



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

PROPOSED CHANGES TO THE EMERGENCY PLAN

TEXAS UTILITIES ELECTRIC COMPANY

COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-445 AND 50-446

1.0 INTRODUCTION

By letter dated October 15, 1998, as supplemented by letters dated April 7 and May 28, 1999, Texas Utilities Electric Company (the licensee) submitted proposed changes to the Comanche Peak Steam Electric Station Emergency Plan (CPSESEP). The licensee stated that the emergency plan changes were submitted for NRC staff review and approval as required by Title 10 of the Code of Federal Regulations, Section 50.54(q) (10 CFR 50.54(q)). The licensee indicated that the proposal also involved other changes to the emergency plan, which would likely be judged as not requiring NRC approval but were included as part of this request because they are small, were identified at the same time, and are not deemed to warrant processing as a separate amendment. Attachment 1 to the October 15, 1998, letter provided a description of the proposed changes and associated justifications. In the May 28, 1999, letter, the licensee indicated that all of the proposed changes to the CPSESEP were submitted to the NRC for review and approval in accordance with 10 CFR 50.54(q).

2.0 APPLICABLE REGULATIONS AND GUIDANCE

The NRC's requirements concerning emergency plans and preparedness for nuclear power facilities are contained in 10 CFR 50.47, "Emergency plans" and in Appendix E to 10 CFR Part 50, "Emergency Planning and Preparedness for Production and Utilization Facilities." In this regard:

- (1) 10 CFR 50.47(b)(1) states, in part, "...and each principal response organization has staff to respond and to augment its initial response on a continuous basis."
- (2) 10 CFR 50.47(b)(2) states, in part, "On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available...." (Emphasis added)
- (3) 10 CFR 50.54(q), states, in part, "A licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in §50.47(b) and the requirements in [A]ppendix E to this part...."

(4) 10 CFR Part 50, Appendix E, Section IV, "Content of Emergency Plans," Subsection A.6, states, "A description of the local offsite services to be provided in support of the licensee's emergency organization." (Emphasis added)

Regulatory Guide (RG) 1.101, Revision 2, "Emergency Planning and Preparedness for Nuclear Power Reactors," provides acceptable methods for implementing the requirements of 10 CFR 50.47 and Appendix E to 10 CFR Part 50. RG 1.101, Revision 2, states, in part:

The criteria and recommendations contained in Revision 1 of NUREG-0654/FEMA-REP-1 are considered by the NRC staff to be acceptable methods for complying with the standards in 10 CFR 50.47 that must be met in on-site and off-site emergency response plans.

### 3.0 BACKGROUND

The licensee stated in its October 15, 1998, letter that the emergency plan changes were submitted for NRC staff review and approval as required by 10 CFR 50.54(q). The licensee indicated that the changes, except as noted, were categorized to be either in a "grey area" (undefined) with respect to current guidance and understanding of what may be deleted or otherwise changed under 10 CFR 50.54(q) without prior NRC approval, or a potential decrease in the effectiveness of the current CPSESEP and, therefore, require prior NRC approval. The licensee indicated that the proposal also involved other changes to the emergency plan, which would likely be judged as not requiring NRC approval but were included as part of this request because they are small, were identified at the same time, and are not deemed to warrant processing as a separate amendment. Attachment 1 to the October 15, 1998, letter provided a description of the proposed changes and associated justifications.

On March 24, April 1, and May 20, 1999, telephone conversations were conducted with the licensee to obtain additional information concerning the proposed changes. Following these telephone conversations, the licensee submitted revised change descriptions, justifications, and supplemental plan changes in letters dated April 7 and May 28, 1999.

### 4.0 REVIEW CRITERIA

In accordance with 10 CFR 50.54(q), a condition of the license, a licensee is to follow and maintain in effect an emergency plan which meets the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50. Licensees may make changes to this plan without Commission approval only if the changes do not decrease the effectiveness of the plan and the plan, as changed, continues to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50. Proposed changes that decrease the effectiveness of the approved emergency plan may not be implemented without application to and approval by the Commission.

