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Ref. # 10 CFR 52

November 18, 2009

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555  
ATTN: David B. Matthews, Director  
Division of New Reactor Licensing

**SUBJECT:** COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 3 AND 4  
DOCKET NUMBERS 52-034 AND 52-035  
RESPONSES TO REQUESTS FOR ADDITIONAL INFORMATION  
NO. 2864, 3295, AND 3327

Dear Sir:

Luminant Generation Company LLC (Luminant) herein submits responses to Requests for Additional Information No. 2864, 3295, and 3327 for the Combined License Application (COLA) for Comanche Peak Nuclear Power Plant Units 3 and 4. The affected COLA pages are included with the responses.

Should you have any questions regarding these responses, please contact Don Woodlan (254-897-6887, Donald.Woodlan@luminant.com) or me.

The commitments made in this letter are specified on page 3.

I state under penalty of perjury that the foregoing is true and correct.

Executed on November 18, 2009.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

- Attachments
1. Response to Request for Additional Information No. 2864 (CP RAI #32)
  2. Response to Request for Additional Information No. 3295 (CP RAI #70)
  3. Response to Request for Additional Information No. 3327 (CP RAI #78)
  4. Electronic Attachments (on CD)

DO90  
NCO

cc: Stephen Monarque w/all Attachments

Electronic Distribution w/Attachments 1-3

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Portfolio of .pdf files

## Regulatory Commitments in this Letter

This communication contains the following new or revised commitments which will be completed or incorporated into the CPNPP licensing basis as noted. The Commitment Number is used by Luminant for internal tracking.

<u>Number</u>	<u>Commitment</u>	<u>Due Date/Event</u>
6761	CPNPP EALs provided in Appendix 1 of the Emergency Plan will be updated to include current US-APWR design information and to indicate the differences and deviations (to NEI 99-01, Revision 5) currently known to Luminant.	COLA Revision 2
6771	As discussed in Critical Element 2, the fully developed site-specific EAL scheme will be incorporated into Appendix 1 of the Emergency Plan. Accordingly, future changes to the EAL scheme will require an evaluation under 10 CFR 50.54(q) to determine if these changes will reduce the effectiveness of the Emergency Plan.	At least 180 days prior to initial fuel load
6781	The existing EOF will be modified to include Units 3 and 4 data displays described in the US-APWR DCD.	Prior to implementation of Emergency plan

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CP-200901586  
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11/18/2009

## **Attachment 1**

**Response to Request for Additional Information No. 2864 (CP RAI #32)**

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**Comanche Peak, Units 3 and 4**  
**Luminant Generation Company LLC**  
**Docket Nos. 52-034 and 52-035**

**RAI NO.: 2864 (CP RAI #32)**

**SRP SECTION: 02.02.03 - Evaluation of Potential Accidents**

**QUESTIONS for Siting and Accident Conseq Branch (RSAC)**

**DATE OF RAI ISSUE: 9/3/2009**

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**QUESTION NO.: 02.02.03-7**

RG 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," (June 2007) provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. In addition to assessing the radiological hazards from Comanche Peak Nuclear Power Plant (CPNPP), Units 3 and 4, the release of radioactive material from Units 1 and 2 from normal operations or from an unanticipated event may also impact the safety of the plant or personnel at CPNPP Units 3 and 4. The potential effects from Units 1 or 2 has not been addressed in CPNPP Units 3 and 4 COL FSAR Section 2.2.3.1. Provide a discussion of these potential effects from Unit 1 or 2 on the personnel at CPNPP Units 3 and 4 in Section 2.2.3.1 or provide a reference to the appropriate section.

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**ANSWER:**

Release of radioactive material from Units 1 and 2, although not a potential external hazard in the classical sense of SRP 2.2.3, could have an impact on Units 3 and 4 personnel. As stated in this question, normal effluent releases and releases from unanticipated events could potentially impact the safety of the plant or personnel at CPNPP Units 3 and 4.

For normal operations, the Units 1 and 2 operational radiation exposure policy is to maintain exposures As Low As Reasonably Achievable (ALARA) in compliance with Regulatory Guides (RGs) 1.8, 8.8, and 8.10, and 10 CFR Part 20. This policy applies to normal airborne and liquid effluent releases. Airborne radiation levels for normal and anticipated operational occurrences in restricted areas of the plant site where workers and visitors are permitted are maintained within the limits of 10 CFR Part 20 Appendix B by the Units 1 and 2 ventilation systems. In addition, the airborne radioactivity monitoring performed by the process radiation monitoring system alarms on high airborne radioactivity levels to control the release of radioactive gases and particulates produced in the operation of the plant. The process radiation monitoring system ensures compliance with the requirements of 10 CFR Part 20, 10 CFR Part 50, General Design Criterion (GDC) 60, 63, and 64, and NRC RGs 1.21 and 8.8. Operation of the process radiation monitoring system is fundamental in the protection of the general public and plant personnel from exposure to airborne radioactivity in excess of that allowed by applicable regulations.

This system controls or terminates releases exceeding discharge limits and warns plant personnel so they can take appropriate protective measures.

The Units 1 and 2 ventilation and radiation monitoring systems are designed to ensure the maximum airborne radioactivity levels for normal and anticipated operational occurrences are within the limits of 10 CFR Part 20 Appendix B for areas within the plant structures and for restricted areas on the plant site where workers and visitors are permitted. Consequently, there is no deleterious impact on Units 3 and 4 personnel due to normal and anticipated operational releases from Units 1 or 2.

CPNPP Units 1 and 2 FSAR Subsection 12.4.4.1 provides an evaluation of the Unit 2 construction worker doses resulting from Unit 1 operations and normal gaseous effluent releases. This evaluation showed that the estimated doses resulting from airborne radioactivity received by construction workers on Unit 2 as a result of the operation of Unit 1 are well within the limits of 10 CFR Part 20 for exposure of occupationally employed individuals in unrestricted areas. Because Units 3 and 4 are considerably removed from the evaluated Unit 2 construction area, the doses to construction or operation personnel would be even less. Therefore, normal gaseous effluents from Units 1 and 2 have no impact on Units 3 and 4 personnel.

