

RULES AND DIRECTIVES
BRANCH
2016

2016 AUG 19 AM 10:57 ID: 57

PUBLIC SUBMISSION

As of: 8/19/16 10:55 AM
Received: August 19, 2016
Status: Pending_Post
Tracking No. 1k0-8rf0-79gy
Comments Due: September 06, 2016
Submission Type: Web

RECEIVED

Docket: NRC-2016-0133
Dedication of Commercial-Grade Items for Use in Nuclear Power Plants

Comment On: NRC-2016-0133-0001
Dedication of Commercial-Grade Items for Use in Nuclear Power Plants; Draft Regulatory Guide for Comment

Document: NRC-2016-0133-DRAFT-0005
Comment on FR Doc # 2016-16215

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7/08/2016
84 FR 44670
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General Comment

See attached file(s)

Attachments

DG-1292 R2

EPRI Comments on DG 1292

SUNSI Review Complete
Template = ADM - 013
E-RIDS= ADM -03
Add= S. Putilov (5x63)



August 12, 2016
PT-081216-072

Cindy Bladey
Office of Administration
Mail Stop: OWFN-12 H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Docket ID NRC-2016-0133, Comments to Draft Regulatory Guide DG-1292, "Dedication of Commercial-Grade Items for Use in Nuclear Power Plants"

Dear Ms. Bladey:

As an independent, non-profit organization for the benefit of the public, the Electric Power Research Institute (EPRI) appreciates the opportunity to provide comments on Draft Regulatory Guide DG-1292, "Dedication of Commercial-Grade Items for Use in Nuclear Power Plants."

We believe that the attached comments and recommendations will lead to a more technically sound and useful document.

Please do not hesitate to contact me at (704) 595-2854/ cwiegand@epri.com or Marc Tannenbaum at (704) 595-2609/ mtannenbaum@epri.com if you have any questions

Sincerely,

Christopher Wiegand
Plant Engineering Manager, EPRI

PT-081216-072

Attachment: EPRI Comments to Docket ID NRC-2016-0133.

c: Ken Canavan
Marc Tannenbaum

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EPRI Comments on DG-1292, Commercial Grade Dedication Guidance

No.	Affected Section and Page Number	Comment/Basis	Recommendation
1.	Multiple locations, including page 10, References	<p>Multiple locations in the draft guide do not include the current reference number for the EPRI guidance.</p> <p>The correct reference number is 3002002982. Use of the correct reference number will facilitate access to the document and will help avoid inadvertent use of the older version (NP-5652).</p>	<p>Revise reference #6, and in-line references throughout DG-1292, to:</p> <p>"Electric Power Research Institute (EPRI), 3002002982, "Plant Engineering: Guideline for the Acceptance of Commercial-Grade Items in Nuclear Safety-Related Applications: Revision 1 to EPRI NP-5652 and TR-102260," September 2014"</p>
2.	Section B, Page 5	<p>The following sentence in Section B, page 5 does not accurately represent the intent of EPRI 3002002982.</p> <p>"The EPRI report specifies that if absolute assurance of compliance with all applicable requirements of a Code or standard is required, the item should be procured as a basic component."</p> <p>In its correct, complete context, this sentence is part of a paragraph in Section 5.2.2, Page 5-23 of the report that reads:</p> <p>"If absolute assurance of compliance with all applicable requirements of a code or standard is required, the item should be procured as a basic component. <i>If not, and it is possible to dedicate the item based on intended end-use applications, proceed to Step 5.2.3.</i>"</p> <p>Section 5.2.2, Page 5-23 is guidance on how to proceed with the dedication process after deciding the item will be dedicated (instead of being otherwise controlled in accordance with an Appendix B QA program without dedication), and after the dedication process has been started for the item. In this context, the sentence is the first part of a condition that offers the option of dedicating the item for its specific end use application(s).</p> <p>Without including the follow on-sentence, the DG can be misinterpreted as meaning it is not permissible to dedicate an item that must comply with any code or standard – which will restrict the ability to dedicate items for specific end-use applications / safety functions (without certifying to all the requirements of the specification) and restrict the ability to accept items for use using Appendix B quality controls without any dedication.</p> <p>Section 5.2, Page 5-7 (basic description of screening for eligibility sub-process) of the EPRI report includes the following statement that correctly represents the intent of the EPRI report and is appropriate for use in the context of the draft guide:</p> <p>"If the item is not eligible for dedication, it must be procured as a basic component or otherwise controlled in accordance with a 10CFR50, appendix B-compliant QA program."</p>	<p>Revise the sentence in the DG to:</p> <p>"The EPRI report specifies that if absolute assurance of compliance with all applicable requirements of a Code or standard is required, the item should be procured as a basic component <i>or otherwise controlled in accordance with a 10CFR50, appendix B-compliant QA program.</i>"</p>
3.	Section C, Item 1, Page 5	<p>There is a typographical error in the EPRI document number referenced in the following statement in the DG:</p> <p>"Revision 1 of EPRI NP-5652 and TR-102260, in Section I.3 refers to two EPRI guidance documents, NP-7874 "Seismic Technical Evaluation of Replacement Items for Nuclear Power Plants (STERI)" (Ref. 14), and TR 105849, "Plant Support</p>	<p>Revise NP-7874 to NP-7484</p>