As indicated in its October 15, 1998, and May 28, 1999, letters, the licensee requested NRC approval for all the proposed changes identified in the October 15, 1998, letter. The staff reviewed these proposed changes using:

NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," dated October 1980, which is endorsed by RG 1.101, Revision 2, "Emergency Planning and Preparedness for Nuclear Power Reactors," dated October

1981, as an acceptable method by which licensees may develop site specific emergency plans; and

Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements," dated December 1982, which provided clarification of guidance regarding acceptable means for meeting some of the basic emergency preparedness requirements. Supplement 1 to NUREG-0737 was issued to all reactor licensees by Generic Letter No. 82-33, dated December 17, 1982.

During this review, it was noted that CPSESEP Table 1.1, "Staffing Requirements for Emergencies," links the licensee's capability for 40- and 70-minute emergency staffing to the declaration of the Alert and Site Area or General Emergency classification, respectively, and to specific emergency response facility (ERF) activation time goals. (Table B-1, NUREG-0654, indicates that licensees are to have the capability to augment the emergency staff at any emergency and does not link the capability for addition of staff or their response time goals to a specific emergency classification or to specific ERF activation time goals.)

By itself, Table 1.1 would not provide for the timely augmentation of staff as required by 10 CFR 50.47(b)(2) because classifications are not time-dependent and preclude the capability for additions in the times indicated in Table B-1, NUREG-0654 (Table 2, Supplement 1 to NUREG-0737), for any emergency. However, the licensee indicated in its April 7, 1999, letter, that a change would be made to Section 1.1.2, "Response," of the CPSESEP by adding a sentence stating: "Prior to declaring an Alert, the Shift Manager (Emergency Coordinator) has the authority to call in any portion of the augmentation staff specified in Table 1.1 as may be required for emergency response." Adding this sentence removes the linking of the licensee's capability for addition of staff to emergency classification and to specific ERF activation time goals.

## 5.0 DESCRIPTION OF PROPOSED CHANGES TO THE CPSESEP

The licensee has proposed the following changes to the CPSESEP:

### 1. Page 1-10, Section 1.2.2, "Local Services Support"

Delete the sentence "The following organizations are the local support groups which have agreed to provide services, if requested:" and the six (6) organizations immediately following in bullets. Revise the preceding sentence which refers to letters of agreements in Section 15.0, Appendix H, to add the words "which identifies the local services support organizations".

The licensee indicates that this information is redundant to information in Appendix H of the CPSESEP. However, in the March 15, 1998, submittal, the local offsite support agencies were listed but a description of the services to be provided was not included in Appendix H. This information was in Section 1.2.2 of the CPSESEP. Appendix E to 10 CFR Part 50, Section IV.A.6, requires the plan to contain a description of the local offsite services to be provided in support of the licensee's emergency organization. In the April 7, 1999, letter, Appendix H of the CPSESEP now lists the supporting organizations and describes the services to be provided in support of an emergency at CPSES.

2. Page 1-11, Section 1.2.3, "Private Sector Support"

Delete the underlined words in the sentence: "The following organizations have agreed to provide services, if requested:"

The licensee indicates that this change is for clarification in that the underlined words imply that a letter of agreement exists with the organizations described in bullets. The licensee states that letters of agreement are not maintained with all of the organizations described (i.e., American Nuclear Insurers; Westinghouse Corporation). Section 1.2.3 identifies the support agencies and indicates where letters of agreements exist or where the services to be provided are a condition of a plan or policy.

3. Page 1-12, Section 1.2.4, "State Agencies"

1. Delete the word "lead" from the description of the State Division of Emergency Management (DEM).
2. Revise the description of the Texas Department of Health (TDH).

Change 3.1 - The licensee states that this change is for clarification in that the use of the words "lead agency" in the description of the DEM implied there is more than one coordinating agency for the State's emergency response. The licensee indicates that the Texas DEM is the one and only designated coordinating agency for the State of Texas. Within the description of the DEM, the licensee indicates it states that the Director of the DEM assumes overall direction and control of the State's response to an emergency condition at CPSES.

Change 3.2 - The licensee states that this change is for clarification and the revised wording more accurately reflects the role of the TDH as described in the State of Texas Emergency Management Plan. The revised wording indicates that the TDH, Bureau of Radiation Control, is responsible for providing technical assistance and advice to local governments during a radiological emergency at CPSES.

