

From: Thomas Alexion
To: GUYNN, MILTON F; LEAVINES, JOSEPH W
Date: 6/23/04 4:17PM
Subject: EAL RAIs for GG and RB

Milton, Joseph,

See the attached files.

Tom

CC: ENGLAND, LESLEY A; HAYES, CURTLEY C

docs. 50-416 + 50-468

Mail Envelope Properties (40D9E55F.671 : 0 : 20628)

Subject: EAL RAIs for GG and RB
Creation Date: 6/23/04 4:17PM
From: Thomas Alexion

Created By: TWA@nrc.gov

Recipients	Action	Date & Time
entergy.com	Transferred	06/23/04 04:17PM
CHAYES CC (HAYES, CURTLEY C)		
JLEAVIN (LEAVINES, JOSEPH W)		
LENGLAN CC (ENGLAND, LESLEY A)		
MGUINN (GUINN, MILTON F)		

Post Office	Delivered	Route
		entergy.com

Files	Size	Date & Time
MESSAGE	714	06/23/04 04:17PM
GG.EAL.RAI.0604.wpd	60205	06/23/04 01:55PM
RB.EAL.RAI.0604.wpd	62180	06/23/04 02:03PM

Options

Auto Delete: No
Expiration Date: None
Notify Recipients: Yes
Priority: Standard
Reply Requested: No
Return Notification: None

Concealed Subject: No
Security: Standard

To Be Delivered: Immediate
Status Tracking: Delivered & Opened

REQUESTS FOR ADDITIONAL INFORMATION (RAIs)
REGARDING ADOPTION OF NEI 99-01, REVISION 4
FOR GRAND GULF NUCLEAR STATION, UNITS 1
DOCKET NUMBER 50-416

By letter #GNRO-2003/00067, dated December 16, 2003 (ML033510722), Entergy Operations, Inc. submitted proposed changes to the emergency action levels (EALs) for Grand Gulf Nuclear Station (GGNS), Unit 1. This submittal revises the GGNS EALs from the current NUREG-0654, Appendix 1 scheme to NEI 99-01, Revision 4.

The NRC staff performed a review on the proposed EAL Matrix (Attachment 3), EAL Basis (Attachment 4), and Plant-Specific Correlations, Differences, Deviations and Justification (Attachment 5). Proposed changes to the GGNS FSAR, contained in Attachments 1 and 2, were not included as part of the NRC staff's review.

The NRC staff has the following questions related to this submittal:

General Comments:

1. 10 CFR 50, Appendix E -- Section IV.B (Assessment Actions) states, "...emergency action levels shall be discussed and agreed on by the applicant [*licensee*] and State and local governmental authorities, and approved by NRC." (Italics added) Submittal cover letter reflects that these changes have been reviewed and approved by the States of Mississippi and Louisiana, and local government authorities. Provide documentation of when these discussions occurred and agreement by the State and local governmental authorities on the implementation of the proposed EAL changes based on NEI 99-01, Revision 4. Specific reference needs to be made regarding State and local concurrence for any proposed changes that would require either a higher or lower classification than that designated in the NEI 99-01 guidance.
2. Provide update to Attachment 5 (Plant Specific Correlations, Differences, Deviations and Justifications), based on an evaluation of changes proposed to NEI 99-01 guidance, to ensure that any deletions to NEI 99-01 Initiating Condition (IC) statements, example EALs criterion and basis, or significant content changes (other than format, nomenclature, simple terminology or system names, etc.) that may impact intent or thresholds established or guidance provided in NEI 99-01, are listed as deviations. In addition, provide site-specific technical justification for any deviations, as appropriate. (Specific examples are listed under "Specific Comments", but are not all inclusive.)
3. Provide a simplified drawing or schematic illustrating unit auxiliary and start-up transformers, and describe the inter-relationship regarding conditions needed for a loss of off-site power and the ability of emergency diesel generators to supply on essential busses.
4. Provide a copy, or include a detailed description in Attachment 4, of calculations used to determine effluent monitor thresholds under AG1, AS1, AA1 and AU1, and specify any deviations in Attachment 4 from guidance contained in Appendix A to NEI 99-01 (Basis for Radiological Effluent Initiating Conditions).

Specific Comments:

1. AU1 (corresponds to NEI 99-01, AU1)
AA1 (corresponds to NEI 99-01, AA1)
 - a. Licensee applies EAL 1 only to liquid releases. Identify as a deviation in Attachment 5 and provide technical justification, or provide proposed change to comply with NEI 99-01, AU1 (AA1) / EAL 1 wording.
 - b. Licensee applies EAL 2 only to gaseous releases and does not provide monitor thresholds for an inadvertent liquid releases that might occur outside of a planned discharge. Identify as a deviation in Attachment 5 and provide technical justification, or provide proposed change to comply with NEI 99-01, AU1 (AA1) / EAL 2 wording.
2. AA1 (corresponds to NEI 99-01, AA1)

The deviation using a threshold of 20 times ODCM limit appears justified; however, as part of response to General Comment #1, describe methodology used to ensure consistency with NEI 99-01, AU1/AA1 →AS1/AG1 and Appendix A guidance. Specifically evaluate calculations against those proposed by River Bend Station (RBS), which uses 200 times TS / ODCM limit as threshold.
3. AA2 (corresponds to NEI 99-01, AA3)
 - a. Describe the methodology used for determining areas requiring continuous occupancy to maintain plant safety functions in EAL 1. Specifically, provide justification for not including other control stations that may be manned continuously (i.e., per NEI 99-01 AA3 Basis, the radwaste control room and central alarm station). In addition, describe how these areas requiring continuous occupancy correlate to those identified by other Entergy stations under their respective NEI 99-01 submittals.
 - b. Provide technical rational in licensee Basis for selection of ≥ 80 R/hr threshold in EAL 2. Describe why threshold would not “impede” operator access based on NEI 99-01 Basis guidance, and how threshold correlates to station normal occupational guidelines and limits, versus emergency access under EOPs. In addition, describe how this threshold correlates to those identified by other Entergy stations under their respective NEI 99-01 submittals.
 - c. Licensee EAL 2 criteria states that “access is required.” Per NEI 99-01 guidance, access does not need to be required, but rather access to areas requiring infrequent access to maintain plant safety functions would be impeded. Provide proposed change to comply with NEI 99-01 guidance.
4. AA3 (corresponds to NEI 99-01, AA2)
 - a. IC statement in Attachments 3 and 5 state, “...outside the RPV”. However, Attachment 4 states, “...outside the reactor vessel.” Provide proposed change to address inconsistency in terminology.