EPRI Comments on DG-1292, Commercial Grade Dedication Guidance

No.	Affected Section and Page Number	Comment/Basis	Recommendation
		<p>Engineering: Generic Seismic Technical Evaluations of Replacement Items for Nuclear Power Plants," Revision 1 (Ref. 15).</p> <p>The correct document number is NP-7484.</p>	
4.	Section C, Item 1, Page 5	<p>EPRI takes exception to the following statement in the DG:</p> <p>"The NRC does not find these two EPRI documents to be acceptable for use, and in general does not find the use of generic testing data bases acceptable as a means for maintaining or providing seismic qualification of seismically sensitive replacement components."</p> <p>To EPRI's knowledge, these documents have not been formally reviewed by the NRC nor have any comments been submitted to EPRI.</p>	<p>Delete the following paragraph:</p> <p>"Revision 1 of EPRI NP-5652 and TR-102260, in Section I.3 refers to two EPRI guidance documents, NP-7874 "Seismic Technical Evaluation of Replacement Items for Nuclear Power Plants (STERI)" (Ref. 14), and TR 105849, "Plant Support Engineering: Generic Seismic Technical Evaluations of Replacement Items for Nuclear Power Plants," Revision 1 (Ref. 15). The NRC does not find these two EPRI documents to be acceptable for use, and in general does not find the use of generic testing data bases acceptable as a means for maintaining or providing seismic qualification of seismically sensitive replacement components."</p>
5.	Section C, Item 1, Page 5	<p>The following statement pertains to seismic qualification and is inappropriate for the scope of the DG as it does not benefit the discussion on commercial grade dedication:</p> <p>"The NRC . . . in general does not find the use of generic testing data bases acceptable as a means for maintaining or providing seismic qualification of seismically sensitive replacement components."</p> <p>Regulatory Guide 1.100 addresses the NRC's position on seismic qualification. Including guidance on seismic qualification in a separate location (DG) could result in misunderstanding and misinterpretation.</p>	<p>Delete the following paragraph:</p> <p>"Revision 1 of EPRI NP-5652 and TR-102260, in Section I.3 refers to two EPRI guidance documents, NP-7874 "Seismic Technical Evaluation of Replacement Items for Nuclear Power Plants (STERI)" (Ref. 14), and TR 105849, "Plant Support Engineering: Generic Seismic Technical Evaluations of Replacement Items for Nuclear Power Plants," Revision 1 (Ref. 15). The NRC does not find these two EPRI documents to be acceptable for use, and in general does not find the use of generic testing data bases acceptable as a means for maintaining or providing seismic qualification of seismically sensitive replacement components."</p>
6.	Section C, Item 1, Page 5	<p>The following statement conflicts with IEEE-344 and RG 1.100 and is not technically correct.</p> <p>"The NRC . . . in general does not find the use of generic testing data bases acceptable as a means for maintaining or providing seismic qualification of seismically sensitive replacement components."</p> <p>Qualification involving the use of generic testing data (similarity) is an accepted method of qualification addressed in IEEE Std 344 and NRC RG 1.100.</p> <p>Page 3 of NRC RG 1.100, Revision 3, clearly addresses the use of "actual earthquake experience data from nonnuclear plants located worldwide (e.g., fossil-fueled power plants, substations, petrochemical plants) and existing test experience data from domestic NPPs to evaluate the performance of electrical and mechanical equipment in those facilities to infer the susceptibility of similar NPP equipment to seismic loads." And states that "The SQUG concluded, and the NRC agreed, that the use of experience data was feasible for the purpose of verifying the seismic adequacy of equipment in the older, USI A-46 plants."</p> <p>In addition, use of earthquake experience data for seismic qualification of new and replacement equipment is included in the plant specific SERs closing out the USI A-46 reviews.</p>	<p>Delete the following paragraph:</p> <p>"Revision 1 of EPRI NP-5652 and TR-102260, in Section I.3 refers to two EPRI guidance documents, NP-7874 "Seismic Technical Evaluation of Replacement Items for Nuclear Power Plants (STERI)" (Ref. 14), and TR 105849, "Plant Support Engineering: Generic Seismic Technical Evaluations of Replacement Items for Nuclear Power Plants," Revision 1 (Ref. 15). The NRC does not find these two EPRI documents to be acceptable for use, and in general does not find the use of generic testing data bases acceptable as a means for maintaining or providing seismic qualification of seismically sensitive replacement components."</p>