4. Page 1-13, Section 1.2.5, "Federal Agencies"

Delete statements concerning the NRC's mobile laboratory.

The licensee states that this is to be deleted because the NRC has discontinued this program. While the NRC's mobile laboratories may be used for other programs within the NRC, they are not now intended to be used for incident response.

5. Table 1.1, "Staffing Requirements for Emergencies"

- (a) Delete dedicated Engineer 40-minute responder and add one additional member to the TSC Engineer Team responding at 70 minutes;
- (b) Revise footnote annotations of (\*) and (\*\*), respectively; and
- (c) Add footnote "(c)" to on-shift minimum staffing column.

Change 5(a) - The licensee proposes to delete the Engineer responding at 40 minutes and add one additional member to the TSC Engineering Team responding at 70 minutes. The licensee's justifications for this change are:

1. The increase in the credible planning basis for the time from the initiating event to start of atmospheric release reduces the immediacy for providing augmented technical support; information needed for quantifying fuel damage would not be required or available until some time after the TSC is expected to be activated.
2. The CPSES TSC Engineering Team would be increased from three to four members and the TSC is staffed/activated within 70 minutes of the Alert.
3. The recent development and availability of the CPSES Response and Severe Accident Management Guidelines enhance the resources immediately available to the on-shift operating crew and serve to make the initial response to a severe accident situation more manageable.
4. The installation and application of new systems/equipment such as the Safety Parameter Display System and Radiation Monitoring System provide for easy monitoring and trending.

The proposed revision would allow the Core Thermal/Hydraulic (CTH) Engineer position to be augmented in 70 minutes following an emergency declaration rather than in the current 40 minutes. The job descriptions for the Shift Technical Advisor (STA), the 40-minute Engineer responder, and the 70-minute TSC Engineering Team were not submitted in the licensee's March 15, 1998, letter. The licensee did add to the justification for this change, in the April 7, 1999, letter, that the current Section 1.1.2.2 of the CPSESEP specifies the support available to the control room, which includes a description of the TSC Engineering Team. This support includes "engineering data analysis including core thermal hydraulics."

Change 5(b) - The licensee changed (\*) and (\*\*) to (a) and (b), respectively, and indicates that this change enhances table readability and reduces the potential for misinterpretation.

Change 5(c) - The licensee proposes to add footnote "(c)" to the on-shift minimum staffing column. This would allow, upon exercising certain compensating actions (not provided), a temporary exception to the on-shift minimum staffing requirements due to unforeseen circumstances (e.g., personal illness). Further, the licensee indicates that the addition of this footnote is consistent with similar provisions allowed for the on-shift crew in the CPSES Technical Specification and the Final Safety Analysis Report.

Staffing requirements for normal operations are defined in 10 CFR 50.54(m)(2)(i) and it allows temporary deviation from specified numbers in accordance with criteria established in the unit's technical specifications. Staffing requirements for emergencies are defined in 10 CFR 50.47(b)(1) and (2) and Section IV.A of Appendix E to 10 CFR Part 50. Guidance regarding minimum staffing for emergencies is provided in Table B-1 of NUREG-0654. In its April 7, 1999, letter, the licensee clarified the footnote as follows:

(c) The minimum on-shift crew composition may be one (1) less than the minimum specified for any position during normal operations for a period of time not to exceed two (2) hours in order to accommodate unexpected absence, [sic] provided immediate action is taken to fill the required position. This exception does not permit any crew composition to be

unmanned upon shift turnover due to an oncoming crew member being late or absent. This exception is not applicable during declared emergencies.

Consequently, the footnote would not apply to meeting the minimum on-shift staff requirement for emergencies.

6. Table 1.2, "Predetermined Response Actions"

Add a predetermined response action statement to "recommend protective actions to offsite officials" at classification of a General Emergency.

The licensee indicates that this response action is already stated under the purpose of a General Emergency in Section 1.1.2 of the CPSESEP and is being included in Table 1.2 to provide consistency.

7. Page 3-1 thru 3-4, Section 3, "Notification Methods and Procedures"

Revise and reformatted all Section 3 information.

