

U.S. Nuclear Regulatory Commission
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ENCLOSURE

WATTS BAR NUCLEAR PLANT
EMERGENCY ACTION LEVELS
REQUEST FOR ADDITIONAL INFORMATION

By letter dated July 1, 1993, NRC requested additional information related to TVA's proposed emergency action levels (EALs). The following is TVA's response to that request. The NRC comment/request is stated followed by the TVA response.

NRC Comment 2.0.2.A

EPIP-1 Section 3.0, Instructions, states in paragraph 3.3.5 that, "If an EAL for a higher classification was exceeded but the present situation indicates a lower classification, the fact that the higher classification occurred SHALL be reported to the NRC and Central Emergency Control Center (CECC), but should not be declared."

Paragraph 3.3.7 states, "IF an EAL was exceeded but the emergency has been totally resolved (prior to declaration), the emergency class that was appropriate shall be declared and terminated at the same clock time."

Comment: These two instructions conflict with each other. For clarification, the instructions should be merged, and the apparent conflict eliminated.

The NRC staff position on terminated emergencies is that the event or condition should be classified and reported to the NRC (and state and local authorities). However, this does not mean that an emergency must be "declared" after the fact when it no longer exists, and arrangements should be made in advance to not unduly alarm offsite officials when reporting a terminated emergency.

TVA Response

TVA agrees with the NRC staff position on terminated emergencies and the need to avoid unduly alarming offsite officials. In keeping with this intent, we do not believe that paragraphs 3.3.5 and 3.3.7 conflict with each other. The following example of how paragraph 3.3.5 would be used at WBN is provided to show that these paragraphs do not conflict.

For WBN Security Event No. 4.6, General Emergency, Emergency Action Level (EAL) No. 1 notes, "if the Control Room or the remote shutdown panel has been taken over by a hostile armed force" the conditions for the General Emergency declaration are warranted. Should the threat be eliminated prior to the declaration (i.e., by site security forces or other means) and the Shift Operations Supervisor (SOS) believes he has control of the plant, his classification actions would be to declare a Site Area Emergency and report the occurrence of the higher classification to the NRC and the TVA Central Emergency Control Center (CECC). This arrangement has been coordinated with the Tennessee

Emergency Management Agency (TEMA) so that offsite officials are kept informed and local residents are not unduly alarmed.

In NESP-007 Revision 2, page 3-10, paragraph 3.6, eight characteristics are identified which are to be incorporated into the model EALs. Of particular note, the "ease of upgrading and downgrading" is to be maintained. TVA considers that EPIP-1, paragraph 3.3.5, meets this guidance. Also, on page 3-18, paragraph 3.11 of NESP-007, "Emergency Class Downgrading," the recommendations also support TVA's procedure.

Concerning paragraph 3.3.7, TVA agrees with the interpretation of the NRC staff position on terminated emergencies and has revised paragraph 3.3.7 to include, "IF an EAL was exceeded but the emergency has been totally resolved (prior to the declaration), the emergency condition that was appropriate shall not be declared but reported to the NRC and Operations Duty Specialist (ODS) at the same clock time."

NRC Comment 2.0.2.B

The term ODCM (Offsite Dose Calculation Manual) is used in the EALs but does not appear on the unnumbered page (between pages 7 and 8) of Definitions/Acronyms in EPIP-1.

Similarly, the word "imminently" appears in the instructional note on page 8 concerning when a plant condition is considered to be "met." "Imminent" is also undefined in EPIP-1, although it is specifically defined as within 1 to 2 hours in Table 4 of NESP-007.

Comment: For clarification, the terms "ODCM" and "imminent" should be added to the Definitions/Acronyms list. The list should be page numbered to ensure page accountability.

TVA Response

The acronym ODCM (Offsite Dose Calculation Manual) has been added to the Definitions/Acronyms page which is found in each section. The definition/clarification for imminently has been improved to provide further guidance and placed directly after its use in the Fission Product Barrier Matrix (Note) which precedes the instructions. All Definitions/Acronym pages have been numbered to ensure page accountability.