Liquid effluent releases are maintained within the radioactive liquid release limits established by 10 CFR Part 20. These limits require that the concentration limit for an unidentified, instantaneous release basis is less than the values given as defined in 10 CFR Part 20 Appendix B. For identified releases, the limits defined in 10 CFR Part 20 Appendix B, Table II Column 2 are applicable. These concentration limits are considered at the point of discharge to Squaw Creek Reservoir. The permissible dose due to liquid effluent releases for an individual in an unrestricted area is 0.5 rem per calendar year to the whole body. Contact with Units 1 and 2 normal liquid effluents by Units 3 and 4 personnel is not routine; however, if it became necessary, the task would be performed, monitored, and controlled under the guidance and requirements of the operational radiation protection program.

Therefore, normal Units 1 and 2 operations and effluent releases do not have a deleterious impact on Units 3 and 4 personnel.

The consequences of unanticipated events at Units 1 and 2 are bounded by the consequences of a design basis loss of coolant accident (LOCA). Therefore, the impact on the safety of the plant or personnel at CPNPP Units 3 and 4 due to the release of radioactive materials from Units 1 and 2 for an unanticipated event will only consider the consequences of radioactive material releases for a design basis LOCA. Following a LOCA at Unit 1 or 2, any non-essential personnel will be evacuated in accordance with the Emergency Plan so that doses to these personnel need not be considered.

The Units 1 and 2 control room habitability systems ensure that the post-LOCA doses to the essential control room operators are maintained below the limits given in 10 CFR 50, GDC 19. Similar control room habitability systems are provided for Units 3 and 4. These habitability systems ensure that the personnel occupying the Unit 1 and 2 Control Room during the first 30 days following an accident will not be exposed to radiation doses exceeding 5 rem whole body gamma dose, 30 rem thyroid dose, and 30 rem beta skin dose. For the Units 3 and 4 COL application, GDC 19 requires that adequate radiation protection be provided to ensure that radiation exposures do not exceed 0.05 Sv (5 rem) total effective dose equivalent (TEDE) as defined in § 50.2 for the duration of the accident. The significant design parameters for the Units 3 and 4 main control room (MCR) heating, ventilation and air conditioning system (HVAC) are given below with the comparable Units 1 and 2 values.

Parameter	Units 1 and 2 Value	Units 3 and 4 Value
CRE volume including MCR (ft <sup>3</sup> )	423,032	140,000
Unfiltered inleakage via ingress/egress (cfm)	10 - ingress/egress 2 - ductwork inleakage	120
Filtered air intake flow (cfm)	800 <sup>(1)</sup>	1,200
Filtered air recirculation flow (cfm)	7200 <sup>(2)</sup>	2,400
MCR post-accident pressure relative to adjacent areas	0.125 inch water gauge	passive pressurization
Filter efficiency		
• Elemental iodine (%)	99	95
• Organic iodine (%)	99	95
• Particulates (%)	99	99

<sup>(1)</sup> 3800 during emergency ventilation mode

<sup>(2)</sup> 4200 during emergency ventilation mode

As show above, the Units 3 and 4 MCR HVAC system is similar to the Units 1 and 2 system. In the event of a Design Basis Accident (DBA) at Unit 1 or 2, a high radiation signal from the Unit 3 or 4 control room air intake monitors will initiate the Units 3 and 4 emergency recirculation and pressurization modes of the MCR air conditioning system. Consequently the Units 3 and 4 MCR accident dose would be similar to the Units 1 and 2 accident dose if all other parameters used in the dose calculation were the same. However, the atmospheric dispersion coefficients for Units 3 and 4 assuming a release from Units 1 or 2 would be significantly lower than the dispersion factor values used in the Units 1 and 2 dose analysis. Consequently the Units 3 and 4 accident doses would be correspondingly smaller. Because the MCR LOCA doses for Units 1 and 2 are less than the limiting values specified in 10 CFR 50 Appendix A GDC 19, the Units 3 and 4 doses would be lower and would also meet GDC 19 limits.

The Units 3 and 4 electrical, mechanical, and instrument and control equipment designated as safety-related or important to safety are addressed in the equipment qualification program to verify their capability of performing their design functions under all anticipated service conditions defined in 10 CFR 50.49(b)(1)(ii). The radiation environment for qualification of equipment is based on the normally expected radiation environment over the equipment qualified life, plus that associated with the most severe DBA during or following which that equipment must remain functional. Because the equipment dose to Units 3 and 4 safety-related or important to safety equipment due to an accident at Unit 1 or 2 should be less than the qualified dose, there is no impact on Units 3 and 4 equipment.

COLA FSAR Subsections 2.2.3.1 and 2.2.3.1.7 have been revised to reflect this response.

Impact on R-COLA

See attached marked-up FSAR Draft Revision 1 pages 2.2-11, 2.2-20, and 2.2-21.

Impact on S-COLA

None.

Impact on DCD

None.



**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

**2.2.3.1 Determination of Design Basis Events**

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CP COL 2.2(1) Add the following subsections after DCD Subsection 2.2.3.

Design basis events internal and external to the nuclear power plant are defined as those accidents that have a probability of occurrence on the order of about  $10^{-7}$  per year or greater and potential consequences serious enough to affect the safety of the plant to the extent that the guidelines in 10 CFR Part 100 could be exceeded. The following categories are considered for the determination of design basis events: explosions, flammable vapor clouds with a delayed ignition, toxic chemicals, fires, collisions with the intake structure, ~~and~~ liquid spills and radionuclide releases at adjacent units.

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**2.2.3.1.1 Explosions**

This subsection addresses potential explosion hazards from nearby transportation routes, and nearby industrial facilities. Nearby pipelines and gas wells are evaluated in Subsections 2.2.3.1.2.3 and 2.2.3.1.2.4.

