

JUN 15 1988

In Reply Refer To:  
Dockets: 50-313  
50-368

Arkansas Power & Light Company  
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Gentlemen:

This is to acknowledge receipt of changes to the AP&L emergency plan transmitted to this office by your letter dated March 30, 1988, in accordance with the requirements of 10 CFR 50.54(q) and Appendix E to 10 CFR Part 50.

The changes have been reviewed by the staff. The following observations resulted from differences between the example initiating conditions of Appendix 1, NUREG-0654, and the new EALs used by AP&L to classify emergencies. Each observation begins with a reference to the appropriate 0654 Appendix 1 initiating condition. These differences could result in a less conservative or less timely classification of accident conditions than intended by existing regulatory guidance. As a result, the licensee should consider EAL changes as shown below.

Since differences exist between the units, EPIP 1903.10 describes two sections of EALs, one each for Units 1 and 2. The following comments apply to both units unless otherwise noted.

- a. (NOUE No. 1) Delete the phrase "after receipt of an ES signal."  
(EAL 1.1). Any inadvertent initiation of ECCS, with flow to the vessel, should be the subject of an unusual event classification.
- b. (NOUE No. 2, ALERT No. 15) Verify that essential power is available to dose assessment computers to convert effluent monitor indications to the EAL values listed in EALs 5.1, 5.2, or provide a means to convert effluent monitor units (counts per minute) into appropriate offsite dose related units (MPC, mR/hr).
- c. (NOUE No. 10) Add the condition that if a fire inside the protected area continues for more than 10 minutes, the licensee should declare an NOUE (EAL 7.5).
- d. (NOUE No. 11) Remove the following modifying condition stated in EAL 6.4, 1.D., "The affected ventilation exhaust fans are running." The loss of dose assessment capability should result in a NOUE declaration without regard to ventilation fans operating. Other motive forces, such as pressure, may cause a release.

RIV:NMEPB  
NMTer:ap  
6/8/88

C:NMEPB  
WLFisher  
6/9/88

C:DRP/A  
DChamberlain  
6/14/88

D:DRP  
LJCallan  
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AI 88-134

8806210155 880615  
PDR ADOCK 05000313  
F PDR

ADHS  
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/10

- e. (NOUE No. 12) Remove the modifier, "Ongoing . . ." from EAL 7.1, dealing with a security threat. The condition should result in a NOUE declaration even if the event is not ongoing. An ongoing threat is the subject of an Alert declaration.
- f. (Alert No. 1.b) Verify that if 1 percent fuel failure is intended as the threshold indicator of severe loss of fuel cladding, then 400 uCi/gm specific I-131 (versus DEI-131) is the equivalent EAL (1.3). The same verification applies to EAL 1.2, NOUE, 0.1 percent failed fuel = 40 uCi/gm specific I-131.
- g. (Alert No. 5, Unit 2) Be sure that the EAL uses 50 gpm. This is a more conservative value of primary leakage for loss of RCS (primary) integrity (EAL 2.2). As written, a leak rate of approximately 130 gpm could exist before an Alert declaration. This action is not consistent with the conservative and anticipatory philosophy of NUREG-0654, and it affects other EALs (e.g., 2.3).
- h. (Alert No. 15) Remove the time modifier, "Projected dose rates . . . indicate greater than 10 MPC for greater than one hour at the site boundary." (EALs 5.1 and 5.2) The staff should classify the emergency based on radiological effluents (dose rates) as well as integrated dose rates (doses).
- i. (SAE Nos. 6 and 7) Add a time limit (e.g., 15 minutes) to existing EALs regarding the total loss of AC or DC power for an extended period of time (EALs 4.4 and 4.5). As written, the EAL plant degradation will occur before the EAL is exceeded to the extent that subcooled margin to boiling would be reduced to 50°F. At that time the staff will make the SAE declaration. For the type of event postulated, this could take hours. Because of this, the EAL, as written, does not retain the early warning conservatism of NUREG-0654.

In a related issue, the Unit 2 EAL 4.5 states that a loss of all vital DC power must be accompanied by a total loss of AC power before declaration of an SAE. Modify the EAL to declare an SAE upon loss of all vital DC for an extended time, about 15 minutes. The SAE can be declared without contingency upon AC power availability. In the event of a serious emergency during the loss of DC, normal staffing (especially back-shifts) would not permit a timely manual operation of breakers necessary to mitigate the emergency.

- j. (SAE No. 9) Remove Unit 1 EAL 6.3 regarding a reactor scram signal without rod insertion. The EAL states, "AND 2. Subsequent efforts to manually trip the reactor fail." Operators interpreted the EAL to mean that, notwithstanding continued power generation following the trip signal, reactor shutdown occurring by other mitigative strategy warrants only an Alert declaration. The EAL could state that an SAE is declared when a scram occurs without reactor shutdown.

- k. (SAE No. 18) Add time constraints to EALs about evacuation of the Control Room (EAL 6.9). An SAE should be declared in about 15 minutes if evacuation of the control room must take place before verifying shutdown control of the reactor. The conservatism implied in the use of a time limit is lost by waiting for further plant degradation (e.g., loss of subcooled margin to boiling of less than 50°F prior to classifying the accident).
- l. (GE No. 2) Modify EAL 1.8 to reflect that the loss or challenge, in any combination, of the three fission product barriers, would result in a General Emergency.

In addition, the licensee should consider the following items:

- a. Following loss of the first and second fission product barriers, consider the inability to monitor the third fission product barrier's integrity as equivalent to the loss of that barrier.
- b. Define the term "fission product barrier," and the relationship of integrity and thresholds of failure.
- c. The ANO EAL basis document addresses the term "challenge," but this term was not included in the classification procedure. Address the term challenge in the classification procedure to aid the user.
- d. The Basis Document defined challenge as "containment pressure greater than 59 psig," or "Hydrogen concentration in containment greater than 3.5%." These values are at or near design. The licensee needs to consider a more conservative definition of challenge, such as "Containment pressure is 15 psig, increasing, with low probability of restoring heat removal system capability to reduce pressure/temperature."

If you have any questions in regard to your transmittal, please contact Mr. N. M. Terc at (817) 860-8129.

*Original Signed By:*  
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