NRC Comment 2.0.2.C

Not all EALs are numbered to permit easy identification between conferring agencies. Although the EALs have some degree of identification, a unique identifier for each EAL would facilitate discussion between the licensee, NRC, state, and local agencies during an emergency. TVA should consider the use of such identifiers.

TVA Response

TVA does not concur with this comment. TVA considers that the current identification system for event classification and declaration is adequate. This position is based on the following:

- The current classification flow chart for the events and the respective EALs utilizes a number and word identifier (e.g., 5.1 Earthquake) for each of the 37 events.
- Concerning the Fission Product Barrier Matrix, the specific barrier would be identified with its respective EAL (e.g., 1.3.2 CNTMT Barrier, Containment Pressure/Hydrogen) and status (i.e., "loss" or "potential loss").
- The unique number and word identifier carry through the four classifications for that event.
- This system was developed to facilitate the break down of the events into the seven major sections, provide a user friendly format, and a cross check for verification purposes.

During training with the Plant Operators and acceptance reviews with the Tennessee Emergency Management Agency and the Tennessee Department of Radiological Health, TVA determined that this system provided a good cross reference and was easy to understand. Also, communications are enhanced with offsite authorities when the use of acronyms is kept to a minimum, and the addition of another unique identifier could cause undue confusion.

NRC Comment 2.0.3.A: Subcategory 1.2 - RCS Barrier

NUMARC EAL RCS Barrier #4, Containment Radiation Monitoring under "loss" states:

Containment rad monitor reading GREATER THAN (site-specific) R/hr

Comment: NUMARC EAL RCS #4 of Table 4 was omitted from the WBN list of EALs. However, the WBN REP, Appendix C, Fission Product Barrier cross-reference matrix, page C-4, under 1.2 RCS, specifically lists RCS #4 as included in the EAL procedure. The WBN Appendix C basis document did not address the omission.

A containment radiation monitor reading should be calculated for a coolant release to containment (no fuel damage) using maximum technical specification values for coolant activity. This value should be less than the value used for Fuel Clad Barrier IC #5. If all containment monitors (high range, area monitors, or other process monitors) are located such that radiation shine from nearby systems would mask the released cloud of coolant, then other site specific indications of RCS leakage could be substituted.

The applicant should revise this EAL to include the NUMARC example initiating condition or provide justification for the omission.

TVA Response

TVA concurs with this comment. The reference to NUMARC EAL RCS No. 4 in the Appendix C Fission Product Barrier Matrix was removed under the guidance provided in NESP-007 Revision 2 due to the limited capabilities of the monitor and its location. This information was not corrected in the cross reference matrix. The subject EAL has been revised to reflect this omission. Other site specific indications on RCS leakage are provided to aid the Plant Operator in determining RCS Barrier integrity in Section 2, "System Degradation," Event 2.5, "RCS Unidentified Leakage," and Event 2.6, "RCS Identified Leakage."

NRC Comment 2.0.3.B(1): Subcategory 1.3 - Containment Barrier

NUMARC EAL Containment Barrier EAL #2, Containment Pressure under "loss" states:

Rapid unexplained decrease following initial increase
or
Containment pressure or sump level response not consistent with LOCA conditions

The WBN procedure under 1.3 CNTMT Barrier, #2, Containment Pressure/Hydrogen under "loss" states only:

Rapid unexplained decrease following initial increase

Comment: The second part of the NUMARC EAL, pressure and sump level not consistent with LOCA conditions, is not listed under the containment pressure EAL nor is it listed in the basis document under the applicable NUMARC EAL. However, EPIP-1 lists the following similar condition as a "potential loss" in Subcategory 1.3 CNTMT Barrier, EAL #4, Containment Bypass:

Containment pressure or Sump level Not increasing (with LOCA in progress)