The licensee indicates that this proposed change revises and relocates information from Sections 3.0 through 3.6 to Sections 3.0 and 3.1. The licensee states that the changes reformat/clarify content, define "Initial Notifications" and "Followup Notification" and identify to whom these notifications are sent, specify the content of the Initial and follow-up notifications, identify time requirements for these notifications and allow State and local authorities to specify the frequency for receiving follow-up notifications if their need is different from 1 hour. Other changes, such as redundant requirements for the Shift Manager, are deleted and information has been rearranged, revised and relocated.

8. Page 7-3, Section 7.3.1, "Onsite Radiological Assessment"

1. Change Chemistry/Environmental Technicians to Chemistry Technicians.
2. Change the responsibility statement of the Technical Support Center (TSC) Onsite Radiological Assessment Coordinator (ONRAC) and Emergency Operations Center (EOF) Radiation Protection Coordinator (RPC) for functions of onsite and offsite radiological assessment and survey activities to be effective upon activation of the TSC and EOF, instead of the declared emergency classifications of Alert and Site Area Emergency, respectively. This change also deletes "onsite" from the scope of the overall radiological assessment responsibilities assumed by the RPC when the EOF is activated.

Change 8.1 - The licensee indicates that this change reflects the current position title and the CPSES organization.

Change 8.2 - This change would also have the functions of onsite and offsite dose assessment be done following the activation of the TSC and EOF, respectively. The licensee is to have this capability within 40 and 70 minutes of the emergency. Section 1.1.2.1 of the CPSESEP indicates that the licensee retains an on-shift dose assessment capability. The TSC and EOF activations are classification dependent; i.e., Alert or higher, respectively. However, as

discussed in Section 4.0, herein, the licensee unlinked the capability for addition of staff for emergencies to classification.

The licensee also proposes to delete "onsite" from the scope of the overall radiological assessment responsibilities assumed by the RPC when the EOF is activated. As described in Table 1.1 of the CPSESEP, onsite radiological assessment is the responsibility of the on-shift RP Technician. As discussed in Section 4.0, herein, the licensee unlinked the capability for addition of staff for emergencies to classification and provided the capability to augment this function with an RP Technician within 70 minutes of an emergency.

9. Page 7-3, Section 7.3.2, "Offsite Radiological Assessment"

Change the RPC's responsibility for assuming the coordination of offsite radiological monitoring and assessment from "In the event a Site Area Emergency or General Emergency is declared" to "Once the EOF is activated".

The licensee indicates that this change allows the RPC to assume this responsibility earlier and independent of event emergency classification. The RPC's responsibility for assuming the coordination of offsite radiological monitoring and assessment would be dependent upon the activation of the EOF. Section 1.1.2.1 of the CPSESEP indicates that the licensee has the capability to perform dose assessments on-shift. Additionally, as discussed in Section 4.0, herein, the emergency coordinator—person in charge of the emergency—may call staff in at any emergency. While the EOF is activated at the Site Area or General Emergency, this change would not be affected when the RPC could be called in to perform this task; only when the responsibility was assumed.

10. Page 8.2, Section 8.1.6, "Radioprotective Drugs"

Revise to add a sentence on the maintenance of Potassium Iodide (KI) supplied by TU Electric and clarify a statement of KI use with respect to the contents of State or local government emergency plans and procedures.

The licensee indicates that this change clarifies that the KI supplied by TU Electric to onsite and offsite locations is maintained in accordance with Appendix J of the CPSESEP. Additionally, the licensee states this will clearly reflect what is described in the State and local plans or procedures with respect to KI use.

11. Page 12-2, Section 12.2.4, "Radiological Monitoring Drills"

Revise to provide consistency with other statements in the CPSES Emergency Plan and change the scope of monitoring activities to be performed in drills by CPSES personnel assigned to radiological monitoring teams.

In its April 7, 1999, letter, the licensee clarified this change and indicated that it pertains only to the task of and drilling in analyzing media other than air. Section 12.2.4 of the CPSESEP states "CPSES personnel participate in drills to demonstrate the collection of water, vegetation, and soil. This is in addition to CPSES required annual drills for collecting and analyzing air samples and performing beta-gamma exposure rate determinations." Section 1.2.4, "State Agencies," of the CPSESEP states that the State of Texas (Bureau of Radiation Control) has the capability and responsibility to monitor and analyze environmental samples.