**2.2.3.1.1.1 Transportation Routes**

Accidents were postulated for the nearby highways identified in Subsection 2.2.2.5. The nearest commercial traffic is FM 56, which passes approximately 1.4 mi west-southwest of the nearest safety-related structure of CPNPP Units 3 and 4. The accident of concern along FM 56 is one that results in the detonation of a highly explosive cargo carried by a truck. Based on Regulatory Guide 1.91, it is necessary to demonstrate that such an explosion on the highway does not result in a peak positive incident overpressure that exceeds 1 pounds per square inch (psi) at the critical structures on the CPNPP Units 3 and 4 site. The maximum probable hazardous cargo for a single highway truck is presented in terms of equivalent trinitrotoluene (TNT). Regulatory Guide 1.91 states the maximum probable hazardous solid cargo for a single highway truck is 50,000 lb. The TNT equivalency is based on The Departments of The Army, The Navy, and The Air Force TNT equivalency equation (Reference 2.2-220).

The methodology presented in Regulatory Guide 1.91 establishes the safe distance beyond which no damage would be expected (i.e., a peak positive incident overpressure of less than 1 psi at the critical structures on the CPNPP Units 3 and 4 site) from a truck explosion along FM 56 at its closest point. An evaluation performed for materials with a TNT equivalency of 2.24 and using the maximum cargo for two trucks determined the safe distance to be 0.52 mi. There is considerable margin between the required safe distance and the actual distance to the nearest safety-related structure (1.4 mi). The TNT equivalency value of 2.24 is almost double the U.S. Department of Defense Explosive Safety Board value of 1.14 for HBX-3 (Reference 2.2-210), an explosive used primarily in underwater demolition and missile warheads. It is unlikely that two trucks carrying

**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
**COL Application**  
**Part 2, FSAR**

Fire and smoke from accidents at nearby homes, industrial facilities, transportation routes, or from area forest or brush fires, do not jeopardize the safe operation of the plant due to the distance of potential fires from the plant (Figure 2.2-201). Smoke detectors are located in the control room outside air intakes and are used to automatically switch the control room heating, ventilating, and air conditioning (HVAC) system from the normal operating mode to the emergency mode upon detection of smoke (DCD Subsection 9.4.1.2.2). Any potential heavy smoke problems at the MCR air intakes would not affect the plant operators.

A potential gas well fire was analyzed using the ALOHA code. The fire is modeled as a jet fire with a burn rate of 3.3E4 pounds per min. This flow rate bounds the maximum absolute open flow potential of the wells within 5 mi of CPNPP Units 3 and 4. The assumed distance is 1.2 mi from the center point of CPNPP Units 3 and 4, and is based on the location of the closest currently operating well. The resulting heat flux from a gas well fire on the closest safety-related structure is less than 0.02 kilowatts (kW) per m<sup>2</sup>. The analysis shows that the heat flux decreases to 2.0 kW/m<sup>2</sup> at 219 yd (<0.15 mi) from the jet fire. This heat flux is sufficiently low as to not result in exceeding any of the thermal acceptance criteria of the structures.

On-site fuel storage facilities are designed in accordance with applicable fire codes, and plant safety is not jeopardized by fires or smoke in these areas. A detailed description of the plant fire protection system is presented in DCD Subsection 9.5.1.

**2.2.3.1.5 Collision with Intake Structure**

As discussed in Subsection 2.2.2.4, the only waterway near CPNPP is SCR, which does not provide public access to the site. There is no commercial or recreational traffic on SCR. There are no navigable rivers within 5 mi of the site. Thus, collisions with the intake structure are not considered to be credible.

**2.2.3.1.6 Liquid Spills**

As discussed in Subsection 2.2.2.4, the only waterway near CPNPP is SCR, which does not provide public access to the site. There is no commercial or recreational traffic on SCR. The only source of liquid spills in the vicinity of CPNPP is the crude oil pipeline. The accidental release of petroleum products into SCR would not affect operation of the plant. Normal operation of the water intake structure pumps requires submergence. Liquids with a specific gravity less than unity, such as petroleum products, would float on the surface of the river and consequently are not likely to be drawn into the makeup water system.

**2.2.3.1.7 Radiological Release**

The impact of Unit 1 or 2 radiological releases on Units 3 and 4 has been evaluated. This evaluation considered the release of radioactive material from

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**Comanche Peak Nuclear Power Plant, Units 3 & 4**  
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Units 1 and 2 due to normal operations and unanticipated events. For normal releases, the Unit 1 and 2 radiation monitoring program limits the maximum airborne radioactivity levels for normal and anticipated operational occurrences to within the limits of 10 CFR 20, Appendix B. The potential doses to Unit 3 and 4 personnel due to normal or anticipated releases from Units 1 or 2 are acceptable because these releases would be within the Appendix B limits.

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For design basis events, the potential effects from Units 1 or 2 radiological releases on the Unit 3 and 4 main control room personnel was found to be bounded by the Unit 1 or 2 main control room accident doses due to the greater atmospheric dispersion for Units 3 or 4. Following a limiting design basis accident at Units 1 or 2, any non-essential Unit 3 or 4 personnel would be evacuated in accordance with the Emergency Plan.

### **2.2.3.2 Effects of Design Basis Events**

Potential design basis events associated with accidents at nearby facilities and transportation routes have been analyzed and the effects of these events on the safety-related components of the plant are insignificant as discussed in Subsection 2.2.3.1.

Many gas wells currently exist around the site, the closest being 1.2 mi from the center point of CPNPP Units 3 and 4. Future wells may be closer to the site as a result of further development of the Barnett Shale. Subsection 2.2.3.1.4 showed that the resulting heat flux from a fire satisfies the acceptance criteria at distances greater than 0.15 mi from the wellhead (approximately 660 ft). Thus, wells should be located no closer than 0.15 mi from any safety-related structure.

### **2.2.4 Combined License Information**

CP COL 2.2(1) Replace the content of DCD Subsection 2.2.4 with the following.

**2.2(1)** *Description of nearby facilities, establishment of hazards, and determination of accidents.*

*This COL item is addressed in Subsections 2.2.2 and 2.2.3 and the associated tables and figures.*

CP SUP 2.2(2) Add the following new subsection after DCD Subsection 2.2.4.

