

JUN 20 1984

Docket No. 50-458

Mr. William J. Cahill, Jr.  
Senior Vice President  
River Bend Nuclear Group  
Gulf States Utilities Company  
Post Office Box 2951  
Beaumont, Texas 77704  
ATTN: Mr. J. E. Booker

Dear Mr. Cahill:

SUBJECT: Request for Additional Information - Emergency Action Levels

The staff has completed its review of the Emergency Classification Scheme contained in Section 13.3.3 of the River Bend Station Radiological Emergency Plan, Amendment 11 to the FSAR, dated January 1984. As a result of our review we find that the additional information/clarification delineated in the enclosure is required on the Emergency Action Levels (EALs) listed in Table 13.3-1 of the Plan before we can conclude that the EALs conform to the guidelines expressed in Appendix 1 to NUREG-0654. A preliminary discussion of these items was held with your staff on May 11, 1984.

Please provide your response to the enclosed staff comments within 45 days.

If you desire any discussion or clarification on the information requested, please contact NRC Project Manager, Edward Weinkam, 301/492-8349.

Sincerely,

A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing

Enclosure: As stated

cc: w/enclosure  
See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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A. Schwencer, Chief  
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River Bend

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West Feliciana Police Jury  
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REVIEW OF THE RIVER BEND STATION EMERGENCY  
ACTION LEVELS

GENERAL

The comments pertain to the EALs found in Table 13.3-1 of the River Bend Station Emergency Plan, dated January 1984. Emergency classification and action level schemes compatible with NUREG-0654, Appendix 1 have been established. Some setpoints for various EALs are not yet given. These should be determined upon NRC approval of the Technical Specifications and inserted into the appropriate places. The following EALs are in need of further revision.

Alert

Initiating Condition 4 (Steam line break with significant MSIV malfunction causing leakage). The EALs should include a steam line break inside of primary containment. The applicant's EAL for Site Area Emergency covers BWR Steam line break outside containment without isolation.

Site Area Emergency

Initiating Condition 8 (Complete loss of any function needed for plant hot shutdown). The proposed EALs address failure to scram the reactor, not loss of functions needed for plant hot shutdown. The EALs should include the loss of essential systems that would prevent hot shutdown. For example, "Inoperable RHR system or RHR heat sink or all safety/relief valves are inoperable."

### General Emergency

Initiating Condition 2 (Loss of 2 of 3 fission product barriers with a potential loss of 3rd barrier). The EAL set seems to address one but does not adequately address the three permutations of failures for two out of three fission product barriers. The EALs address only radiation releases which are assumed to correlate to a loss of fuel cladding and the primary coolant boundaries and a containment pressure exceeding 15 psig for more than 15 minutes which indicates a potential loss of the containment boundary.

Initiating Conditions 6a, 6b, 6c, and 6d (BWR Accident Sequences). Table 13.3-1 lists one EAL set for all four BWR sequences. This EAL set is interpreted as follows:

"High Drywell Pressure or Low Reactor Water (LOCA), and  
Loss of offsite and onsite AC power for more than 15 minutes, and  
Loss of onsite DC Power for more than 15 minutes, and  
No suppression pool cooling for more than 30 minutes, or  
Loss of onsite DC power for more than 10 hours."

This EAL set indicates some of the conditions for each BWR sequence, but it does not completely address each one. The generality of the EAL set does not

allow for explicit and unique characterization of some of the conditions found in these sequences. It is suggested that an EAL set be prepared for each example BWR sequence listed in NUREG-0654, Appendix 1. Some recommended generic EALs for each sequence are given below.

6a. Transient and Failure of Core Shutdown Systems

The main point of this sequence is that the reactor is producing power without adequate heat sinks. Appropriate EALs for this example BWR sequence and for a number of others involving failure to scram would be cases where the reactor remains critical after a trip with any of the following:

- ° very high reactor pressure,
- ° rapidly increasing containment or suppression pool temperature, and
- ° rapidly increasing containment pressure.

6b. LOCA with ECCS Failure Leading to Core Melt

This sequence is a LOCA with ECCS failure that has resulted in damaged fuel. If the ECCS continues to malfunction core melting will occur, which is grounds for declaring a General Emergency. Generic EALs would be:

- ° EALs for indicating a LOCA (e.g., high drywell pressure or low reactor water), and
- ° Gap activity in reactor coolant or steam or the core is uncovered, and ECCS malfunction.

6c. LOCA with Unsuccessful Containment

This sequence assumes that a LOCA has occurred with the ECCS functioning properly. However, containment cooling has failed which, in time, would lead to a loss of the ECCS and core melt. Generic EALs are:

- ° A small or large LOCA has occurred, and
- ° Containment temperature has become excessive and is still rising, or
- ° Containment cooling is inadequate for 30 minutes or more.

6d. Shutdown without Heat Removal Means

This sequence in simple terms means that all heat sinks have been lost. Generic EALs would be:

- ° RHR not functional or no standby service water, and



- ° Main feedwater condenser system not functional or no circulating water system, and
- ° RCIC not functional or excessive suppression pool temperature.

There may be other heat sink systems at River Bend Station that were not called out above.

Protective Action Decision making EALs (General Emergency Conditions)

The applicant lists acceptable protective actions to be taken under General Emergency conditions. They are listed in Table 13.3-1 under footnote 7, and adhere to the intent of the protective action decisions in NUREG-0654, Appendix 1.

Additional Comments

The following NUREG-0654, Appendix 1 example initiating conditions were not addressed in Table 13.3-1:

Unusual Event 13b

Alert 17b



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River Bend

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