- b. Under EAL 1, licensee included qualifier, “potential spent fuel damaging event.” Describe the criteria that will be used by licensee, in addition to a valid radiation monitor alarm, to determine when qualifier is met. In addition, describe how this threshold correlates to those identified by other Entergy stations under their respective NEI 99-01 submittals.
 - c. Describe how radiation monitors proposed in licensee EAL 1 correlate to radiation monitor locations listed in NEI 99-01 AA2 / EAL 1 criterion.
 - d. Identify revisions to licensee EAL 2 as a deviation to NEI 99-01 AA2 / EAL 2 criterion in Attachment 5. Clarify whether a method may be available during refueling outages where level can be monitored or alarm capability provided.
5. AS1 (corresponds to NEI 99-01, AS1)
AG1 (corresponds to NEI 99-01, AG1)
- a. Use of qualifier, “using actual meteorology,” in IC statement is inappropriate based on calculation of effluent monitor thresholds per NEI 99-01 AS1(AG1) / EAL 1, which requires the use of annual average meteorology. Provide proposed change to comply with NEI 99-01 guidance.
 - b. Monitor readings are intended to be calculated based on exceeding IC limit for each release monitor. Assessment of release from multiple release points would be provided via dose projection. Provide radiation monitor thresholds for effluent release points reflecting calculation methodology described in NEI 99-01 AS1 and Appendix A for exceed IC limit on each respective release point. In addition, describe how these thresholds correlate to those identified by other Entergy stations under their respective NEI 99-01 submittals.
 - c. Provide proposed change for licensee EAL 1 to address NEI 99-01, AS1(AG1) / EAL 4 criteria for field survey results (i.e., closed window dose rates exceeding 100 mR/hr (AS1) / 1000 mR/hr (AG1) expected to continue for more than one hour, OR sample analysis indicate thyroid CDE of 500 mR/hr (AS1) / 5000 mR/hr (AG1) for one hour one inhalation).
6. FC1 (corresponds to NEI 99-01, Table 5-F-2: Fuel Clad Barrier Example EAL #1)
 Provide statement under justification in Attachment 5 that supports use of units in “uCi/ml” as equivalent to NEI 99-01 threshold in “Ci/gm”.
7. FC2 (corresponds to NEI 99-01, Table 5-F-2: Fuel Clad Barrier Example EAL #2)
 Licensee threshold for a LOSS and Potential LOSS incorrectly states that “reactor water level cannot be restored” above specific threshold. Per NEI 99-01, exceeding threshold alone is sufficient to consider either a loss or potential loss of fuel clad barrier. Provide proposed changes to comply with NEI 99-01 guidance of “Level LESS THAN (site-specific) value.”

8. **FC3 (corresponds to NEI 99-01, Table 5-F-2: Fuel Clad Barrier Example EAL #3)**
 - a. NEI 99-01 Basis guidance states that reading should indicate 300 uCi/gm I-131 or the calculated concentration equivalent to the clad damage used in FC1. NEI 99-01, Fuel Clad Barrier Example EAL #1, further states that value corresponds to "less than 5% fuel clad damage"; however, licensee FC3 Basis in Attachment 4 states "approximately 5%". Provide proposed change to Attachment 4 to reflect NEI guidance on basis for EAL threshold. In addition, discuss rationale for not including CAUTION statement from NEI 99-01 regarding effects of shine.
 - b. Provide reference in Attachment 4 to site-specific calculations performed to determine 5,000 R/hr threshold. In addition, provide a copy of calculations for review.
9. **FC4 (corresponds to NEI 99-01, Table 5-F-2: Fuel Clad Barrier Example EAL #4)**

Provide technical justification that "Main Steam Line Radiation levels > Hi-Hi Alarm Set Point" is equivalent to 300 uCi/gm dose equivalent I-131, which serves as the basis for fuel clad barrier LOSS due to primary coolant activity (Example EAL #1) and drywell radiation monitoring (Example EAL #3).
10. **RC1 (corresponds to NEI 99-01, Table 5-F-2: RCS Barrier Example EAL #1)**

Addition of qualifier, "...with indications of a leak in the drywell," is not provided as a deviation. Identify as a deviation in Attachment 5.
11. **RC2 (corresponds to NEI 99-01, Table 5-F-2: RCS Barrier Example EAL #2)**
 - a. Licensee threshold for a LOSS incorrectly states that "reactor water level cannot be restored" above specific threshold. Per NEI 99-01, exceeding threshold alone is sufficient to consider a loss of the fuel clad barrier. Provide proposed changes to comply with NEI 99-01 guidance of "Level LESS THAN (site-specific) value."
 - b. Licensee states in Attachment 5 that qualifier, "with indications of a leak in the drywell," was added to ensure consistency with RCS Barrier EAL 1 (Drywell Pressure). This application is incorrect, since LOSS criterion is intended to stand alone for classifications purposes. RPV Level reaching TOAF is intended to cover scenarios that result not only due to an inventory loss, but as a result of a loss of makeup that would lead to core uncover. Provide proposed change to remove qualifier, "with indications of a leak in the drywell."
 - c. In Attachment 5, under differences, the licensee incorrectly lists "-192 in. (MSCRWL)" as threshold for barrier LOSS. This is inconsistent with threshold of "-162 in. (TOAF)" used in Attachments 3 and 4, and NEI 99-01 guidance. Provide proposed change to address inconsistency and comply with NEI 99-01 guidance.
12. **RC3 (corresponds to NEI 99-01, Table 5-F-2: RCS Barrier Example EAL #3)**
 - a. NEI 99-01 Basis for RCS Leak Rate specifically states "[a]n unisolable main steam line (MSL) break." Identify as a deviation in Attachment 5 and provide justification for including an RCIC steam line break as a RCS barrier LOSS. In addition, provide site-specific indication of an isolable main steam line break to comply with NEI 99-01 guidance.

- b. Provide basis for listing “MSL Pipe Tunnel Temp” and “MSL Rad Monitor” as criteria for a “Potential LOSS” when this appears to be in conflict with proposed licensee “LOSS” criteria due to a MSL or RCIC steam line break.
 - c. Identify as deviation and provide technical justification for removing NEI 99-01 qualifier “inside drywell” under 1st Potential Release for RCS leakage greater than 50 gpm.
 - d. Under 2nd Potential Loss criteria, licensee inserts qualifier “with confirmed Reactor Pressure Boundary leakage in the area,” rather than NEI 99-01 criteria of “unisolable primary leakage outside drywell.” Licensee change is inconsistent with NEI 99-01 guidance where area and temperature levels are used to confirm a leak outside drywell (containment). Provide proposed change to comply with NEI 99-01, RCS Barrier Example EAL #3 criterion.
 - e. In Attachment 5, under EAL #3, the licensee does not address 2nd Potential LOSS criteria as listed in Attachments 3 and 4. Provide proposed change to address inconsistency.
13. **RC?? (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #4)**
Provide further technical justification for elimination of drywell (containment) radiation monitor threshold based on applicability of other BWR-6 stations, which have included drywell (containment) radiation monitor in NESP-007 or proposed NEI 99-01 EALs. Clarify why threshold cannot be calculated based on RCS leakage with normal RCS coolant activity (i.e., value calculated would be less than radiation monitor reading recorded during normal plant operation).
14. **RC4 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #5)**
Describe in Attachment 4 the justification for why a stuck open relief valve alone, without a corresponding increase in Suppression Pool bulk temperature approaching allowable Technical Specification limits or abnormal coolant activity, provides sufficient technical justification to warrant an Alert declaration.
15. **PC1 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #1)**
- a. Licensee does not address NEI 99-01 LOSS criteria, “Drywell pressure response not consistent with LOCA conditions,” nor identifies as a deviation in Attachment 5. This criteria is intended to address a condition were a loss of drywell (containment) exists at the time of a LOCA where pressure does not increase as expected. Provide proposed change to comply with NEI 99-01 guidance based on pressure in containment per Mark III design.
 - b. Use of 22 psig Containment pressure is inconsistent with NEI 99-01 criterion submitted by Industry and approved by NRC under associated safety evaluation. Provide proposed change to comply with NEI 99-01 criterion reflecting a potential loss of primary containment based on design pressure (15 psig).
16. **PC3 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #1)**
Per NEI 99-01 guidance, a Potential LOSS of primary containment is appropriate when an explosive mixture exists (above deflagration limits), regardless of hydrogen ignitor status. Provide proposed change to comply with NEI 99-01 guidance.

