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Ms. Cindy Bladey
Office of Administration
Mail Stop: OWFN-12-H08
U.S. Nuclear Regulatory Commission
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82FR 18018

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Subject: Comments Concerning Draft NUREG-1122, Revision 3, "*Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized Water Reactors*," and Draft NUREG-1123, Revision 3, "*Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Boiling Water Reactors*" (*Federal Register* 82FR18018, dated April 14, 2017, Docket ID NRC-2017-0068)

This letter is being submitted in response to the U.S. Nuclear Regulatory Commission's (NRC's) request for comments concerning draft NUREG-1122, Revision 3, "*Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized Water Reactors*," and draft NUREG-1123, Revision 3, "*Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Boiling Water Reactors*," which was published in the *Federal Register* (i.e., 82FR18018, dated April 14, 2017).

These draft NUREGs provide the basis for development of content valid examinations used for licensing operators at nuclear power plants under the NRC's regulations contained in 10 CFR 55. The examinations developed using the guidance in NUREG-1122 and NUREG-1123, along with NUREG-1021, "*Operator Licensing Examination Standards for Power Reactors*," will sample the topics listed in 10 CFR 55.

Exelon Generation Company, LLC (Exelon) appreciates the opportunity to comment on the subject draft NUREGs and offers the attached comments for consideration by the NRC.

If you have any questions or require additional information, please contact Richard Gropp at (610) 765-5557.

Respectfully,

David P. Helker
Manager, Licensing and Regulatory Affairs
Exelon Generation Company, LLC

Attachment: Comments on Draft NUREG-1122, Revision 3 and Draft NUREG-1123, Revision 3

SUNSI Review Complete
Template = ADM - 013
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Add = D. Moller (dsmm3)

Attachment

Comments on Draft NUREG-1122, Revision 3

and Draft NUREG-1123, Revision 3

Docket ID NRC-2017-0068

Page 1 of 5

Comments on Draft NUREG-1122, Revision 3 and Draft NUREG-1123, Revision 3

The U.S. Nuclear Regulatory Commission (NRC) issued draft NUREG-1122, Revision 3, "*Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized Water Reactors*," and draft NUREG-1123, Revision 3, "*Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Boiling Water Reactors*," for public comment. These draft NUREGs, along with NUREG-1021, "*Operator Licensing Examination Standards for Power Reactors*," provide the basis for development of content valid examinations used for licensing operators at nuclear power plants under the NRC's regulations contained in 10 CFR 55.

Exelon Generation Company, LLC (Exelon) appreciates the opportunity to comment on the draft NUREGs and offers the comments contained in the table below of this attachment for consideration by the NRC.

NUREG-1123, BWR K/A Catalog			
<u>Comment</u>	<u>Page/Section</u>	<u>Issue / Recommended Change</u>	<u>Reason</u>
1	v-vii / Contents, Section 3	Change system titles to Title Case.	To match other sections of Draft NUREG-1123 and Draft NUREG-1122 (PWR K/A Catalog).
2	xi / Summary of Significant Changes Also applies to Draft NUREG-1122.	For Item #6, remove "...and fuel handling categories." (Also refer to Comment 10 below.)	Item #6 incorrectly states "Eliminated RO/SRO Importance Ratings (IRs) and replaced with a single IR EXCEPT for the A2, G, and fuel handling categories." The Fuel Handling System (234000 / 034) has a single IR for all K/As except for A2, similar to other systems.
3	xi / Summary of Significant Changes	Add a period at the end of Item #12.	Punctuation.
4	1-3 / Organization of the Catalog	The second to last paragraph under Section 1.9, Plant Systems, describes the term "Plant Specific," which indicates K/As that do not apply to all plants. Yet the only system that uses this term is the RHR/LPCI system (203000), found on page 3.2-1. Recommend applying this term to all applicable systems, or deleting it from 203000.	Consistency - there are other systems that do not apply to all plants such as High Pressure Coolant Injection (206000), High Pressure Core Spray (209002), Isolation (Emergency) Condenser (207000), Reactor Core Isolation Cooling System (217000), etc.