Comment: While this EAL is not specifically addressed under containment pressure in the licensee's EAL procedure as it is in the NUMARC guidance, an equivalent statement is contained under Containment Bypass as a potential loss of barrier. Placing the statement under containment bypass raises one concern. The only conditions listed for "loss" in the WBN Containment Bypass EAL, 1.3 #4, are steam generator problems. If no S/G problems exist, the EAL, and the condition of "containment response not consistent" associated with the "potential loss," might be overlooked. The NUMARC EAL, which has the statement in the Containment Pressure/Hydrogen EAL and is applicable to LOCAs, S/G ruptures, or any other type of interfacing LOCA, avoids that problem. Under the NUMARC EAL, anytime the Containment Pressure/Hydrogen barrier EAL is reviewed, the reminder to check for proper containment response would also be reviewed.

The applicant should modify the EAL to be consistent with corresponding NUMARC guidance or provide additional information to justify the deviation.

TVA Response

TVA concurs with these comments. The EAL reference to Containment Pressure or Sump level Not increasing (with LOCA in progress) has been revised and the condition has been removed from the "Potential LOSS," EAL No. 4, "Containment Bypass," and relocated to the "LOSS," EAL No. 2, "Containment Pressure/Hydrogen."

NRC Comment 2.0.3.B(2): Subcategory 1.3 - Containment Barrier

NUMARC EAL Containment Barrier EAL #4 S/G Secondary Side Release With Primary-to-Secondary Leakage under "loss" states:

Release of secondary side to atmosphere with primary to secondary leakage GREATER THAN tech spec allowable

The WBN EAL states:

Secondary side release outside CNTMT from a RUPTURED S/G that Cannot be terminated in < 15 Minutes

OR

Prolonged (4 Hours) Secondary Side release outside CNTMT from A S/G with a SGTL > T/S Limits

Comment: In the second part of the WBN EAL the "A" before S/G is capitalized. Although, it appears to be a minor typographical error, capitalization (A, B, C, D) is frequently used to indicate a specific steam generator and could be confusing.

TVA Response

TVA concurs with this comment. The EAL has been revised and the "A" has been changed to read "a."

NRC Comment 2.0.3.B(3): Subcategory 1.3 - Containment Barrier

The WBN EAL 1.3 CNTMT Barrier, #4, Containment Bypass under "potential loss" states:

Unexplained VALID increase in area or ventilation RAD monitors in adjacent areas (with LOCA in progress)

Comment: The term "adjacent areas" is open ended and could be better defined without making the EAL much longer or more complicated. It could be adjacent to the LOCA (interfacing LOCA - e.g., containment spray, RHR, etc.) or adjacent to containment (penetration,

containment isolation valve, equipment or personnel hatch, etc.). Adjacent should have a modifier, such as "adjacent to containment."

This EAL should be revised to improve clarity and reduce the potential for confusion.

TVA Response

TVA concurs with this comment. The EAL has been revised to include the modifier "adjacent to containment."

NRC Comment 2.0.3.B(4): Subcategory 1.3 - Containment Barrier

The WBN EAL Section 1.3 CNTMT Barrier does not include a loss EAL for intentional venting of containment as a means of preventing catastrophic containment failure.

Comment: NUMARC/NESP-007, Revision 2, page 5-33 prescribes that if site EOPs provide for venting of containment during an emergency, a "Loss" EAL should be included for the containment barrier.

This EAL should be added to the WBN EAL procedure, Section 1.3, CNTMT Barrier, or additional information should be provided to justify the deviation.

TVA Response

TVA does not concur with this comment. Intentional venting of the containment to prevent a catastrophic failure is not an action that is prescribed in the WBN Emergency Operating Procedures (EOPs). TVA considers that its justification as a deviation in the Basis (i.e., Appendix C) is unnecessary.