17. **PC4 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #3)**
- a. NEI 99-01 criterion was not intended to consider the Primary Containment Barrier lost based on a failure to isolate alone. Identify as deviation in Attachment 5, why licensee did not include NEI 99-01 qualifier, "AND downstream pathway to the environment exists," under 1st LOSS criterion and provide justification for consideration.
 - b. Under 2nd Loss criterion, licensee inserts qualifier "with confirmed Reactor Pressure Boundary leakage in the area," rather than NEI 99-01 criteria of "unisolable primary leakage outside drywell." Licensee change is inconsistent with NEI 99-01 guidance where area and temperature levels are used to confirm a leak outside drywell (containment). Provide proposed change to comply with NEI 99-01 guidance.
 - c. In Attachment 5, under EAL #4 description, the licensee does not list 3rd LOSS criterion (unisolable primary leakage outside drywell/containment), which is contained in Attachments 3 and 4. Provide proposed change to address inconsistency.
18. **PC5 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #4)**
Provide rationale in Attachment 4 consistent with NEI 99-01 guidance for drywell radiation monitor reading (i.e., clad damage of 20%). In addition, provide a copy of calculations for review.
19. **PC?? (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #5)**
Provide discussion in Attachment 5 of evaluation performed to identify other site-specific indications of a loss or potential loss of the Containment Barrier per NEI 99-01 guidance.
20. **HU1 / EAL 2 (corresponds to NEI 99-01, HU4 / EAL 2)**
Licensee EAL 2 defines a Site Security Code YELLOW as "an armed adversary attempting to or has entered company property." NEI 99-01 guidance states, "Security events as determined from site-specific Safeguards Contingency Plans," which per the Attachment 4 Basis discussion includes sabotage, hostage / extortion, civil disturbance, and strike action. Provide proposed change to EALs to comply with NEI 99-01 guidance.
21. **HU3 / EAL 2 (corresponds to NEI 99-01, HU1 / EAL 2)**
HA4 / EAL 2 (corresponds to NEI 99-01, HA1 / EAL 2)
Provide further justification why wind speed defined under FSAR design tornado should not be used to meet NEI 99-01 criteria for high winds. Describe at what recorded wind speed would a tornado exist.
22. **HU3 (corresponds to NEI 99-01, HU1)**
- a. Provide further justification why wind speed, defined under FSAR design tornado, should not be used to meet NEI 99-01 guidance. If change retained, identify deletion of high winds from licensee EAL 2 criteria as a deviation in Attachment 5.
 - b. Provide proposed change to licensee EAL 4 to define "damage" in accordance with NEI 99-01, Section 5.4 definition of "visible damage".

- c. Describe evaluation performed to identify site-specific phenomena (i.e., low/high river level or other FSAR external hazards, etc.). Provide proposed change to address site-specific phenomena, or identify and justify as deviation in Attachment 5.
23. **HU3 (corresponds to NEI 99-01, HU1 / EAL 6)**
HA4 (corresponds to NEI 99-01, HA1 / EAL 5)
Provide indication in licensee HU3 for uncontrolled internal flooding in areas where flooding could potentially affect safety-related equipment as defined under EOPs per NEI 99-01 guidance. This EAL would subsequently escalate to an Alert under NEI 99-01, HA1 / EAL 5 if water level reached Maximum Safe Operating Value or equivalent. In addition, address under HA4 internal flooding events that create industrial safety hazards (e.g., electric shock) that precludes access necessary to operate or monitor safety equipment.
24. **HU4 (corresponds to NEI 99-01, HU2)**
As proposed, licensee EAL appears to be limited to fires within buildings containing plant vital areas. Licensee incorrectly limits fires to within the power block structure. Provide proposed change to address NEI 99-01 criteria for a fire within the protected area that also applies building and areas contiguous (in actual contact or immediately adjacent) to plant vital areas.
25. **HU5 (corresponds to NEI 99-01, HU3)**
- a. Provide definition in licensee Basis, or other applicable plan section or procedure, that defines "normal plant operation" consistent with that defined in Section 5.4 to NEI 99-01.
- b. Licensee justification for deletion of NEI 99-01, HU3 / EAL 2 is that no industries are near the GGNS site. This rationale does not address possible transportation accidents in the vicinity of the GGNS site. Provide proposed change to comply with NEI 99-01, HU3 / EAL 2 criterion that event classification is warranted based on a report by respective offsite agencies of the need for the evacuation or sheltering of site personnel based on an offsite event.
26. **HA1 (corresponds to NEI 99-01, HA4 / EAL 2)**
NEI 99-01 guidance states, "Other security events as determined from site-specific Safeguards Contingency Plans," which per Attachment 4 Basis guidance includes sabotage, hostage / extortion, and strike action. Licensee EAL criteria is limit to addressing an intrusion by a hostile force into the protected area. Provide proposed change to comply with NEI 99-01 guidance.
27. **HA4 / EALs 2 and 3 (corresponds to NEI 99-01, HA1 / EALs 2 and 3)**
- a. Provide proposed change to licensee EAL 2 to address visible damage to plant structures (containing systems and functions required for safe shutdown), in lieu of damage to a vital area that is contained within structure. In addition, address NEI 99-01, HA1 / EAL 2 and 3 criterion for events resulting in indication of degraded performance.
- b. Define what plant structures are within the "vital area".

28. HA4 / EAL 4 (corresponds to NEI 99-01, HA2)
HA5 (corresponds to NEI 99-01, HA2)
Provide proposed change to address NEI 99-01, HA2 criterion, "AND Affected system parameter indications show degraded performance or plant personnel report visible damage to permanent structures or equipment within specified areas (required to establish or maintain safe shutdown)."
29. HA4 / EAL 5 (corresponds to NEI 99-01, HA1 / EAL 4)
In Attachments 3 and 5, licensee EAL 5 states, "...resulting in visible damage to safety related equipment." However, licensee EAL 5 description in Attachment 5 states, "...resulting in visible damage to vital area." Provide proposed change to address inconsistency per NEI 99-01 guidance.
30. HA4 / EAL 5 (corresponds to NEI 99-01, HA1 / EAL 4)
a. Licensee revised IC statement limiting classification to events affecting the "...operation of safety systems required to establish or maintain safe shutdown," which fails to address requirement to "maintain safe operation." Provide proposed change to IC statement to address NEI 99-01 criteria covering the "operation of systems required to maintain safe operation or establish and maintain safe shutdown."
b. Licensee EAL is limited to gases within a vital area, which is more restrictive than NEI 99-01 criteria. Provide proposed change to address NEI 99-01 criterion covering the report or detection of gases within or contiguous to a vital area.
31. HS1 / EAL 2 (corresponds to NEI 99-01, HS1 / EAL 2)
NEI 99-01 guidance states, "Other security events as determined from site-specific Safeguards Contingency Plans," which per Attachment 4 Basis discussion includes sabotage and hostage / extortion. Licensee EAL criteria only addresses an intrusion by a hostile force into the plant vital area. Provide proposed change to comply with NEI 99-01 guidance.
32. HG1 (corresponds to NEI 99-01, HG1)
a. Provide proposed change to comply with NEI 99-01 Basis guidance that safety functions for a BWR include decay heat removal (ability to maintain a heat sink).
b. Provide proposed change to Attachment 4 Basis discussion to include NEI 99-01 guidance, which states, "This EAL should also address loss of physical control of spent fuel pool cooling systems if imminent fuel damage is likely (e.g., freshly off-loaded reactor core in pool)."
33. SU1 (corresponds to NEI 99-01, SU1 and CU3)
a. Identify as a deviation in Attachment 5 and provide technical justification for deleting NEI 99-01 criterion, "AND At least (site-specific) emergency generators are supplying power to emergency busses."
b. Correct incomplete sentence under Differences discussion in Attachment 5.
34. SU3 (corresponds to NEI 99-01, SU5)
Identify the revision to threshold for identified leakage as a deviation and provide justification in Attachment 5.