### **2.2.5 References**

2.2-201 Bureau of Transportation Statistics (BTS). 2006. "National Transportation Atlas Database (NTAD) 2006 CD," CD-ROM, 2006.

2.2-202 Banks Information Solutions, Inc (BIS). 2007. "Environmental FirstSearch Report – Glen Rose Texas 76043." March 6, 2007.

U. S. Nuclear Regulatory Commission  
CP-200901586  
TXNB-09072  
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## **Attachment 2**

**Response to Request for Additional Information No. 3295 (CP RAI #70)**

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**Comanche Peak, Units 3 and 4  
Luminant Generation Company LLC  
Docket Nos. 52-034 and 52-035**

**RAI NO.: 3295 (CP RAI #70)**

**SRP SECTION: 13.03 - Emergency Planning**

**QUESTIONS for Licensing and Inspection Branch (NSIR/DPR/LIB) (EP)**

**DATE OF RAI ISSUE: 9/20/2009**

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**QUESTION NO.: 13.03-1**

**SITE-4: Emergency Action Levels (EALs)**

Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(4), Section IV.B of Appendix E to 10 CFR Part 50

**EALs are discussed in Part 5 – Emergency Plan, Appendix 1 of the Comanche Peak Units 3 and 4 COL application.**

D.1. The initial EALs, which are required by 10 CFR 50.47(b)(4) and Section IV.B of Appendix E to 10 CFR Part 50, must be approved by the NRC. Recent combined license (COL) applications have been submitted that do not fully address certain aspects of the required EAL scheme. This is because various equipment set points and other information cannot be determined until the as-built information is available; e.g., head corrections, radiation shine, final technical specifications, and equipment calculations and tolerances. The NRC has been evaluating possible options to ensure applicants address the regulations and provides the following options:

Option 1 – Submit an entire EAL scheme, which contains all site-specific information, including set points. Until this information is finalized, EALs would remain an open item.

Option 2 – Submit emergency plan Section D, “Emergency Classification System,” which addresses the four critical elements of an EAL scheme (listed below). The NRC will determine the acceptability of the EAL scheme.

- *Critical Element 1* – Applicant proposes an overview of its emergency action level scheme including defining the four emergency classification levels, (i.e., Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency), as stated in NEI 99-01, Revision 5, with a general list of licensee actions at each emergency classification level.

- *Critical Element 2* – Applicant proposes to develop the remainder of its EAL scheme by using a specified NRC endorsed guidance document. In the development of its EALs, the proposed EALs should be developed with few or no deviations or differences, other than those attributable to the specific reactor design. NEI 07-01, if endorsed, will be applicable to the AP1000 and ESBWR (passive) reactor designs, and NEI 99-01 is applicable to all (non-passive) reactor designs. If applicable, EALs related to digital instrumentation and control must be included.

The NRC must find in the Safety Evaluation Report that this approach is acceptable for each site.

*Critical Element 3* – Applicant proposes a License Condition (LC) that the applicant will create a fully developed set of EALs in accordance with the specified guidance document. These fully developed EALs must be submitted to the NRC for confirmation at least 180 days prior to fuel load.

*Critical Element 4* – The EALs must be kept in a document controlled by 10 CFR 50.54(q), such as the emergency plan; or a lower tier document, such as the Emergency Plan Implementing Procedures.

Please review the two options provided above, identify which option will be chosen, and provide the detailed EAL information in support of the chosen option.

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**ANSWER:**

- D.1 Luminant will follow Option 2 for the CPNPP Units 3 and 4 COLA Emergency Plan. Currently, Subsection II.D of the Emergency Plan discusses the EAL scheme based on NUREG-0654 and NEI 99-01, Revision 5 guidance. Appendix 1 of the Emergency Plan provides detailed initiating conditions (ICs) and Emergency Action Levels (EALs) based on the NEI 99-01 guidance. Changes to the Emergency Plan have been incorporated as discussed below.

The Luminant approach to each of the Critical Elements discussed in the question is described below:

Critical Element 1

Part 5 of the CPNPP COLA is the Emergency Plan. Subsection II.D.1 of the Emergency Plan provides an overview of its EAL scheme including defining the four emergency classification levels, (i.e., Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency), as stated in NEI 99-01, Revision 5. However, Subsection II.D.1 does not include a general list of licensee actions at each emergency classification level.

Subsection II.D.1 has been revised to include a general list of licensee actions at each emergency classification level (see attached marked-up pages).

Critical Element 2

CPNPP will develop its EAL scheme using NEI 99-01 Revision 5 with few differences or deviations. Initiating conditions SU3, SA4, and SS6 which are related to annunciator malfunctions, have been modified as presented in NEI 99-01 to address the digital control systems in the US-APWR. The approach for digital control initiating conditions and EALs presented in NEI-07-01. was generally adopted for the US-APWR.

CPNPP EALs provided in Appendix 1 of the Emergency Plan will be updated to include current US-APWR design information and to indicate the differences and deviations (to NEI 99-01, Revision 5) currently known to Luminant.

### Critical Element 3

The following proposed License Condition related to the creation of a fully developed set of site-specific EALs has been added to Part 10 of the COLA in accordance with the guidance documents discussed above:

The licensee shall submit a fully developed set of site-specific Emergency Action Levels (EALs) to the NRC in accordance with NEI 99-01, Revision 5, with few differences or deviations. The fully developed site-specific EAL scheme shall be submitted to the NRC for confirmation at least 180 days prior to initial fuel load.

### Critical Element 4

As discussed in Critical Element 2, the fully developed site-specific EAL scheme will be incorporated into Appendix 1 of the Emergency Plan. Accordingly, future changes to the EAL scheme will require an evaluation under 10 CFR 50.54(q) to determine if these changes will reduce the effectiveness of the Emergency Plan.

### Impact on R-COLA

See attached markup of Emergency Plan Draft Revision 1 pages II-33, II-34, and II-35, and COLA Part 10 Draft Revision 1 pages 4 and 5.

### Impact on S-COLA

None.

### Impact on DCD

None.