EPRI Comments on DG-1292, Commercial Grade Dedication Guidance

No.	Affected Section and Page Number	Comment/Basis	Recommendation
		<p>Furthermore, clauses 9 and 10 of IEEE Std 344-2004, accepted for use in NRC RG 1.100, discuss the use of similarity to demonstrate seismic qualification of equipment that is similar to equipment for which performance in testing and in earthquakes has been demonstrated.</p>	
7.	Section C, Item 2, Page 5	<p>EPRI takes exception to following statement regarding four (4) EPRI guidance documents related to digital devices:</p> <p>“The remaining four guidance documents, EPRI 1025283, “Commercial-Grade Digital Equipment for High-Integrity Applications: Oversight and Review of Evaluation and Acceptance Activities” (Ref. .18); EPRI TR-107339, “Evaluating Commercial Digital Equipment for High-Integrity Applications: A Supplement to EPRI Report TR-106439” (Ref. 19); EPRI 1011710, “Handbook for Evaluating Critical Digital Equipment and Systems” (Ref. 20); and EPRI TR-103291 “Handbook for Verification and Validation of Digital Systems” (Ref 21), have not been approved by the NRC as an acceptable approach for meeting an NRC requirement” (sic)</p> <p>DG-1292 includes a statement affirming that EPRI TR-106439 and TR-107330 have been reviewed and endorsed by the NRC.</p> <p>The context in which these two statement are presented conveys a message that the NRC has formally reviewed all six (6) documents, and found two (2) acceptable.</p> <p>To EPRI’s knowledge, these documents have not been formally reviewed by the NRC nor have any comments been submitted to EPRI.</p>	<p>Either delete the following statement:</p> <p>“The remaining four guidance documents, EPRI 1025283, “Commercial-Grade Digital Equipment for High-Integrity Applications: Oversight and Review of Evaluation and Acceptance Activities” (Ref. 18); EPRI TR-107339, “Evaluating Commercial Digital Equipment for High-Integrity Applications: A Supplement to EPRI Report TR-106439” (Ref. 19); EPRI 1011710, “Handbook for Evaluating Critical Digital Equipment and Systems” (Ref. 20); and EPRI TR-103291 “Handbook for Verification and Validation of Digital Systems” (Ref 21), have not been approved by the NRC as an acceptable approach for meeting an NRC requirement.”</p> <p>Or:</p> <p>Revise the statement as follows to clarify the status of the 4 documents that have not been reviewed by NRC:</p> <p>The remaining four guidance documents, EPRI 1025283, “Commercial-Grade Digital Equipment for High-Integrity Applications: Oversight and Review of Evaluation and Acceptance Activities” (Ref. 18); EPRI TR-107339, “Evaluating Commercial Digital Equipment for High-Integrity Applications: A Supplement to EPRI Report TR-106439” (Ref. 19); EPRI 1011710, “Handbook for Evaluating Critical Digital Equipment and Systems” (Ref. 20); and EPRI TR-103291 “Handbook for Verification and Validation of Digital Systems” (Ref 21), have not been <i>reviewed or</i> approved by the NRC as an acceptable approach for meeting an NRC requirement.”</p>