35. **SU4 (corresponds to NEI 99-01, CU1)**
Provide further technical justification for elimination of NEI 99-01 criteria, based on other capabilities to monitor RCS leakage will in Modes 4 and 5 (i.e., sump in-leakage, etc.). Specifically justify why in-leakage cannot be monitored, but is utilized in NESP-007 and proposed NEI 99-01 schemes at other Industry BWR-6 stations.
36. **SU7 (corresponds to NEI 99-01, SU8 / EAL 2 and CU8 / EAL 2)**
Identify deletion of NEI 99-01 EAL 2 (positive startup rate) as a deviation, rather than difference, in Attachment 5.
37. **SU9 / EAL 2 (corresponds to NEI 99-01, SU6 / EAL 2 and CU6 / EAL 2)**
- a. Licensee includes cellular ("cell") telephones under offsite communications capability. Clarify in Attachment 5 whether implementing procedures address the use of cellular phones as a back-up means of offsite communications. In addition, confirm that cellular phones will function within or in close proximity to plant structures to be considered an effective means of offsite communications. Provide a proposed change to delete cellular phones if its use is not proceduralized, since this should be considered an extraordinary means.
 - b. Licensee lists the UHF radios under offsite communications equipment, but NEI 99-01 Basis describes radio transmissions as an extraordinary means of offsite communications. Clarify in Attachment 5 whether implementing procedures address the use of the Radio System as a back-up means of offsite communications. Provide a proposed change to delete UHF radios if its use is not proceduralized, since this should be considered an extraordinary means.
 - c. Licensee lists satellite phones under offsite communications equipment. Clarify in Attachment 5 whether implementing procedures address the use of the satellite phones as a back-up means of offsite communications. In addition, confirm that satellite phones will function within plant structures (i.e., control room) to be considered an effective means of offsite communications. Provide a proposed change to delete satellite phones if its use is not proceduralized, since this should be considered an extraordinary means.
 - d. Describe what offsite communications capability is provided by "OHL", which is listed in licensee Table S2, but not described in licensee Basis.
38. **SA1 / EAL 1 (corresponds to NEI 99-01, SA5 / EAL 1)**
Licensee revised 1st NEI 99-01 criterion to state, "AC power to 15AA and 16AB busses reduced to only one of the following source for > 15 minutes." If a power source is only supplying one essential bus, then a station blackout condition does not exist; yet, EAL implies that classification is warranted since both 15AA and 16AB are not being supplied. Provide proposed change to comply with NEI 99-01 guidance. In addition, identify any deviations in Attachment 5 and provide technical justification.
39. **SA3 / EAL 1 (corresponds to NEI 99-01, SA2 / EAL 1)**
SS3 / EAL 1 (corresponds to NEI 99-01, SS2 / EAL 1)
- a. Identify deviation from NEI 99-01 wording in Attachment 5 and provide technical justification for further consideration, or provide proposed change for consistency with NEI 99-01 guidance.

- b. Define term “rapidly insert” in Attachment 4, since its use is not defined in NEI 99-01 guidance.
40. **SA5 (corresponds to NEI 99-01, CA4)**
- a. Define “Containment Closure” in Attachment 4 consistent with definition provided in Section 5.4 to NEI 99-01. In addition, clarify why term “Containment Closure” is not used in licensee EALs.
- b. Licensee EAL 3 provides the threshold, “results in RPV pressure increase > 10 psig.” Attachment 4 states, “RPV pressure would have to be monitored on the Plant Data System computer to determine the 10 psig pressure increase.” Per the NEI 99-01, CA4 / EAL 3 Basis, the site-specific RCS pressure chosen should be 10 psig or the lowest pressure that the site can read on installed Control Room instrumentation that is equal to or greater than 10 psig, rather than the Plant Data System computer’s capability. Describe the capability of Control Room instrumentation to monitor RPV pressure equal to or greater than 10 psig, and provide a proposed change, if applicable, to reflect the lowest pressure that can be read on Control Room instrumentation if minimum capability is greater than 10 psig.
41. **SA6 / EAL 1 (corresponds to NEI 99-01, SA4 / EAL 1)**
Define term “significant transient” in Attachment 4, consistent with that defined in Section 5.4 to NEI 99-01.
42. **SS1 / EAL 1 (corresponds to NEI 99-01, SS1 / EAL 1)**
Identify the combining loss of onsite and offsite criterion as a deviation, rather than a deviation, in Attachment 5 and provide technical justification.
43. **SS4 / EAL 1.a & b (corresponds to NEI 99-01, CS1 / EAL 2.b and CS2 / EALs 1.b and 2.b)** Provide proposed change to address containment high range radiation monitor reading, erratic source range monitor indication, and other site-specific indications in compliance with NEI 99-01 guidance.
44. **SS4 / EAL 1.a & b (corresponds to NEI 99-01, CS2 / EALs 1.b and 2.b)**
Provide proposed change to address indication of core uncover in Refueling Mode, versus unexplained RPV inventory loss in Cold Shutdown Mode.
45. **SS6 / EAL 1.b (corresponds to NEI 99-01, SS6 / EAL 1.c)**
Provide proposed change to clarify that fission product barriers considered per NEI 99-01 Basis are the RCS and primary containment.
46. **SG1 / EAL 1 (corresponds to NEI 99-01, SG1 / EAL 1)**
Identify the combining loss of onsite and offsite criterion as a deviation, rather than a deviation, in Attachment 5 and provide technical justification.
47. **SG2 / EAL 1 (corresponds to NEI 99-01, SG2 / EAL 1)**
The mode applicability in Attachment 4 lists Mode 3 (Hot Shutdown), which is not consistent with Attachments 3 and 5, or NEI 99-01 guidance. Provide proposed change to address inconsistency in mode applicability.