Recognition Category 2 -- System Degradation

NRC Comment 2.0.3.C: Subcategory 2.1 - Loss of Instrumentation

SAE - NUMARC EAL SS6 states:

Inability to Monitor a Significant transient in Progress. Op. Modes: Power Operation, Hot Standby, Hot Shutdown

Comment: The WBN EAL 2.1 Loss of Instrumentation, SAE contains the condition, "UNPLANNED loss of most (> 75 percent of MCR annunciators (and Annunciator Printer) or indications for > 15 minutes." The 15 minute time allowance is not conservative for the SAE condition. For the SAE, NUMARC does not include a time limit. Once the annunciators are lost, the transient either can be monitored or not. If it cannot be monitored, then the SAE is appropriate. With the WBN EAL wording, if most or all alarms were lost during a transient (unable to monitor transient), an SAE may not be declared for 15 minutes, a nonconservative condition.

The EAL should be revised to be consistent with NUMARC guidance or additional information provided to justify the deviation.

TVA Response

TVA concurs with this comment. The EAL has been revised and the 15 minute time duration has been removed to be consistent with the NUMARC guidance.

NRC Comment 2.0.3.D: Subcategory 2.2 - Loss of Function/Communication

SAE - NUMARC EAL SS4 states:

Complete Loss of Function Needed to Achieve or Maintain Hot Shutdown, Op. Modes: Power Operation, Hot Standby, Hot Shutdown

The WBN SAE EAL 2.2 Loss of Function states:

Complete loss of function needed to achieve or maintain Hot Shutdown (1 or 2)

1. CSF status tree indicates Core Cooling Red
2. CSF status tree indicates Heat Sink Red (RHR not in service)

Comment: The WBN EAL is significantly less conservative than the NUMARC guidance. The NUMARC EAL addresses the "loss of function" rather than waiting until the loss of function to result in putting the plant on a Critical Safety Function (CSF) RED path. The loss of function may occur at a time when all CSF status trees are GREEN. The WBN EAL is not anticipatory and is less conservative because the declaration would be based on the results of the loss which might occur much later. If the function was lost and could not be quickly restored, the declaration should be made immediately. The loss, regardless of path status, represented an actual failure of a function intended for protection of the public and, therefore, warrants the declaration of a Site Area Emergency.

The EAL should be revised to incorporate NUMARC guidance or additional information should be provided to justify the deviation.

TVA Response

TVA does not concur with this comment. TVA considers that WBN Site Area Emergency (SAE) EAL 2.2 is comparable to NUMARC Initiating Condition (IC) SS4. The NUMARC IC is based on a "COMPLETE" loss of function. NRC concluded that WBN SAE EAL 2.2 was not as conservative as the NUMARC IC SS4 and based this on the following two conclusions which TVA believes are in error:

1. The NUMARC IC addresses the potential "loss of function" rather than waiting for the "loss of function" to occur, placing the plant in a CSF Red Path.

2. The loss of function may occur at a time when all CSF status trees are in a Green Path.

The NUMARC ICs were written to focus attention on "functions" rather than "components." For example, in the Fission Product Barrier Matrix the focus is on "loss of sub cooling" rather than on the numerous possible equipment failures that could lead to a loss of sub cooling. This philosophy is clarified in NUMARC NESP-007 Revision 2, EAL Workshop Questions and Answers (Q & A), which defines functions in terms of reactivity control, RCS inventory control, and secondary heat removal.

TVA considers that use of the CSFs in lieu of tabulating combinations of failed components is appropriate. This is substantiated in NUREG-1210 Revision 2, page 15, which states, "Many systems are designed to protect the fission product barriers. The effectiveness of these systems can be assessed in terms of how well they perform a few critical safety functions (CSFs). The critical safety functions will, if maintained, prevent damage to the core." Considering the loss of a single auxiliary feed pump, for example, to constitute a "loss of a function necessary for the protection of the public" when the function of heat removal can be accomplished by other redundant and diverse equipment such that the CSF remains in a Green Path is over conservative and not supported by the SAE definition.

