

**Palo Verde Emergency Plan Change to Implement NEI 99-01 Revision 5 EALs
NRC Request for Additional Information (RAI)
TAC Nos. MD9642, MD 9643 and MD 9644**

RAI #	EAL	Question
GENERIC		<p>It is expected that licensees adhere to endorsed guidance, particularly for Initiating Conditions and Definitions, with no differences or deviations other than those related to a licensee's particular design. This is to ensure regulatory stability of standard EAL schemes to NRC reviewed and endorsed guidance with no non-design related deviations and little to no differences.</p> <p>This also ensures that, as stated in 10 CFR 50.47(b)(4), licensees implement a "...standard emergency classification and action level scheme...."</p> <p>While the NRC is not enforcing strict verbatim compliance with the endorsed guidance, where applicable, the NRC will be pointing out areas where we expect compliance with the endorsed guidance to ensure implementation of a standard scheme. This is primarily based upon industry and NRC experience with issues related to the particular EAL.</p>
BASES INFORMATION		<p>Staff has noted discrepancies between the <u>proposed</u> Bases Information wording and the <u>endorsed</u> Bases Information wording. Incorporate the endorsed wording to ensure a standard emergency classification and action level scheme or provide detailed justification for not doing so in each case.</p>
1	SECT. 4.4	<p>Add the definition for "Affecting Safe Shutdown" to ensure compliance with the standard emergency classification and action level scheme.</p>
2	SECT. 4.4 HU-1 HU-2 HA-1 HA-2	<p>The term "power block" includes structures, systems or components that contain equipment necessary for safe operation and /or shutdown of the reactor. The EALs in which this term is used request a site specific list of structures or areas that contain safety systems, or components and functions required for safe shutdown. Provide a site specific list of areas required for safe shutdown only for each EAL consistent with NEI 99-01 R5.</p>
3	RU1.1 RA1.1 RS1.1 RG1.1	<p>Discuss how the radiation monitors listed could be used to detect monitored non-routine release pathways (e.g., primary-to-secondary leaks). As appropriate, include any additional radiation monitors to the requisite list for each EAL specified.</p>
4	RA1 RU1	<p>For a zero discharge plant, it is expected that an EAL for liquid release be developed. Provide additional justification for its exclusion or develop an EAL to ensure compliance with the standard emergency classification and action level scheme.</p>
5	RA3	<p>Explain the basis for adding the Remote Shutdown Panel, TSC, SAS, and the EOF to this EAL. Are these areas requiring continuous occupancy that, if evacuated, would impede operation of systems required to maintain plant safety functions or perform a safe shutdown? Fully justify their inclusion or remove.</p>
6	RU2	<p>For EAL 1.b.: Do all of these bullets need to be applicable, or any? Staff expects it to be 'any'. Justify and/or revise as applicable.</p>

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7	CS1	The table in Enclosure 4, "Deviation and Difference Justifications", column 4, "Justifications", states that 101 ft. 4 in. is centerline of the loop and the level where SDC starts experiencing loss of suction affecting decay heat removal capability.... However, Attachment 2, "Cold Conditions RCS Levels states that 101 ft. 6 in. is 2 inches above the RCS hot leg centerline and is the minimum level for mid-loop operations. Clarify whether or not 101 ft. 4 in. is the correct level resulting in a loss of shutdown cooling. If any changes are warranted, revise as applicable.
8	CG1 CS1 (Q3 ONLY)	<ol style="list-style-type: none"> 1. Provide additional explanation regarding the local gage glass. Where is this located? Does it actually have coolant in it? How is it applicable to this EAL? 2. Is the stated value within the calibrated range of the instrumentation? How will it be differentiated from being offscale low? 3. Where is the expected rad monitor threshold? It is expected that the conditions intended to be addressed with an applicable rad monitor value(s) be captured in this EAL.
9	CA1	The value in threshold 1 is not the same as from CS1, yet they are the same value in your EALs. Explain this discrepancy from the standard emergency classification and action level scheme or revise accordingly.
10	CA3	The standard emergency classification and action level scheme has a paragraph from the bases that needs to be in this EAL (specifically paragraph 2). Please justify its removal or return it to the EAL.
11	CA4	Is the 10 psi value within the calibrated range of the instrument used? What is the lowest scale value?
12	CU2	Can you measure/monitor RCS water level below the Reactor Vessel flange? If not, why is this an acceptable threshold?
13	CU6 MU6	<ol style="list-style-type: none"> 1. Is the two-way radio, and sound powered phone system, a viable, routine communication method in the plant? 2. How is the sound powered phone system tested to ensure it is a viable communication method? 3. How do the Ringdown Circuits notify the State and Counties as well as the NRC? Is it tested? 4. Explain how the NAN works, and how it notifies the State and Counties as well as the NRC? Is it tested?
14	CU8 MU8	Why was "...resulting in an inadvertent criticality" added to this EAL?

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15	FB MATRIX	<ol style="list-style-type: none"> 1. FC Barrier – PL3.A, and Cont Barrier - PL2.B.b: In other EALs, the value 99'7" was used to represent this expected value. Explain why a different value was used in this case. 2. General: Discuss whether your site uses CSFSTs or an alternate means of monitoring critical safety functions similar to the equivalent indication of a CSFST. Justify why the CSFST information or similar, alternate means would not be included in the Fission Product Barrier matrix. 3. RCS Barrier – PL1.A: Why is the site specific value not listed here, and why is this not for 1 charging pump? 4. Cont Barrier – L4.b: Explain why "...signal" is not added to the threshold as expected with the endorsed guidance. Revise to ensure consistency with standard emergency classification and action level scheme.
16	HA1 HU1 (Q2 ONLY)	<ol style="list-style-type: none"> 1. How is 1a determined? All within the Control Room? 2. Is the 100 mph value measurable on the instrumentation used for its determination?
17	HU4	Listing the applicable events from the Security Contingency Plan is not warranted as it is potentially 'official use only' information. Remove from this information from the EAL.
18	MG1	Considering your SBO analysis in your FSAR and in RG 1.155 states 4-hours, justify why 4.5-hours is appropriate for your timing criteria.
19	MG2 (Q1, Q2) MS2 MA2	<ol style="list-style-type: none"> 1. Why do you not have a power value as an indication of being shutdown? 2. Is "Plant Protection System failed..." equivalent to automatic trip? Revise to ensure compliance with the standard emergency classification and action level scheme (IC, EAL, and Basis). 3. Only the action taken from the reactor control console applies to this EAL, not all actions available in the Control Room to shutdown the plant. Revise to ensure compliance with the standard emergency classification and action level scheme (IC, EAL, and Basis). 4. Why was "reactor power is dropping" added to MA2, particularly since it is not part of MS2 or MG2 and is not part of the standard emergency classification and action level scheme?
20	MS6 MA4 MU3 (Q1)	<ol style="list-style-type: none"> 1. How did you determine that "...4 of the following..." is equivalent to the standard emergency classification and action level scheme? 2. It is expected that EAL 1.b uses the defined term "significant transient" rather than the list you provided. Revise to ensure compliance with the standard emergency classification and action level scheme (IC, EAL, and Basis).
21	MA4 MU3	Add the word "Unplanned" to the EAL threshold as stated in the endorsed standard emergency classification and action level scheme.

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22	MU4	Explain why you have not incorporated a threshold using existing radiation monitoring, or equivalent, as expected in the endorsed standard emergency classification and action level scheme.