Comments on Draft NUREG-1122, Revision 3 and Draft NUREG-1123, Revision 3

NUREG-1123, BWR K/A Catalog			
<u>Comment</u>	<u>Page/Section</u>	<u>Issue / Recommended Change</u>	<u>Reason</u>
5	1-6 / Table 2, K/A Stem Statements for Plant Systems Also applies to Draft NUREG-1122.	For K4 Stem Statement, determine whether to use "interlock(s)" or "interlocks." In most cases, the K4 statements in Section 3 use "interlocks." There are 3 exceptions where "interlock(s)" is used: systems 300000, 510000 and 510001.	Consistency. [Note that the other stem statements (K1-K3, K5 and K6) do not use "(s)" for pluralized words (e.g., connections, implications, or relationships).]
6	1-6 / Table 2, K/A Stem Statements for Plant Systems	For K6 Basis, use upper case for "(system)" in the second to last sentence.	Consistency.
7	1-6, 1-7 / Table 2, K/A Stem Statements for Plant Systems Also applies to Draft NUREG-1122.	K/A stem statements in NUREG-1122 and NUREG-1123 are not exactly the same in all cases. Examples include: K1, K4, A1 and A4. Recommend verifying ALL stem statements in both catalogs match word-for-word.	Consistency between BWR and PWR catalogs. Note that one of the goals of the NEI project team was to align the BWR and PWR catalogs...some inconsistencies appear to have occurred.
8	1-9 / Table 4, K/A Stem Statements for E/APEs Also applies to Draft NUREG-1122.	For E/AK3 Basis, add a comma after the word reasons (Basis – Lists the reasons, responses...).	Punctuation.

Comments on Draft NUREG-1122, Revision 3 and Draft NUREG-1123, Revision 3

NUREG-1123, BWR K/A Catalog			
<u>Comment</u>	<u>Page/Section</u>	<u>Issue / Recommended Change</u>	<u>Reason</u>
9	1-9 / Table 4, K/A Stem Statements for E/APEs Also applies to Draft NUREG-1122.	K/A stem statements in Draft NUREG-1122 and Draft NUREG-1123 are not exactly the same in all cases. Examples include: E/AK1, E/AA1, and E/AA2. Recommend verifying ALL stem statements in both catalogs match word-for- word.	Consistency between BWR and PWR catalogs. Note that one of the goals of the NEI project team was to align the BWR and PWR catalogs...some inconsistencies appear to have occurred.
10	1-11 / Table 6, Importance Ratings Also applies to Draft NUREG-1122.	For the fourth bullet under 1.15, General Guidance, remove "and fuel handling" from the first sentence, and delete the second sentence. (Also refer to Comment 2 above.)	The IR column for the Fuel Handling system (234000 / 034) is also in single column format, similar to other systems. Fuel handling is an RO license activity and does have RO associated K/As (i.e., they are not marked N/A in the RO column - there is no RO column). Also refer to K/A G2.1.44, among others.
11	2-1, 2.0 - Generic Knowledge and Abilities Also applies to Draft NUREG-1122.	There is no spacing between individual items, as there was in Revision 2. Recommend adding a line between each item.	Formatting - ease of use.
12	Sections 3 and 4 Also applies to Draft NUREG-1122.	Add page headers to all pages in the Systems and E/APE sections, vice only the first page for each System or E/APE.	This was the format used in Revision 2 and makes the K/A Catalog easier to read/use.

Comments on Draft NUREG-1122, Revision 3 and Draft NUREG-1123, Revision 3

NUREG-1123, BWR K/A Catalog			
<u>Comment</u>	<u>Page/Section</u>	<u>Issue / Recommended Change</u>	<u>Reason</u>
13	Section 3.1, Recirculation System (202001)	Determine what happened to K/As A.17 and A.18 and add them back in, or mark them DELETED, as appropriate.	Per the NEI project team's charter, no K/As were to be renumbered; if K/As were deleted, then the K/A then the number would remain and any new K/As would be added to the list.
14	4.2-16, APE 295007	K/A AA2.03 is listed twice, once as DELETED. Determine if "Bypass valve capacity" should be K/A AA2.04.	Per the NEI project team's charter, no K/As were to be renumbered; if K/As were deleted, then the K/A number would remain and any new K/As would be added to the list.
15	4.2-22, APE 295010	K/A AA2.01 is listed as "A2.01"; change to AA2.01.	Correction.
16	Various Might also apply to Draft NUREG-1122.	Columns are not always aligned...see page 4.2-47 as an example (one of many).	Formatting.

Comments on Draft NUREG-1122, Revision 3 and Draft NUREG-1123, Revision 3

NUREG-1122, PWR K/A Catalog			
<u>Comment</u>	<u>Page/Section</u>	<u>Issue / Recommended Change</u>	<u>Reason</u>
1	3.1-10, System 001	The term "Plant Specific" is not defined in Draft NUREG-1122 (as it is in Draft NUREG-1123) and is only used in one instance - System 001, Control Rod Drive System, A4.04. Recommend defining term and applying it to all applicable systems, or deleting it from 001/A4.04.	Consistency and accuracy between BWR and PWR catalogs.
2	3.7-16, 072 - ARM Area Radiation Monitoring System	A2 Ability to (a) predict the impacts of the following on the Area Radiation Monitoring System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: A2.01 Area radiation monitor components Recommend changing A2.01 to "ARM component failures" (compare to System 073 - PRM, A2.01 on page 3.7-18).	Existing text appears to be missing information needed to qualify impact.