There is additional information on the use of critical safety functions with regards to the EALs on page 3-16 of NESP-007 Revision 2. The discussion therein notes that the definition of a Red Path in the Westinghouse Emergency Response Guides (ERGs) is "an extreme challenge to a plant function necessary for the protection of the public" and is similar to the definition of a Site Area Emergency (i.e., an actual or likely failure of plant functions needed for the protection of the public). The discussion concludes that, "It reasonably follows that if any CSF enters a Red Path, a Site Area Emergency exists." It is important to note that entry into a Red Path results from an "extreme challenge" to a function. Thus, using a Red Path as the basis of EAL 2.2 SAE is anticipatory. Paragraph 6, on page 5-33 of NESP-007 Revision 2, notes that the Emergency Operating Procedures (EOPs) functional restoration guidelines "can arrest core degradation within the reactor vessel in a significant fraction of the core damage scenarios." Thus, a General Emergency would be appropriate only if the functional restoration procedures were ineffective.

NRC Comment 2.0.3.E: Subcategory 2.3 - Failure of Rx Protection

Alert - NUMARC EAL SA2 states:

Failure of Reactor Protective System Instrumentation to Complete or Initiate an Automatic Reactor Scram Once a Reactor Protection System Setpoint Has Been Exceeded and Manual Scram Was Successful. Op. Modes: Power Operations, Hot Standby

Site Area Emergency - NUMARC EAL SS2 states:

Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Scram Once a Reactor Protection System Setpoint Has Been Exceeded and Manual Scram Was NOT Successful.

The WBN EAL for 2.3, Failure of Rx Protection, UNUSUAL EVENT, states:

Rx power Was Not < 5 percent and decreasing after a VALID Auto Trip signal (1 & 2)

1. VALID Auto Trip signal received or required
2. Rx power Was Not < 5 percent and decreasing

Note: Manual Rx Trip from the MCR was successful

The WBN EAL for the ALERT states:

Rx Power Was Not < 5% and decreasing after VALID Auto and Manual Trip signals (1 and 2 and 3)

1. VALID Auto Trip signal received or required
2. Manual Rx Trip from the MCR was Not successful
3. Rx Power Was Not < 5% and decreasing

Note: FR-S.1 has been entered and actions from the MCR were successful in decreasing Rx power to < 5%

Comment: The WBN ATWS EALs involve significant non-conservative deviations from NUMARC guidance. The WBN EALs for the Unusual Event and the Alert classifications are one full classification level below NUMARC guidance. The WBN Alert EAL for the ATWS scenario with an unsuccessful manual trip would be a Site Area Emergency under NUMARC guidance. The licensee recognized the EALs are deviations from NUMARC guidance and had identified SA2 and SS3 as modified in the Appendix C basis document matrix.

As stated in NUMARC/NESP-007, the failure of the RPS to automatically scram the reactor was more than a potential degradation of a safety system in that a front line automatic protection system did not function in response to a plant transient. Thus, plant safety has been compromised and design limits of the fuel may have been exceeded. An Alert is appropriate because conditions exist that lead to a potential loss of fuel clad or RCS (e.g., strong precursor to a core melt sequence). If a manual scram is not successful in reducing power to <5 percent and decreasing, a more serious sequence would be unfolding warranting the declaration of a Site Area Emergency.

The applicant should revise all WBN ATWS EALs to be consistent with the NUMARC guidance or provide adequate justification for the deviations.

TVA Response

After careful deliberation TVA concurs with this comment. The WBN EALs associated with event 2.3, "Failure of Rx Protection," for the Unusual Event, Alert and Site Area Emergency classifications have been revised to be consistent with the NUMARC guidance. However, TVA considers that the guidance on Failure of Rx Protection (ATWS) in NESP-007 Revision 2 is overly conservative. TVA understands that this issue has been discussed in detail between NRC and industry and this issue remains under review for possible revision justification to the NRC by NUMARC. TVA will continue to monitor efforts to revise this guidance.