12. Appendix B, "Time/Distance/Dose (Thyroid) Curve For A LOCA Condition at CPSES"
- Appendix C, "Time/Distance/Dose (Whole Body Gamma) Curve For A LOCA Condition at CPSES"
- Appendix D, "Time/Distance/Dose (Whole Body Total) Curve For a LOCA Condition at CPSES"

Delete Appendix B, C and D from the CPSES Emergency Plan

The licensee indicates that these graphs are not used or referenced as a planning basis for determining offsite protective action recommendations and that Section 7.0, "Accident Assessment" and Section 8.0, "Protective Response" of the CPSESEP encompass the intent of these graphs in accordance with the guidance of RG 1.101, Revision 2. Section 1.1.2.1 of the CPSESEP indicates that the licensee has the capability to perform dose assessments on-shift. The licensee retains the capability to perform dose assessments without these graphs using CPSESEP Procedure EPP-303, "Operation of Computer Based Emergency Dose Assessment System," which describes the computer based dose projections performed for the Plume Exposure Emergency Planning Zone in response to an unplanned release of radioactive material to the environment.

13. Page J-2 thru J-4, Appendix J, "Emergency Equipment and Supplies"

Revise all Appendix J information.

The licensee indicates that this change revises all information to eliminate redundancy, unnecessary and meaningless detail, ambiguities and erroneous information, and to delete certain listed items of equipment and supplies. The licensee stated that certain items of equipment/supplies were being deleted in that TU Electric no longer maintains those items at the CPSES ERFs. Additionally, the licensee states that the list of supplies/equipment in Appendix J is typical and the actual supplies/equipment are maintained in emergency plan implementing procedures and related quarterly inventory logs. The licensee indicated that this change would update Appendix J and provide consistency with CPSESEP sections involving emergency equipment.

14. Page Q-4, Appendix Q, "Definitions"

Add a definition titled "Periodic Definitions" that defines the terms "monthly", "quarterly", "semi-annual or semi-annually", and "annual or annually" as used in the CPSES Emergency Plan.

In its April 7, 1999, letter, the licensee withdrew the proposed definition of "12 months."

## 6.0 CONCLUSION

In that there is no decrease in the effectiveness of the plan and the plan, as changed, continues to meet the planning standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50, NRC approval is not required and the licensee may implement the changes, as described herein, pursuant to 10 CFR 50.54(q). It should be noted that:

1. With regard to Change 5(a), described in Section 5.0, herein, Section 1.1.2.1 of the CPSESEP indicates the STA's duties include CTH responsibilities. In its April 7, 1999, letter, as discussed in Section 4.0, herein, the licensee has the capability to augment staff



for any emergency. Consequently, the engineer with CTH expertise could respond within 70 minutes of an emergency involving potential core damage to relieve the STA of that duty. Based upon (a) the current functional description of the STA; (b) the qualification of the STA to perform CTH assessments (Section 1.1.2.1 of the CPSESEP); (c) overall control room staffing level and distribution of responsibilities (Table 1.1 and Section 1.1.2.1 of the CPSESEP); and (d) the licensee's capability to augment this position in 70 minutes of an emergency (Table 1.1 of the CPSESEP), this change is acceptable contingent upon the preceding factors remaining constant.

2. With regard to Change 5(b), as described in Section 5.0, herein, during this review, it was noted that footnote "(a)" is applied to the on-shift communicator which indicates the position "may be provided by on shift or augmentation personnel assigned other functions." Table B-1 of NUREG-0654, indicates the major functional area of Notification/Communications may be performed by the engineering aide to the shift supervisor and that the position is dedicated to notification/communication for emergencies. Annotating the position with this footnote could indicate the position would not be dedicated. In its April 7, 1999, letter, the licensee indicated that Table 1.1 would be changed such that the position of "I&C Technician" is now "Communicator" without footnote "(a)." Consequently, a dedicated communicator position would be established when an emergency occurred.
3. With regard to Change 7, as described in Section 5.0, herein, the revised "Notification and Procedures" portion of the CPSESEP remains adequate to meet the requirements of 10 CFR 50.47(b) and Appendix E.

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