**Comanche Peak Nuclear Power Plant, Units 3 and 4**  
**COL Application**  
**Part 5 - Emergency Plan**

**D. Emergency Classification System**

Luminant implements the standard emergency classification scheme discussed below based on system and effluent parameters, on which the State of Texas and Somervell and Hood Counties may rely for determining minimum initial off-site response measures.

The ICs include the conditions provided in NEI 99-01, "Methodology for Development of Emergency Action Levels," Rev. 5 (Reference 7) as applied to US-APWR facilities and postulated accidents identified in the FSAR. The US-APWR uses a digital control system that is not addressed in NEI 99-01. Accordingly, related guidance in NEI 07-01, "Methodology for Development of Emergency Action Levels for Advanced Passive Light Water Reactors," Rev. 0 (Reference 8) is used. EALs established for each emergency classification have been accepted by off-site authorities responsible for implementing protective measures for the population-at-risk.

The classification system is not intended to include minor deviations during normal operation. Furthermore, it may be discovered that an event or condition, which met the classification criteria had existed, but that the basis for the emergency class no longer exists at the time of discovery. For example, the event may have rapidly concluded or been discovered during a post-event review. As discussed in NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73," Rev. 2 (Reference 9), actual declaration of an emergency class is not necessary in these circumstances, although notification to the NRC, the State of Texas and Somervell and Hood County agencies is warranted.

**1. Classification System**

Appendix E of 10 CFR Part 50 identifies four distinct classes of emergencies: NOUE, Alert, SAE, and GE.

ICs that determine the appropriate classification are generally described in the following paragraphs. Appendix 1 provides detailed ICs and EALs based on specific instrument readings, parameters or equipment status used to determine whether an emergency class threshold has been reached. If plant conditions change in severity, the situation is reassessed and reclassified (if appropriate) and corresponding actions are taken.

The definitions of these emergency classes, more fully discussed in NEI 99-01, and a general list of licensee actions at each emergency class level are as follows:

- NOUE – Events are in ~~process~~ progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs.

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**Part 5 - Emergency Plan**

Actions undertaken at the Notification of Unusual Event include promptly informing State and local authorities of the event, augmenting on-shift resources as needed, assessment and response, and escalation to a more severe class, if appropriate. If the emergency class is not escalated to a more severe class, then State and local authorities will be notified of event termination in accordance with implementing procedures.

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- Alert – Events are in ~~process~~ progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of hostile action. Any releases are expected to be limited to small fractions of the EPA Protective Action Guide (PAG) exposure levels.

Actions undertaken at the Alert emergency class include those described for the Notification of Unusual Event and activation of the Technical Support Center and Operational Support Center. In addition, Emergency Operations Facility and other key emergency response personnel are alerted, on-site monitoring teams are dispatched, periodic plant status updates and meteorological assessments are provided to offsite authorities, as are dose estimates, if any event-related releases are occurring.

RCOL2\_13.  
03-1

- SAE – Events are in ~~process~~ progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or hostile actions that result in intentional damage or malicious act: 1) toward site personnel or equipment that could lead to the likely failure of or; 2) that prevent effective access to, equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA PAG exposure levels beyond the site boundary.

Actions undertaken at the Site Area Emergency class include those described for the Alert emergency class and activation of the Emergency Operations Facility. In addition, non-essential personnel are evacuated from the site unless otherwise directed, an individual is dedicated to provide plant status updates to offsite authorities and periodic media briefings (jointly with offsite authorities when practicable), senior technical and management staff are made available for consultation with NRC and the State on a periodic basis, and release and dose projections based on available plant condition information and foreseeable contingencies are provided.

RCOL2\_13.  
03-1

- GE – Events are in ~~process~~ progress or have occurred which involve actual or imminent substantial core degradation or

**Comanche Peak Nuclear Power Plant, Units 3 and 4**  
**COL Application**  
**Part 5 - Emergency Plan**

melting with potential for loss of containment integrity or hostile action that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA PAG exposure levels off-site for more than the immediate site area.

Actions undertaken at the General Emergency class include those described for the Site Area Emergency class. In addition, a Protective Action Recommendation is issued for the public and continuous assessment of information from monitoring groups is provided.

RCOL2\_13.  
03-1

Appendix 1 of this Plan provides recognition categories, the associated IC matrices, and the EALs.

**2. Emergency Action Levels**

Luminant adopts the EAL methodology provided in NEI 99-01, Rev. 5. EALs contained in this Plan are subject to further review and modification to reflect additional information related to final facility design and operation as reflected in the US-APWR Design Control Document (DCD) (Reference 10) and FSAR.

The US-APWR uses a digital control system that is not addressed in NEI 99-01. Accordingly, related guidance in NEI 07-01 is used. Appendix 1 provides the parameter values and equipment status that are indicative of each emergency class.

The Emergency Coordinator or EOF Manager will close out the emergency class by providing a verbal summary to the affected off-site authorities, followed by a Licensee Event Report or written summary. The Emergency Coordinator or EOF Manager may delegate the required notifications and reports, but must approve their content.

**3. State/Local Emergency Action Level Scheme**

The State of Texas and Somervell and Hood Counties have adopted the emergency classification scheme and EALs established by this Plan. Appendix 8 of this Plan provides a cross-reference to these provisions in State and local Plans, as applicable.

**4. State/Local Emergency Action Procedures**

The State of Texas and Somervell and Hood Counties have established procedures that provide for emergency actions to be taken which are consistent with emergency actions recommended by Luminant. Appendix 8 of this Plan provides a cross-reference to these provisions in State and local Plans, as applicable.

**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application**

**Part 10 - ITAAC and Proposed License Conditions**

**2.3 Operational Programs**

Operational Programs are identified in Table 13.4-201 and their implementation by the milestones indicated in the Table is a potential condition to the license. Some of these programs may be adequately controlled by other methods such as the regulations, the technical specifications or a commitment tracking system and will not need to be addressed in a license condition. A proposed license condition is provided in section 3 below based upon the current information in Chapter 13 of the COLA FSAR.