Recognition Category 4 - Hazards and SED JUDGEMENT

NRC Comment 2.0.3.F: Subcategory 4.5 - Control Room Evacuation

NUMARC EAL HS2 states:

Control Room Evacuation Has Been initiated and Plant Control Cannot be Established. Op. Modes: All

WBN SAE EAL 4.5 Control Room Evacuation states:

Evacuation of the Control Room has been initiated and Control of all necessary equipment Has Not been established within 15 minutes of manning the Auxiliary Control Room (1 and 2 and 3)

1. AOI-27 "Main Control Room Inaccessibility" entered
2. SOS/SED Orders Control Room evacuation
3. Inability to place the transfer switches on Panels L11A and L11B in the Aux position within 15 minutes of manning the Auxiliary Control Room

Comment: The narrative paragraph, preceding the three conditions in the WBN EAL, accurately reflect NUMARC guidance, however, condition #3 does not capture the essence of establishing control. If conditions were severe enough to cause a control room evacuation, placing the Auxiliary Control Room transfer switches in the "auxiliary" position might not effect a transfer for all safe shutdown equipment to Auxiliary Control Room control. Because the evacuation may be under adverse conditions (loss of power, fire, etc.), simply changing switch position may not "establish control." The determination of whether or not control is established at the remote shutdown panel is based upon the judgment of the Emergency Director (ED) who will take all event specific factors into consideration. The ED is expected to make a reasonable, informed judgment on whether or not control is or can be reestablished within the site-specific time.

The applicant should consider modifying the restrictive words of condition 3 to ensure clarity of the EAL.

TVA Response

TVA concurs with this comment. Condition No. 3 of Site Area Emergency EAL 4.5, "Control Room Evacuation," has been revised to state, "Control has not been established at the Remote Shutdown Panel within 15 minutes of manning the Auxiliary Control Room and transfer of switches on Panels L11A and L11B."

Through monitoring at the Remote Shutdown Panel, the Shift Operations Supervisor (SOS) can make a reasonable and informed judgment on re-establishment of plant control.

Recognition Category 5 - Destructive Phenomenon

NRC Comment 2.0.3.G: Subcategory 5.1 - Earthquake

Comment: The phone number listed for the National Earthquake Center in Golden, Colorado is incorrect ((303) 236-1500). The correct number is (303) 273-8500. The incorrect phone number appears in both the Unusual Event and Alert EALs.

The EALs should be revised to include the correct telephone number.

TVA Response

The phone number for the EALs have been revised to reflect the new phone number for the National Earthquake Center.

NRC Comment 2.0.3.H: Subcategory 5.2 - Tornado

NUMARC initiating condition HA1 states:

Natural and Destructive Phenomena Occurring Within the Protected Area. Op. Modes: All

and the NUMARC example EAL 2 for HA1 states:

Tornado or high winds striking plant vital areas: Tornado or high winds greater than (site-specific) mph strike within protected area boundary.

The WBN 5.2 Tornado Alert EAL states:

Tornado or High Winds strikes any structure listed in Table 5-1 and results in VISIBLE DAMAGE (1 & 2)

1. Tornado or High Winds (Sustained >80 mph >1 minute) strikes any structure listed in Table 5-1
2. (a or b)
 - a. Confirmed report of any VISIBLE DAMAGE
 - b. Control Room indications of degraded Safety System or component response due to event

Comment: The WBN EAL is inconsistent with NUMARC guidance HAl, #2 and #3 on page 5-42 of NUMARC/NESP-007 in that both conditions were required. The WBN EAL combines the two separate NUMARC EALs and requires both conditions for declaration of an Alert. If a tornado or high winds are above FSAR values, the plant would be beyond design basis, without regard to damage and, therefore, an Alert declaration is warranted. If there are reports of any damage, regardless of whether the tornado or high winds struck the vital areas, then again, an Alert classification is warranted. Combining both NUMARC EAL #2 and #3 into one EAL by requiring both conditions, was neither conservative nor consistent with NUMARC guidance.

The applicant should revise the EALs to be consistent with NUMARC guidance or provide adequate justification for the deviation.

TVA Response

TVA does not concur with this comment and considers that the interpretation of NUMARC EAL HAl, as stated, is incorrect. TVA considers that the proposed WBN EAL 5.2, "Alert," is consistent with the fundamental definition of an Alert and with the responses contained in the EAL Workshop Questions & Answers section of NESP-007 Revision 2 (see page 23).

