

Enclosure 3: Response to NEI 07-01 RAI/NEI 07-01

Response to NRC Questions / Issues / Concerns dated July 2, 2009

July 21, 2009

#	EAL	QUESTION / ISSUE / CONCERN	Response
1	N/A	<p>In the response to RAI #3, it was stated “The failure mechanism for loss of indication for both a digital or non-digital indication and monitoring system is loss of DC power which is addressed by CU7, Unplanned Loss of Required DC power for 15 minutes or longer.”</p> <p>Provide the failure mode analysis for the digital I&C system to be installed at the AP1000 and ESBWR plants, as well as their applicable Technical Specifications, to support your statement that the failure mechanism is bounded by CU7.</p> <p>Provide the failure mode analysis and applicable Technical Specifications to support your statement that a loss of the non-digital indication and monitoring systems is bounded by CU7.</p> <p>Develop EALs that are equivalent to proposed SA4 and SS6 for cold, refuel, or defueled operating modes.</p>	<p>The following EAL’s were added to the Cold Shutdown section:</p> <p>CU7: Unplanned partial loss of indicating, monitoring and control functions.</p> <p>CA7: Inability to monitor and control the plant</p>
2	N/A	<p>In the response to RAI #9, the 1st paragraph of Section 5.3 was revised instead of deleting it as requested by the staff.</p> <p>The basis for the staff’s RAI is that new reactor applications, that will use NEI 07-01 in the development of the emergency action levels, must adhere to the presentation method as proposed in NEI 07-01 if these new reactor applicants are choosing to commit to NEI 07-01 versus providing a complete detailed set of emergency action levels with their new reactor applications. For new reactor applicants choosing to commit to NEI 07-01 versus providing a complete and detailed set of EALs in their new reactor application, the staff’s expectation is that this guidance will be applied exactly as presented in NEI 07-01 with applicable site-</p>	<p>The first paragraph of Section 5.3 “The guidance presented....at the option of the utility” was stricken from the current draft dated July, 2009.</p>

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		<p>specific information developed as directed by the applicable Developer Note.</p> <p>Explain how maintaining this paragraph as proposed in your response to RAI #9 will provide sufficient specificity to allow the staff to reach a reasonable assurance finding for new reactor applications committing to NEI 07-01.</p>	
3	N/A	<p>In the response to RAI #10, you stated in part, "Not including definitions will help ensure consistency between the Security Plan and Emergency Plans should subsequent definition changes be made to these terms."</p> <p>The basis for the staff's position is that incorporation of common terminology throughout the nuclear industry is advantageous and is expected, particularly for the definition of terms used for non-design related issues such as Security. Regardless of their specific use in NEI 07-01, it is expected that definitions be consistent in all endorsed EAL guidance documents unless excluded by applicable design considerations.</p> <p>The staff considers the following definitions important for implementation in NEI 07-01, in addition to the definitions already proposed: (affecting) safe shutdown, bomb, civil disturbance, extortion, sabotage, and strike action.</p>	<p>The following definitions were added to the current draft dated July, 2009:</p> <ul style="list-style-type: none"> • (affecting) safe shutdown, • bomb, civil disturbance, • extortion, • sabotage, and • strike action.
4	AU2	<p>In the response to RAI #13, question 2, you stated that threshold #1.b (AP1000) was modified so that a Developer Note is no longer required.</p> <p>However, the proposed AU2 AP1000 threshold 1.b still has a site specific tag. Explain or correct the inconsistency, and provide more detail in the Developer Note if the site specific tag is maintained.</p> <p>In addition, explain how a Refueling Bridge 'Portable' Monitor will</p>	<p>A developer note was added for the site specific tag for the Refueling Bridge Portable Monitor.</p> <p>The Refueling Bridge Portable Monitor would only be installed on the refueling bridge during refueling mode only. This condition was noted in the EAL and a discussion placed in the Basis section.</p>

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		be acceptable as an EAL threshold for AU2. Is it required in all operating modes? Provide the documentation that details this requirement.	
5	AA2	<p>In the response to RAI #15, question 3, you stated that a Developer Note for threshold #2 (AP1000) was provided. However, the Developer Note that is still there is unacceptable as it does not clearly describe how this site specific information will be developed. Provide more detail in the Developer Note if the site specific tag is maintained</p> <p>In addition, explain how a Refueling Bridge 'Portable' Monitor will be acceptable as an EAL threshold for AU2. Is it required in all operating modes? Provide the documentation that details this requirement.</p>	<p>A developer note was added for the site specific tag for the Refueling Bridge Portable Monitor.</p> <p>The Refueling Bridge Portable Monitor would only be installed on the refueling bridge during refueling mode only. This condition was noted in the EAL and a discussion placed in the Basis section.</p>
6	CS1	<p>In the response to RAI #24, question 1, the threshold value was changed to an actual value rather than "offscale low." This is an acceptable approach; however, the logic between the two instruments was also changed from an "OR" to an "AND."</p> <p>Explain why this logic was changed with no justification provided to the staff, provide justification in support of this change, or correct the discrepancy.</p> <p>Note that the equivalent threshold in the Fission Barrier Matrix is an "OR" logic.</p>	<p>The referenced logic in CS1 was changed from AND to OR.</p>
7	CG1	<p>In the response to RAI #25, question 1, the threshold value was changed to an actual value rather than "offscale low." This is an acceptable approach; however, the logic between the two instruments was also changed from an "OR" to an "AND."</p> <p>Explain why this logic was changed with no justification provided to the staff, provide justification in support of this change, or</p>	<p>The referenced logic in CG1 was changed from AND to OR.</p>

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		<p>correct the discrepancy.</p> <p>Note that the equivalent threshold in the Fission Barrier Matrix is an "OR" logic.</p>	
8	SS6	In the response to RAI 39, question 2, it was stated that the developer information was incorporated into the Basis. However, this was not actually done. The actions from your RAI response need to be completed.	SS6 was renumbered as SS7 and the basis information that was located in the Developer Section was relocated to the Basis section.
9	CU3 CU7 CA3 SU1 SA1 SS1 SS3	<p>In response to RAIs 40, 42-45, it was stated that if there was power on the DC buss there was power on the UPS buss.</p> <p>Explain why the EAL thresholds are not limited to the UPS busses or develop an EAL that captures loss of the inverters.</p> <p>In addition, explain why CU3 and SU1 are not worded the same and why the cold equivalent to SS3, CU7, is two classifications lower.</p>	<p>Reference to a loss of power to the UPS busses was added to CA3 and SS1.</p> <p>All electrical EALs were checked for consistent wording and modifications made where appropriate.</p> <p>Cold tab ICs were modified so that the Cold equivalent IC is either:</p> <ul style="list-style-type: none"> • At the same level as the "S" tab IC, or • Only one classification level lower in the "C" tab. <p>Electrical EALs now follow a degradation sequence of:</p> <ol style="list-style-type: none"> 1. Safety related DC batteries not being charged for greater than XX minutes. 2. Loss of required DC power or loss of power to UPS Busses. <p>An IC for loss of electrical power in Cold Shutdown that results in a loss of forced circulation is still maintained. The IC was renumbered CA2.</p>