48. **SG?? (corresponds to NEI 99-01, CG1 / EAL 1)**
NEI 99-01 CG1 is not included in the GGNS EAL scheme. In explaining this, GGNS lists this as a difference and states that EALs #2 and #3 are redundant. However, these conditions are different and not addressed by the listed EALs. In a shutdown condition, significant loss of reactor coolant inventory could precede pressure, temperature, or radiological indications by an extended amount of time due to the lower decay heat conditions which would exist. In other EALs, GGNS states that RPV level indications may be suspect, or unavailable during certain plant configurations during shutdown. This EAL is intended to provide additional indications that a significant loss of coolant has occurred which is in the process of uncovering the core. This is considered a deviation from NEI 99-01, which does not appear to be addressed with sufficient justification. Provide indications to meet this EAL, or explain this deviation with detailed justification and documentation to support that the conditions for CG1 in NEI 99-01 would be consistently classified as a General Emergency in the GGNS scheme.
49. **SG3 (corresponds to NEI 99-01, CG1)**
- a. Licensee EAL criteria do not address NEI 99-01 CG1 / EAL 2 indications for high range radiation monitor readings, source range monitor readings, or other site specific indications. The licensee lists this as a difference and uses the core uncover criteria to satisfy this EAL. Provide proposed change to comply with NEI 99-01 guidance, or identify as deviation in Attachment 5 and provide justification that the license EAL scheme would consistently declare a General Emergency for these conditions.
 - b. In Attachment 4, licensee applies an "AND" between EALs 1 and 2, indicating that both conditions must apply for the general emergency classification. NEI 99-01 lists these EALs independently, and they should stand alone as criteria as classification. Attachment 5 does not indicate that this deviation was incorporated. Provide proposed change to comply with NEI 99-01 guidance, or identify as a deviation in Attachment 5 and provide technical justification.

REQUESTS FOR ADDITIONAL INFORMATION (RAIs)
REGARDING ADOPTION OF NEI 99-01, REVISION 4
FOR RIVER BEND STATION, UNIT 1
DOCKET NUMBER 50-458

By letter #RBG-46211, dated December 19, 2003 (ML03360742), Entergy Operations, Inc. submitted proposed changes to the emergency action levels (EALs) for River Bend Station (RBS), Unit 1. This submittal revises the RBS EALs from the current NUREG-0654, Appendix 1 scheme to NEI 99-01, Revision 4.

The NRC staff performed a review on the proposed EAL Matrix (Attachment 3), EAL Basis (Attachment 4), and Plant-Specific Correlations, Differences, Deviations and Justification (Attachment 5). As a result of this review, the NRC staff has the following questions related to this submittal:

General Comments:

1. 10 CFR 50, Appendix E -- Section IV.B (Assessment Actions) states, "...emergency action levels shall be discussed and agreed on by the applicant [*licensee*] and State and local governmental authorities, and approved by NRC." (Italics added) Submittal cover letter reflects that these changes have been reviewed and approved by the States of Mississippi and Louisiana, and local government authorities. Provide documentation of when these discussions occurred and agreement by the State and local governmental authorities on the implementation of the proposed EAL changes based on NEI 99-01, Revision 4. Specific reference needs to be made regarding State and local concurrence for any proposed changes that would require either a higher or lower classification than that designated in the NEI 99-01 guidance.
2. Provide an update to Attachment 5 (Plant Specific Correlations, Differences, Deviations and Justifications), based on an evaluation of changes proposed to NEI 99-01 guidance, to ensure that any deletions to NEI 99-01 Initiating Condition (IC) statements, example EALs criterion and basis, or significant content changes (other than format, nomenclature, simple terminology or system names, etc.) that may impact intent or thresholds established or guidance provided in NEI 99-01, are listed as deviations. In addition, provide site-specific technical justification for any deviations, as appropriate. (Specific examples are listed under "Specific Comments", but are not all inclusive.)
3. Provide a simplified drawing or schematic illustrating unit auxiliary and start-up transformers, and describe the inter-relationship regarding conditions needed for a loss of off-site power and the ability of emergency diesel generators to supply on essential busses.
4. Provide a copy, or include a detailed description in Attachment 4, of calculations used to determine effluent monitor thresholds under AG1, AS1, AA1 and AU1, and specify any deviations in Attachment 4 from guidance contained in Appendix A to NEI 99-01 (Basis for Radiological Effluent Initiating Conditions).

Specific Comments:

1. **AU1 (corresponds to NEI 99-01, AU1)**
AA1 (corresponds to NEI 99-01, AA1)
 - a. Licensee applies EAL 1 only to liquid releases. Identify as a deviation in Attachment 5 and provide technical justification, or provide proposed change to comply with NEI 99-01, AU1 (AA1) / EAL 1 wording.
 - b. Licensee applies EAL 2 only to gaseous releases and does not provide monitor thresholds for an inadvertent liquid releases that might occur outside of a planned discharge. Identify as a deviation in Attachment 5 and provide technical justification, or provide proposed change to comply with NEI 99-01, AU1 (AA1) / EAL 2 wording.
 - c. Licensee EAL 3 uses the term “unplanned” for sample analysis, in lieu of NEI 99-01 term “confirmed”. Provide proposed change to comply with NEI 99-01 guidance, or identify in Attachment 5 and provide technical justification for further consideration.
2. **AU2 (corresponds to NEI 99-01, AU2)**
 - a. Licensee IC and EAL 2 applies qualifier, “by a factor of 1000 over normal levels,” to quantify a radiation monitor increase. The intent of the radiation monitor increase criterion in NEI 99-01 AU2 / EAL 1 is to confirm an uncontrolled water level decrease that would potentially uncover irradiated fuel assemblies. Therefore, a defined threshold for radiation monitor increase is not applicable. As such, qualifier is only applicable to licensee AU2 / EAL 1. Provide proposed change to licensee IC and EAL 2 to comply with NEI 99-01 AU2 guidance, or identify as deviation in Attachment 5 and provide technical justification for further consideration.
 - b. Licensee EAL 2 does not use term “unplanned” in relation to radiation monitor increase. Therefore, an increase in radiation monitor reading(s) due to a planned decrease in pool water level could result in an event declaration. Provide proposed change to licensee EAL 2 to comply with NEI 99-01 guidance, or identify as deviation in Attachment 5 and provide technical justification for further consideration.
3. **AA1 / Table R1 (corresponds to NEI 99-01, AA1)**

Threshold for field monitoring team readings, contained in Table R1, is not required under NEI 99-01 guidance. Identify as deviation in Attachment 5 and provide technical justification for further consideration, or provide proposed change to comply with NEI 99-01 guidance.