NUMARC IC HAl specifies "Natural and Destructive Phenomena Affecting the Plant Vital Area." EAL No. 3 specifies "Report of any visible damage on any of the [suggested] plant structures." EAL No. 4 specifies "(Site Specific) indications in the control room." NUMARC EAL Nos. 1, 2, 5, 6 and 7 address respectively, operating basis earthquake (OBE), tornado, vehicle crash, turbine failure and other. It is TVA's position that the intent of HAl was to have EAL Nos. 3 and 4 act as discriminators for the other EALs. This is the protocol in WBN EAL 5.2, "Alert." TVA believes that specifying damage or degradation distinguishes against events of little or no consequence. Consequential damage (e.g., loss of AC power, loss of function) is assessed on the basis of other EALs. It is important to note that basing the EAL on structural damage, in and of itself, is anticipatory in that damage to the equipment contained within the structures is not a given conclusion. Our position is further supported by the following:

1. The fundamental definition of an Alert is expressed in terms of "Actual or Potential substantial degradation in the level of safety of the plant." Without consideration of EALs Nos. 3 and 4, a conclusion of "substantial degradation" cannot be made. These type events, without observation of structural damage or equipment performance degradation, would constitute no more than an Unusual Event (i.e., events are in progress or have occurred which indicate a potential degradation in the level of safety).
2. The basis for NUMARC HUl, "Natural and Destructive Phenomena Affecting The Protected Area," EAL No. 3 states, "a Tornado striking (touching down) within the protected boundary may have potentially damaged plant structures containing functions or systems required for safe shutdown of the plant. If such damage

is confirmed visually or by other in-plant indications, the event may be escalated to an Alert." TVA believes that this statement represents the intent of NUMARC and supports our position.

3. In the EAL Questions and Answers section of NUMARC NESP-007 Revision 2, question 11 on page 23 addresses tornado and other high wind conditions and notes that wind speed data may not be available. The response to this question (in part) states, "For tornadoes or other high wind conditions, damage exceeding HA1/EAL No. 3 would be prima facie evidence of winds exceeding design basis."
4. The NUMARC EAL HA2 on fires and explosions incorporates an EAL on visible structural damage or degraded plant indications, similar to that which TVA incorporated into Alert EAL Nos. 4.1, 4.2, 5.2, and 5.3. The inherent consequences of a tornado are similar to those of a fire or explosion. The plant design takes into consideration the effects of a tornado and it does not follow that a tornado would cause a substantial degradation in the level of safety of the plant.

Recognition Category 7 - Radiological

NRC Comment 2.0.3.I: Subcategory 7.3 - Radiation Levels

NUMARC EAL AU2 states:

Unexpected Increase in Plant Radiation Levels or Airborne Concentration. Op. Modes: All

WBN EAL 7.3, Radiation Levels, Unusual Event states:

UNPLANNED Increase in Radiation levels within the Facility

1. VALID area Radiation Monitor readings increase by a factor of 1000 over normal levels for > 15 minutes

Comment: The licensee has added a condition that the radiation levels must be present for greater than 15 minutes, a condition not present in the NUMARC EAL. The same condition was added to the WBN Alert EAL corresponding to NUMARC EAL AA3. The WBN Appendix C basis document contained no basis or explanation for the 15 minute time period. The fact that radiation levels have increased to 1000 times normal indicates a loss of control sufficient to declare the event, regardless of whether the situation can be corrected within 15 minutes. For the Alert, the fact that safe operation was impeded, irrespective of time, would warrant an Alert declaration.

The EAL should be revised to remove the 15 minute threshold to be consistent with NUMARC guidance or the applicant should provide justification for the deviation.

Comment Response:

TVA concurs with this comment. The EAL has been revised and the 15 minute time duration has been removed to be consistent with the NUMARC guidance. TVA agrees that if operator actions or plant conditions are impeded due to radiation levels within the plant, then the referenced EAL has been reached and the classification should be declared.