**2.4 Environmental Protection Plan**

The Environmental Protection Plan (EPP) and its implementation may also be a potential condition to the license. The EPP has typically been an appendix to the operating license and that precedent may be followed for COLs as well. No plant specific environmental items have been identified which are not adequately controlled by regulations, the appropriate permits, etc. and thus an EPP has not been proposed and is not needed.

**2.5 Technical Specifications**

Implementation of Technical Specifications prior to fuel load could also constitute a potential condition to the license. The Technical Specifications have typically been an appendix to the operating license and that precedent may be followed for COLs as well.

**2.6 Emergency Planning Actions**

Execution of Letters of Agreement with State and local entities identifying the specific nature of arrangements in support of emergency preparedness and certifying the agency's concurrence with the emergency action levels prior to the full-participation exercise is a potential condition to the license. A proposed license condition is provided in section 3 below.

Submittal of a fully developed set of site-specific Emergency Action Levels (EALs) to the NRC in accordance with NEI 99-01, Revision 5 at least 180 days prior to initial fuel load is a potential condition to the license. A proposed license condition is provided in section 3 below.

RCOL2\_13.  
03-2  
RCOL2\_13.  
03-8

RCOL2\_13.  
03-1

**2.62.7 Others**

The current operating licenses have some typical license conditions in areas such as security, fire protection and others. These current license conditions may or may not apply to COLs.

**3. Specific Proposed License Conditions**

The license conditions identified thus far during the COL development and review are:

**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application**

**Part 10 - ITAAC and Proposed License Conditions**

**3. Specific Proposed License Conditions**

The license conditions identified thus far during the COL development and review are:

<u>Proposed License Condition</u>	<u>Source</u>
<p><u>The plant-specific PTS evaluation of the as-procured reactor vessel material properties will be submitted to the NRC within 12 months following acceptance of the reactor vessel.</u></p>	<p><u>Answer to RAI 2353 (CP RAI #8) question 05.03.02-3 as provided in TXNB-09028 dated August 7, 2009.</u></p>
<p><u>The licensee shall implement the programs or portions of programs identified in the table below on or before the associated milestones.</u></p>	<p><u>COLA FSAR Table 13.4-201 Items 3, 5, 6, 8, 9, 10, 12, 15, 18, and 19.</u></p>
<p>A. Prior to the full-participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, Luminant shall establish Letters of Agreement with the following entities:</p> <ul style="list-style-type: none"> <li>a. Governors Division of Emergency Management (GDEM), Texas Department of Public Safety</li> <li>b. Texas Department of State Health Services</li> <li>c. Hood County Judge</li> <li>d. Somervell County Judge</li> </ul> <p>These Letters of Agreement will identify the specific nature of arrangements in support of emergency preparedness for operation of the proposed new nuclear units and certify the agency's concurrence with the emergency action levels described in Comanche Peak Units 3 &amp; 4 Combined License Application Emergency Plan Procedure, "Assessment of Emergency Action Levels, Emergency Classification and Plan Activation."</p> <p>B. The licensee shall submit a fully developed set of site-specific Emergency Action Levels (EALs) to the NRC in accordance with NEI 99-01, Revision 5, with few differences or deviations. The fully developed site-specific EAL scheme shall be submitted to the NRC for confirmation at least 180 days prior to initial fuel load.</p>	<p><u>Answer to RAI 3295 (CP RAI #70) question 13.03-1 and RAI 3327 (CP RAI #78) questions 13.03-2 and 13.03-8.</u></p>

RCOL2\_13.  
03-1  
RCOL2\_13.  
03-2  
RCOL2\_13.  
03-8

U. S. Nuclear Regulatory Commission  
CP-200901586  
TXNB-09072  
11/18/2009

### **Attachment 3**

**Response to Request for Additional Information No. 3327 (CP RAI #78)**

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**Comanche Peak Units 3 and 4  
Luminant Generation Company LLC  
Docket No. 52-034 and 52-035**

**RAI NO.: 3327 (CP RAI #78)**

**SRP SECTION: 13.03 - Emergency Planning**

**QUESTIONS for Licensing and Inspection Branch (NSIR/DPR/LIB) (EP)**

**DATE OF RAI ISSUE: 9/24/2009**

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**QUESTION NO.: 13.03-2**

**SITE-1: Assignment of Responsibilities (Organizational Control)**

**Basis: 10 CFR 50.47(b)(1), Planning Standard A; 10 CFR 50, Appendix E.III., Appendix E.IV.A.8; NUREG-0654/FEMA-REP-1, Evaluation Criterion A.1, 2, 3, 4**

**Standard Review Plan (SRP) ACCEPTANCE CRITERIA (NUREG-0800, section 13.3): Requirements A and B; Acceptance Criteria 1 and 2.**

- A-1. The Texas Department of State Health Services is identified as a participating organization, but Figure II-1, "Emergency Response Organization Interrelationships," shows Texas Department of Health. The Radiation Control Program (RCP) of the Texas Department of State Health Services is identified as a participating organization, but is not shown in Figure II-1. Appendix 7, "Certification Letters and Letters of Agreement," includes letters of agreement for five organizations that are not shown in the block diagram.
- A. Clarify whether the block labeled Texas Department of Health in Figure II-1 is the same as Texas Department of State Health Services (TDSHS) in Section II.A.1.a. Revise Figure II-1 as appropriate.
  - B. Discuss whether the Radiation Control Program should be shown in Figure II-1. Revise Figure II-1 as appropriate.
  - C. Discuss whether the Environmental Protection Agency (EPA) shown in Section II.A.1.b is a participating organization, and whether it should be listed in Section II.A.1.a and in Figure II-1. Revise Figure II-1 as appropriate.
  - D. Discuss whether Walls Regional Hospital, Granbury/Hood County EMS, Granbury Volunteer Fire Department, Tolar Volunteer Fire Department, Indian Harbor Volunteer Fire Department, or DeCordova Bend Estates Volunteer Fire Department, which are listed in Sec.II.A.1.b, should be added to Figure II-1. Revise Figure II-1 as appropriate.

