 2.	Revision of Regulatory Guide 1.149 is necessary for (1) the NRC to endorse the use of ANSI/ANS-3.5-2009 as a technical standard to ensure compliance with the Commission's simulation facility scope and fidelity requirements, <del>(2) simulation facility licensees to voluntarily move to a single consensus standard and carry out its requirements,</del> (3) the NRC to communicate its expectations, and (4) facilitation of a common approach and methodology for conducting and documenting simulator scenario-based performance testing.
16	Page 10, 1 <sup>st</sup> paragraph under; "Alternative Approaches"	The benefit of updating and revising Regulatory Guide 1.149 is that it would provide guidance to	Revising Regulatory Guide 1.149 will not preclude negative training and inappropriate operator license evaluations.	The benefit of updating and revising Regulatory Guide 1.149 is that it would provide guidance to ensure that nuclear power plant

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>ensure that nuclear power plant simulation facilities used for operator training, license examinations, and applicant experience requirements are maintained in accordance with the industry's most recent consensus standard, which will preclude negative training and inappropriate operator license evaluations. Simulation facilities that meet the minimum scope and fidelity requirements of ANSI/ANS-3.5-2009 must be able to demonstrate, on a continuing basis, compliance with the Commission's simulation facility regulations, as described in 10 CFR 55.46.</p>	<p>Strike this phrase from this paragraph; it appears naïve.</p>	<p>simulation facilities used for operator training, license examinations, and applicant experience requirements are maintained in accordance with the industry's most recent consensus standard, <del>which will preclude negative training and inappropriate operator license evaluations.</del> Simulation facilities that meet the minimum scope and fidelity requirements of ANSI/ANS-3.5-2009 must be able to demonstrate, on a continuing basis, compliance with the Commission's simulation facility regulations, as described in 10 CFR 55.46.</p>
17	Page 10, 2 <sup>nd</sup> paragraph under; "Alternative Approaches"	<p>The impact to the NRC would be the costs associated with preparing and issuing the revised regulatory guide. The impact to the public would be the voluntary costs</p>	<p>The WESTRAIN Simulator Subcommittee believes that it is inappropriate for the NRC staff to "believes that simulation facility licensees would incur little or no cost" (See comments associated with items 4 and 13</p>	N/A

# Palo Verde Comments

## DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>associated with reviewing and providing comments to the NRC during the public comment period. The impact to facility licensees would be the cost of implementing the new standard. The value to the NRC staff and facility licensees would be the benefits associated with enhanced efficiency and effectiveness in using a common guidance document as the technical basis for demonstrating compliance with the Commission's simulation facility scope and fidelity requirements, as described in 10 CFR 55.46, and during other interactions between the NRC and facility licensees. The staff believes that simulation facility licensees would incur little or no</p>	<p>above).</p> <p>The WESTRAIN Simulator Subcommittee agrees that "significant human resource burdens ... are anticipated as a result of moving to one standard."</p> <p>Where is human resource burdens reduced? Transition from 1998 to 2009 requires additional burden for SBT documentation, core performance testing, and post event simulator testing.</p> <p>The WESTRAIN Simulator Subcommittee agrees that there was some burden removed during transition from the ANS-3.5-1985 Standard to the ANS-3.5-1998 Standard.</p>	

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<p>cost (for licensees who have not already moved to ANSI/ANS-3.5-2009, the cost is expected to be minimal, if any, since significant human resource burdens and simulator performance testing time savings are anticipated as a result of moving to one standard, which the proposed guide is advocating).</p>		
18	Page 11 under; "Glossary"	N/A	Add definitions for: (1) replicate, (2) significant deviation, (3) compare favorably, (4) procedural exception.	N/A
19	Appendix B, Item 2	N/A	Please clarify; dos "Simulator initial conditions (IC) agreed with reference plant with respect to reactor status, plant configuration, and system operation" only apply to scenarios associated with reactivity manipulations?	N/A
20	Appendix B, Item 10	SBT conducted in a manner sufficient (i.e., meets requirements of ANSI/ANS-3.5-2009) to	Reference to ANS-3.5-2009 is redundant in this proposed revision 4 to Regulatory Guide 1.149.	SBT conducted in a manner sufficient ( <del>i.e., meets requirements of ANSI/ANS-3.5-2009</del> ) to ensure that simulator fidelity has been

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		ensure that simulator fidelity has been demonstrated and met for this scenario. <i>Note: Attach relevant “as-run” marked-up plant procedures and or procedure portions/pages utilized to support assertion.</i>	Delete reference to ANSI/ANS-3.5-2009.	demonstrated and met for this scenario. <i>Note: Attach relevant “as-run” marked-up plant procedures and or procedure portions/pages utilized to support assertion.</i>
21	Appendix B, Item 11	Modeling and hardware discrepancies identified during the conduct of SBT are documented and entered in accordance with the site simulator configuration management procedures. <i>Note: Discrepancies that directly affect operator response (or action) or expected plant response must be resolved before the SBT test results can be judged as satisfactory.</i>	Regarding the sentence; “Modeling and hardware discrepancies identified during the conduct of SBT are documented and entered in accordance with the site simulator configuration management procedures”...  The term “and entered” is redundant to “documented” in the configuration management process. Strike the phrase “and entered”.	Modeling and hardware discrepancies identified during the conduct of SBT are documented <del>and entered</del> in accordance with the site simulator configuration management procedures. <i>Note: Discrepancies that directly affect operator response (or action) or expected plant response must be resolved before the SBT test results can be judged as satisfactory.</i>
22	Appendix B, Page B-1	<i>The draft regulatory guide includes this appendix so that the public can discern the staff’s acceptance and endorsement of the</i>	In regards to the italicized note at the bottom of Page B-1...  The WESTRAIN Simulator Subcommittee recommends that	N/A

## Palo Verde Comments

### DRAFT REGULATORY GUIDE DG-1248

Item	Reference	DG-1248 Original Text	Comment	Proposed Revision to DG-1248
		<i>Nuclear Energy Institute's (NEI) industry technical guidance document, NEI-09-09, Revision 1. The final guide may or may not include this appendix.</i>	this appendix not be included in final regulatory guide; remove any references to it in the body of the proposed revision to the regulatory guide.	