4. AA2 / EAL 2 (corresponds to NEI 99-01, AA3 / EAL 2)
Licensee states in Attachment 4 for EAL 2 that "EOP Max Safe Operating Values for secondary containment are used as the threshold value." These values are based on emergency actions rather than normal occupational exposure guidelines and limits. Intent of EAL is not to require emergency access, but rather that radiation levels would preclude unimpeded access if needed. Provide threshold value based on the station's normal occupational exposure guidelines and limits that would not impede (delay) access to areas (i.e., the need for administrative approvals and briefings prior to entry), as discussed in NEI 99-01 guidance.
5. AA3 (corresponds to NEI 99-01, AA2)
 - a. Discuss whether any of the radiation monitors in the vicinity of the spent fuel pool would read less than the 9500 mR/hr threshold for the scenario postulated, based on their distance from the spent fuel pool.
 - b. Provide proposed change to licensee EAL 2 to indicate a site-specific water level that will result in irradiated fuel uncovering, or identify deviation in Attachment 5 and provide technical justification for further consideration.
6. CU1 (corresponds to NEI 99-01, CU1)
Provide further technical justification for elimination of NEI 99-01 CU1 criteria, based on other capabilities to monitor RCS leakage in Modes 4 and 5 (i.e., sump in-leakage, etc.). Specifically justify why in-leakage cannot be monitored at RBS, but is utilized in NESP-007 and proposed NEI 99-01 schemes at other Industry BWR-6 stations.
7. CU4 (corresponds to NEI 99-01, CU3)
SU1 (corresponds to NEI 99-01, SU1)
Deletion of 2nd NEI 99-01 criterion, "AND At least (site-specific) emergency generators are supplying power to emergency busses," while technically justified, is incorrectly listed as a difference. Provide proposed change to identify as deviation and provide technical justification in Attachment 5.
8. CU6 (corresponds to NEI 99-01, CU6 / EAL2)
SU4 (corresponds to NEI 99-01, SU8 / EAL2)
Deletion of 2nd NEI 99-01 criterion, "An unplanned sustained positive startup rate observed on nuclear instrumentation," while technically justified, is incorrectly listed as a difference. Provide proposed change to identify as deviation and provide technical justification in Attachment 5.
9. CU?? (corresponds to NEI 99-01, CU5)
 - a. NEI 99-01 CU5 / EAL 1 is based on fuel clad degradation occurring while in Modes 4 and 5, and not as described in licensee justification (Attachment 5), which states monitors would detect in Modes 1, 2 or 3 before reaching Modes 4 and 5. However, technical justification is adequate for not considering MSL or Off-Gas radiation monitors in Modes 4 and 5. Provide proposed change to deviation in Attachment 5 which reflects the potential fuel clad degradation in Modes 4 and 5.

- b. Technical specification or equivalent limits were established by Industry under NEI 99-01, and therefore, are applicable in this application. Provide proposed change to comply with NEI 99-01 CU5 / EAL 2 guidance for RCS activity limits in Modes 4 and 5 (ODCM, station chemistry limits, etc.). Specifically justify why RCS activity limits are not monitored at RBS, but are utilized in NESP-007 and proposed NEI 99-01 schemes at other Industry BWR-6 stations.
10. **CU7 (corresponds to NEI 99-01, CU6)**
SU5 (corresponds to NEI 99-01, SU6)
- a. Licensee includes cellular ("cell") telephones under onsite and offsite communications capability in EALs 1 and 2. Clarify in Attachment 5 whether implementing procedures address the use of cellular phones as a back-up means of offsite communications. In addition, confirm that cellular phones will function within or in close proximity to plant structures to be considered an effective means of onsite and/or offsite communications. Provide a proposed change to delete cellular phones if its use is not proceduralized, since this should be considered an extraordinary means.
- b. Licensee lists the Radio System under offsite communications equipment in EAL 2, but NEI 99-01 Basis describes radio transmissions as an extraordinary means of offsite communications. Clarify in Attachment 5 whether implementing procedures address the use of the Radio System as a back-up means of offsite communications. Provide a proposed change to delete Radio System if its use is not proceduralized, since this should be considered an extraordinary means.
- c. Licensee lists satellite phones under offsite communications equipment in EAL 2. Clarify in Attachment 5 whether implementing procedures address the use of the satellite phones as a back-up means of offsite communications. In addition, confirm that satellite phones will function within plant structures (i.e., control room) to be considered an effective means of offsite communications. Provide a proposed change to delete satellite phones if its use is not proceduralized, since this should be considered an extraordinary means.
- d. Provide change to licensee EAL 2 in Attachment 5 to correct typo (states "onsite" vs. "offsite" communications equipment).
11. **CA1 / EAL 1 (corresponds to NEI 99-01, CA1 / EAL 1 and CA2 / EAL 1)**
 Licensee revised EAL 1 criterion to include qualifier, "and RPV level cannot be restored and maintained", based on NEI 99-01 Basis statement, which says "The inability to restore and maintain level after reaching this set point would therefore be indicative of a failure of the RCS barrier." Per the definition of an Alert, which does not require a failure of the RCS barrier prior to classification, the basis statement was incorrectly applied. NEI 99-01 EAL1 criterion was intended to require an Alert classification in Mode 4 based on reaching level set point due to the significant increase in RCS leakage, regardless of restoration of RPV level. Provide proposed change to comply with NEI 99-01 guidance.

12. **CA2 (corresponds to NEI 99-01, CA4)**
- a. Licensee includes qualifier, "or RCS inventory reduced," in EAL 2 which is applicable only to PWRs (e.g., mid loop operation) per NEI 99-01 guidance. Provide proposed change to comply with NEI 99-01 guidance, or further technical justification as deviation in Attachment 5 to support inclusion of qualifier.
 - b. Licensee EAL 3 provides the threshold, "results in RPV pressure increase > 10 psig." Attachment 4 states, "RPV pressure would have to be monitored on the Plant Data System computer to determine the 10 psig pressure increase." Per the NEI 99-01, CA4 / EAL 3 Basis, the site-specific RCS pressure chosen should be 10 psig or the lowest pressure that the site can read on installed Control Room instrumentation that is equal to or greater than 10 psig, rather than the Plant Data System computer's capability. Describe the capability of Control Room instrumentation to monitor RPV pressure equal to or greater than 10 psig, and provide a proposed change, if applicable, to reflect the lowest pressure that can be read on Control Room instrumentation if minimum capability is greater than 10 psig.
13. **CA3 / EAL 1 (corresponds to NEI 99-01, CA3 / EAL 1)**
- a. Licensee has inserted the term "unplanned" into loss of AC power to essential busses. Describe under what conditions licensee would have a planned loss of onsite and offsite power to essential busses simultaneously in Modes 4 and 5.
 - b. Based on licensee not providing specific reference to site-specific transformers or emergency generators, provide clarification in Attachment 4 that credit will not be taken for temporary power sources which are not identified under station SAR, technical specifications or analysis performed for under station blackout coping analysis in Modes 4 and 5.
14. **CS1 / EAL 1.c (corresponds to NEI 99-01, CS1 and CS2)**
- a. Provide proposed change to EAL 1.c to address containment high range radiation monitor reading, erratic source range monitor indication, and other site-specific indications in compliance with NEI 99-01, CS2 / EAL 1.b.
 - b. Provide proposed change to EAL 2.b to address unexplained (site-specific) sump and tank level increase and erratic source range monitor indication in compliance with NEI 99-01, CS1 / EAL 2.b.
 - c. Provide proposed change to EAL 2.c to address containment high range radiation monitor reading, erratic source range monitor indication, and other site-specific indications in compliance with NEI 99-01, CS2 / EAL 2.b.