- E. Discuss whether the Cities of Stephenville, Cleburne, and Granbury, the National Weather Service, and the American Red Cross should be shown in Figure II-1. Revise Figure II-1 as appropriate.
- A-2. Appendix 8, "Cross Reference to Regulations, Guidance, and State and Local Plans," states that details of the State and county Plans may not yet reflect the addition of CPNPP Units 3 and 4. Clarify when State and county Plans will reflect the addition of Comanche Peak Nuclear Power Plant (CPNPP), Units 3 and 4. Include this information in the Emergency Plan.
- A-3. The letters of agreement in Appendix 7, "Certification Letters and Letters of Agreement," for the State, Somervell and Hood Counties state that specific arrangements will be established in binding agreements if and when construction and operation proceed.
- A. Propose an ITAAC that describes emergency measures to be provided, implementation criteria, and information exchange arrangements to be incorporated into binding agreements for the State and counties if and when construction and operation proceeds. Include this information in the Emergency Plan.

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**ANSWER:**

- A-1.A Figure II-1 incorrectly referred to the Texas Department of Health. The Texas Department of State Health Services is the successor agency to the former Texas Department of Health. Figure II-1 has been revised to reflect the correct name of the State Agency (see attached marked-up pages).
- A-1.B Figure II-1 identifies the interfaces between the various Federal, State, local and private agencies in the Emergency Response Organization. The Radiological Control Program (RCP) is a part of the Texas Department of State Health Services, which has been identified in the revised Figure II-1 as discussed in the response to A-1.A, above. Therefore, no change to Figure II-1 is necessary to specifically address the RCP.
- A-1.C The Environmental Protection Agency (EPA) may provide assistance in supporting environmental monitoring teams and mobile radioanalytical laboratories, as noted in Section II.A.1.b of the Emergency Plan. However, under the National Response Framework's Nuclear/Radiological Incident Annex, the EPA is a designated cooperating agency providing assistance and support to the NRC (RIS 2005-13). As the Coordinating Agency, the NRC performs the Federal-level functions and coordinates the overall Federal response. Therefore, no change to Figure II-1 is necessary to address the EPA.
- A-1.D Figure II-1 of the Units 3 and 4 Emergency Plan was developed to be consistent with Figure 1.1 of the Units 1 and 2 Emergency Plan. The figure illustrates those organizations with primary responsibility for responding to an emergency at the CPNPP site. As described in Section II.B.6 of the Emergency Plan, Figure II-1 illustrates the interfaces among the Luminant Emergency Response Facilities (ERFs) for Units 3 and 4, Luminant Corporate Support, the State of Texas, and Somervell and Hood County government emergency response organizations.

The hospital providing care for persons injured at CPNPP, Lake Granbury Medical Center, is identified in Figure II-1. The plant is physically located in Somervell County, and Somervell County volunteer fire, rescue and EMS services are also identified in Figure II-1. Notification and communications with other hospitals and emergency services entities is initiated by

Sheriff's dispatchers in accordance with Tab C to Appendix 3 and Attachment E of Annex W of the Hood county Emergency Management Plan. Communications pathways are diagrammed in Appendix 1 to Annex B of the Hood and Somervell Counties' Emergency Management Plan.

- A-1.E Stephenville and Cleburne are both located well outside the 10-mile plume exposure pathway Emergency Planning Zone (EPZ) and serve as relocation center locations. Plans and procedures for establishing and operating relocation centers by the cities of Stephenville and Cleburne were included as Supplemental Information in Part 5 of the COLA. Communication with relocation centers in those cities is conducted in accordance with Tab C to Appendix 2 and Attachment E of Annex W of the Hood and Somervell Counties' Emergency Management Plan. No change to Figure II-1 is necessary to address the cities of Stephenville and Cleburne.

The Hood County Emergency Operating Center (EOC) is identified in Figure II-1. According to Section IV.A.2 of Annex W of the Hood County Emergency Management Plan, the county and city governments will coordinate their operations from the Hood County EOC. No change to Figure II-1 is necessary to address the City of Granbury.

The National Weather Service in Ft. Worth, Texas, is identified as a back-up resource to be used if onsite meteorological data is unavailable, as discussed in Subsections II.H.6.a and II.H.8 of the Comanche Peak Units 3 and 4 Emergency Plan. It is not a primary emergency response agency, therefore does not need to be included in Figure II-1.

The American Red Cross has primary responsibility for sheltering and mass care under Annex C of the Hood and Somervell Counties' Emergency Management Plan. Communications pathways with the Red Cross are diagrammed in Appendix 1 to Annex B the Hood and Somervell Counties' Emergency Management Plan.

- A-2. In its April 10, 2009 Request for Additional Information (RAI) letter to Luminant, the Federal Emergency Management Agency (FEMA) identified 15 items in the State and local plans requiring additional information to support a reasonable assurance finding from their review of the COLA for Comanche Peak Units 3 and 4. Luminant's response to the FEMA RAIs included revisions to the State and local emergency plans as well as a revised version of Table A8-2 of Appendix 8 of the Units 3 and 4 Emergency Plan (letter TXNB-09015 dated June 9, 2009 with a copy to Stephen Monarque and Dan Barss, NRC).

Luminant's response resulted in FEMA issuing a single Open Item in its Interim Finding Report (IFR) for Open Items dated August 12, 2009, related to how often county plans are tested; varying exercise scenarios; and the number and types of personnel participating in ingestion pathway exercises. Luminant provided a response to FEMA's IFR on September 16, 2009 (letter TXNB-09044 with a copy to Stephen Monarque and Dan Barss). FEMA's determination of reasonable assurance is currently pending.

The State of Texas and the Hood and Somervell Counties' Emergency Management Plans are constantly reviewed and updated to maintain emergency preparedness. State and local emergency response is not sensitive to the number of nuclear reactors on the Comanche Peak Site. There are a limited number of references to Units 1 and 2 in Tab 1 and Chapter 1 of Annex D of the State Plan related only to background information about the Comanche Peak Site. The Hood and Somervell County Emergency Plans do not include any unit-specific references. No change to the Emergency Plan beyond the revision to Table A8-2 of Appendix 8, discussed above, is necessary to reflect this regulatory requirement.