15. **CG1 (corresponds to NEI 99-01, CG1)**
- a. Per the NEI 99-01 EAL 1 Basis, it is assumed that normal RPV level is available (in cold shutdown) or redundant means installed (in refueling), and that this indication is lost. Licensee states in Attachment 5 that NEI 99-01 CG1 / EAL 1, "Loss of RPV inventory as indicated by an unexplained (site-specific) sump and tank-level increase," is not included since its is redundant with conditions described in NEI 99-01, CG1 / EALs 2 and 3. This is an incorrect statement, since license fails to address under their criterion, "RPV level...cannot be monitored with indication of core uncover for > 30 minutes," per NEI 99-01 CG1 / EAL 2.b. Provide proposed change to comply with NEI guidance as a separate AND statement or as part of site-specific indication per NEI 99-01 guidance.
 - b. Provide proposed change to licensee EAL criteria "RPV level...cannot be monitored with indication of core uncover for > 30 minutes," to address containment high range radiation monitor reading and erratic source range monitor indication, and other site-specific indications in compliance with NEI 99-01 CG1 / EAL 2.b.
 - c. Clarify why criterion, "Drywell hydrogen concentration > 9%," was not considered based on definition of explosive mixture provided by licensee in PC1 as a "Potential Loss" of containment. Provide proposed changes, as applicable, to address inconsistency.
16. **E-HU1 (corresponds to NEI 99-01, E-HU1)**
Provide specific thresholds in EALs, rather than Basis discussion, for criterion reflecting extreme environmental temperature, explosive over-pressure, etc., since data is required to define magnitude for classification purposes.
17. **FC2 (corresponds to NEI 99-01, Table 5-F-2: Fuel Clad Barrier Example EAL #2)**
- a. Licensee defines a LOSS as "minimum steam cooling RPV level (-186") with injection." Discuss whether EOPs identify a "minimum steam cooling RPV level (-186") without injection," and if so, how is threshold addressed if more conservative than "with injection" level.
 - b. Licensee incorrectly states that "reactor water level cannot be restored and maintained" above specific threshold. Per NEI 99-01, exceeding threshold alone is sufficient to consider either a loss or potential loss of fuel clad barrier. Provide proposed changes to comply with NEI 99-01 guidance of "Level LESS THAN (site-specific) value."
18. **FC4 (corresponds to NEI 99-01, Table 5-F-2: Fuel Clad Barrier Example EAL #4)**
- a. Provide technical justification that Main Steam line Radiation levels > Hi-Hi Alarm set point is equivalent to 300 uCi/gm dose equivalent I-131, which serves as the basis for fuel clad barrier LOSS due to primary coolant activity (Example EAL #1) and drywell radiation monitoring (Example EAL #3).
 - b. Correct inconsistency between Attachments 3 and 5 (which state ">") and Attachment 4 (which states "≥").

19. **RC1 (corresponds to NEI 99-01, Table 5-F-2: RCS Barrier Example EAL #1)**
Addition of qualifier, "AND Pressure increase due to reactor coolant leakage," is not provided as a deviation. Provide proposed change to identify as deviation in Attachment 5."
20. **RC2 (corresponds to NEI 99-01, Table 5-F-2: RCS Barrier Example EAL #2)**
- a. Licensee incorrectly states that "reactor water level cannot be restored and maintained" above specific threshold. Per NEI 99-01, exceeding threshold alone is sufficient to consider either a loss or potential loss of fuel clad barrier. Provide proposed changes to comply with NEI 99-01 guidance of "Level LESS THAN (site-specific) value."
 - b. Licensee states in Attachment 5 that qualifier, "with indications of a leak in the drywell," was added to ensure consistency with RCS Barrier EAL 1 (Drywell Pressure). This application is incorrect, since LOSS criterion based on RPV water level is intended to stand alone for classifications purposes. As such, RPV water level reaching TOAF is intended to cover scenarios that result not only due to an inventory loss, but as a result of a loss of makeup that would lead to core uncover. Provide proposed change to remove qualifier, "with indications of a leak in the drywell."
21. **RC3 (corresponds to NEI 99-01, Table 5-F-2: RCS Barrier Example EAL #3)**
- a. NEI 99-01 Basis for RCS Leak Rate specifically states "[a]n unisolable main steam line (MSL) break." Identify as a deviation in Attachment 5 and provide justification for including an RCIC steam line break as a RCS barrier LOSS. In addition, provide site-specific indication of an isolable main steam line break to comply with NEI 99-01 guidance.
 - b. Provide justification for listing Main Steam Tunnel High Ambient Temperature, RCIC Room High Ambient Temperature, and RCIC Equipment Area Radiation Levels in licensee Tables F3 and F4 as applicable for a "Potential LOSS". This appears to be in conflict with proposed licensee "LOSS" criteria due to a MSL or RCIC steam line break.
 - c. Clarify why areas listed in Tables F3 and F4 are inconsistent with those defined in licensee Tables F1 and F2 under PC3. Provide technical justification in Attachment 4 for inconsistency, or provide proposed change to resolve inconsistency between RC3 and PC3.
22. **RC?? (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #4)**
Provide further technical justification for elimination of drywell (containment) radiation monitor threshold based on applicability of other BWR-6 stations, which have included drywell (containment) radiation monitor in NESP-007 or proposed NEI 99-01 EALs. Clarify why threshold cannot be calculated based on RCS leakage with normal RCS coolant activity (i.e., value calculated would be less than radiation monitor reading recorded during normal plant operation).

23. **RC4 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #5)**
Describe in Attachment 4 the justification for why a stuck open relief valve alone, without a corresponding increase in Suppression Pool bulk temperature approaching allowable Technical Specification limits or abnormal coolant activity, provides sufficient technical justification to warrant an Alert declaration.
24. **PC1 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #1)**
While addressed in Attachment 4, licensee criterion, "pressure response not consistent with LOCA conditions," assumes that pressure decrease occurs at time of LOCA. EAL is intended to cover events following a LOCA or significant pressure increase. Provide proposed change to comply with NEI 99-01 guidance, which states "Rapid unexplained decrease following initial increase."
25. **PC3 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #3)**
- a. Licensee inserted the qualifier, "when isolation is required," but does not identify as a deviation or provide justification. Per NEI 99-01 guidance, this qualifier was not included based on requirement that "a downstream pathway to the environment exist." Describe what conditions or scenario this qualifier is intended to cover. In addition, provide proposed change to comply with NEI 99-01 guidance, or if retained, identify as a deviation in Attachment 5 and provide technical justification for further consideration.
 - b. Provide further justification for providing specific thresholds for containment venting per the EOPs or SAPs, rather than simply stating NEI 99-01 criteria of "Intentional venting per EOPs (or SAPs)." Discuss whether there are other thresholds where containment venting is required per EOPs or SAPs.
 - c. Per NEI guidance, the intentional venting of containment per EOPs is sufficient to consider a LOSS of the primary containment barrier, regardless of containment pressure, which is considered under the EOP logic. Licensee EAL PC3 inserted the qualifier, "to maintain Containment pressure < 30 psig." Provide proposed change to comply with NEI guidance.
 - d. Provide technical justification for deviation in Attachment 4 Basis discussion for PC3 statement, "Containment venting for pressure control to maintain containment pressure < 2 psig is not considered since a large radioactivity inventory is not expected," since any intentional venting per EOPs is considered a barrier LOSS in accordance with NEI 99-01 guidance.
26. **PC4 (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #4)**
Provide justification for not including NEI 99-01 Basis discussion that "...reading is a value which indicates significant fuel damage well in excess of that required for the loss of RCS and Fuel Clad."
27. **PC?? (corresponds to NEI 99-01, Table 5-F-2: Containment Barrier Example EAL #5)**
Provide discussion in Attachment 5 of evaluation performed to identify other site-specific indications of a loss or potential loss of the Containment Barrier per NEI 99-01 guidance.

28. **HU3 (corresponds to NEI 99-01, HU3)**
- a. Licensee EAL 1 inserted qualifier, “normally occupied areas.” This is not the intent based on NEI 99-01 HU3 / EAL 1 Basis for an uncontrolled process that has the potential to affect plant operations, regardless of whether areas are normally occupied. Provide proposed change to comply with NEI 99-01 guidance that event classification is warranted based solely on toxic or flammable gases that has or could enter the site area boundary in amounts that can affect “normal plant operations.”
 - b. Define “normal plant operation” in Attachment 4, or other applicable procedure, consistent with that defined in Section 5.4 to NEI 99-01.
 - c. Licensee EAL 2 inserted qualifier, “in amounts that are expected to enter normally occupied areas of the site that can effect normal plant operations.” This is not the intent per NEI 99-01 HU3 / EAL 2 for an uncontrolled process that has the potential to affect personnel safety, rather than plant operations as addressed under EAL 1. Provide proposed change to comply with NEI 99-01 guidance that event classification is warranted based solely on a report by respective offsite agencies of the need for the evacuation or sheltering of site personnel based on an offsite event.

29. **HU4 / EAL 1 (corresponds to NEI 99-01, HU1 / EAL 1)**
HA5 / EAL 1 (corresponds to NEI 99-01, HA1 / EAL 1)
Per NEI 99-01, indications of an Operating Basis Earthquake (OBE) is the threshold for the declaration of an Alert per NEI 99-01 HA1 / EAL 1, and not an Unusual Event as identified by licensee. Provide proposed changes to licensee HU4 / EAL 1 and HA5 / EAL 1 to address the following NEI 99-01 guidance developed by Industry, or equivalent:

HU4 / EAL 1 – Declaration based on vibratory ground motion felt at the nuclear plant site and recognized as an earthquake based on consensus of control room operators on duty at the time, AND seismic switches at the plant are activated (0.01g).

HA5 / EAL 1 – Site-specific method indicates seismic event greater than OBE.

30. **HU4 / EAL 4 (corresponds to NEI 99-01, HU1 / EAL 4)**
Define “visible damage” in Attachment 4, or other applicable procedure, consistent with that defined in Section 5.4 to NEI 99-01.
31. **HU4 / EAL 6 (corresponds to NEI 99-01, HU1 / EAL 6)**
HA5 / EAL 6 (corresponds to NEI 99-01, HA1 / EAL 5)
Per NEI 99-01 Basis guidance, classification of an Unusual Event is required based on uncontrolled flooding caused by internal events in areas containing systems required for safe shutdown of the plant, that are not designed to be wetted or submerged. Actual degradation of system performance (i.e., water level greater than Maximum Safe Operating Value, etc.) should be classified as an Alert, based on NEI 99-01 HA1 / EAL 5. Provide proposed changes to licensee HU4 / EAL 6 to reflect classification on the uncontrolled internal flooding of site-specific plant areas, without consideration for actual water level, and to licensee HA5 / EAL 6 to reflect classification on water level greater than Maximum Safe Operating Value(s) or degraded safety system performance.

32. **HA1 (corresponds to NEI 99-01, HA4)**
- a. Define "hostile force" in Attachment 4, or other applicable procedure, consistent with that defined in Section 5.4 to NEI 99-01.
 - b. Clarify that security events as determined by the RBS Safeguards Contingency Plan include sabotage, hostage / extortion, and strike action as specified in NEI 99-01 HA4 Basis (2nd paragraph). In addition, provide justification why examples of applicable types of security events, listed in NEI 99-01 HA1 Basis, are not contained in licensee HA1 Basis.
33. **HA3 (corresponds to NEI 99-01, HA2)**
HA5 / EAL 4 (corresponds to NEI 99-01, HA2)
- a. Provide proposed change to EAL criteria to identify the site-specific areas containing functions or systems for the safe shutdown of the plant, as provided in licensee Basis Table H-2.
 - b. Provide proposed change to licensee HA5 / EAL 4 to reflect consistency with HA3 / EAL 1 criteria which states that an explosion occurs in site-specific areas (Table H-2) containing functions or systems for the safe shutdown of the plant.
34. **HA5 / EAL 2 (corresponds to NEI 99-01, HA1 / EAL 2)**
HA5 / EAL 3 (corresponds to NEI 99-01, HA1 / EAL 3)
HA5 / EAL 5 (corresponds to NEI 99-01, HA1 / EAL 4)
HA5 / EAL 7 (corresponds to NEI 99-01, HA1 / EAL 2)
Provide proposed change to EAL criteria to identify the site-specific areas containing functions or systems for the safe shutdown of the plant, as provided in Basis Table H-2.
35. **HS1 / EAL 2 (corresponds to NEI 99-01, HS1 / EAL 2)**
Clarify that security events as determined by the RBS Safeguards Contingency Plan include sabotage and hostage / extortion as specified in NEI 99-01, HS1 Basis (2nd paragraph). In addition, provide justification why examples of applicable types of security events, listed in NEI 99-01 HS1 Basis, are not contained in licensee HS1 Basis.
36. **HG1 (corresponds to NEI 99-01, HG1)**
Provide proposed change to comply with NEI 99-01, HG1 Basis guidance that safety functions for a BWR include decay heat removal (ability to maintain a heat sink).
37. **SA1 / EAL 1 (corresponds to NEI 99-01, SA5 / EAL 1)**
- a. Licensee revised 1st NEI 99-01 criterion to state, "Available onsite or offsite AC power to ENS-SWG1A and ENS-SWG1B busses reduced to a single power source for > 15 minutes." As revised, it appears that licensee criteria is that a single source of power is available to both Division A and B Busses. In this case, then if both essential busses are being supplied by their respective emergency generators, any additional single failure (i.e., loss of one of the emergency generators) would not result in a station blackout. Provide proposed change to comply with NEI 99-01 guidance. In addition, identify any deviations in Attachment 5 and provide technical justification.
 - b. Correct typographical error in Attachment 5 under proposed EAL #1: "...or > 15 minutes" vs. "...for > 15 minutes."

38. **SA2 / EAL 1 (corresponds to NEI 99-01, SA2 / EAL 1)**
SS3 / EAL 1 (corresponds to NEI 99-01, SS2 / EAL 1)
- a. Identify deviation from NEI 99-01 wording in Attachment 5 and provide technical justification for further consideration, or provide proposed change for consistency with NEI 99-01 guidance.
 - b. Define term “rapidly insert” in Attachment 4, since its use is not defined in NEI 99-01 guidance.
 - c. The licensee Basis defines subcritical as “reactor power level below the APRM downscale and an extended negative period that will ultimately reduce reactor power to the source range level.” Clarify whether the EAL definition used is consistent with that contained in technical specifications and/or EOPs.
 - d. NEI 99-01 SS2 / EAL 1 statement in Attachment 5 incorrectly lists “hot shutdown” as an applicable mode. Provide proposed change to Attachment 5 to correct mode applicability.
39. **SA3 / EAL 1 (corresponds to NEI 99-01, SA4 / EAL 1)**
- a. Define term “significant transient” in Attachment 4, consistent with that defined in Section 5.4 to NEI 99-01.
 - b. Correct terminology inconsistency between criterion 1.b in Attachments 3 and 4 (“...indications are not available”) and Attachment 5 (“...indications are unavailable”).
40. **SG1 / EAL 1 (corresponds to NEI 99-01, SG1 / EAL 1)**
Identify combining of the loss of onsite and offsite criteria as a deviation, rather than a deviation, in Attachment 5 and provide technical justification.