- A-3.A Regulatory Guide 1.206 section C.I.13.3.1 and SRP 13.3 Acceptance Criterion 18 specify that copies of letters of agreement (or other certifications) reflecting contacts and arrangements



made with State and local agencies with emergency planning responsibilities should be included in applications for construction permits, operating licenses, early site permits or combined licenses, and that the information should be up-to-date when the application is submitted.

Luminant maintains that emergency planning arrangements have been established between Luminant, the State of Texas, and Hood and Somervell Counties for the Comanche Peak Units 3 and 4 emergency response effort. As indicated in the Certification Letters provided in Appendix 7 of the Emergency Plan, the Letters of Agreement will be finalized at a later stage in the planning process.

To satisfy the NRC's concern, COLA Part 10 has been revised to include a proposed license condition describing Letters of Agreement with State and local agencies with emergency planning responsibilities (see attached marked-up pages).

Impact on R-COLA

See attached markup of Emergency Plan Draft Revision 1 page II-13 and COLA Part 10 Draft Revision 1 pages 4 and 5.

Impact on S-COLA

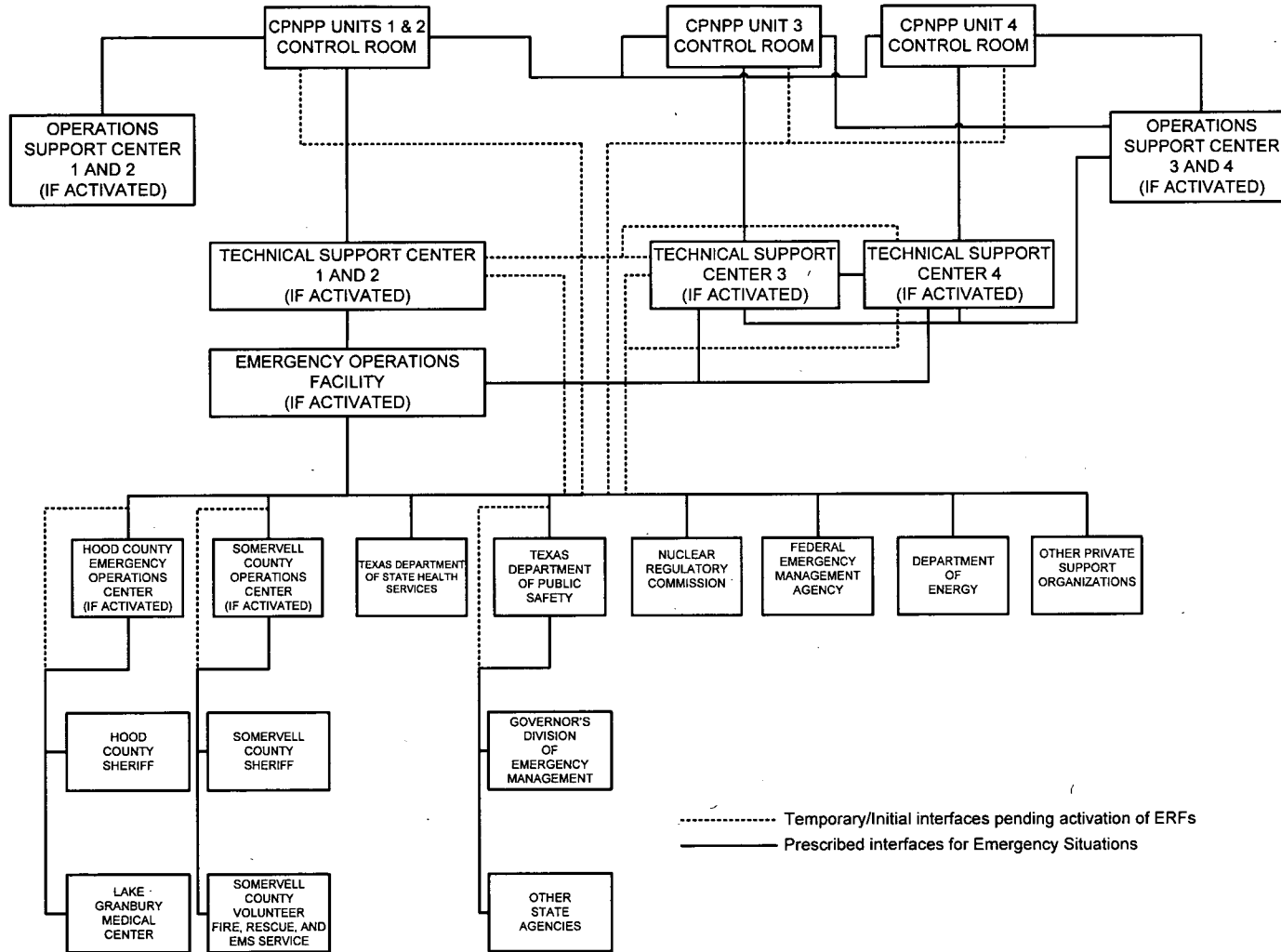
None.

Impact on DCD

None.

**Comanche Peak Nuclear Power Plant, Units 3 and 4  
COL Application  
Part 5 – Emergency Plan**

**Figure II-1 Emergency Response Organization Interrelationships  
(Alert, Site Area Emergency, General Emergency)**



RCOL2\_13.03-2

**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application**

**Part 10 - ITAAC and Proposed License Conditions**

**2.3 Operational Programs**

Operational Programs are identified in Table 13.4-201 and their implementation by the milestones indicated in the Table is a potential condition to the license. Some of these programs may be adequately controlled by other methods such as the regulations, the technical specifications or a commitment tracking system and will not need to be addressed in a license condition. A proposed license condition is provided in section 3 below based upon the current information in Chapter 13 of the COLA FSAR.

**2.4 Environmental Protection Plan**

The Environmental Protection Plan (EPP) and its implementation may also be a potential condition to the license. The EPP has typically been an appendix to the operating license and that precedent may be followed for COLs as well. No plant specific environmental items have been identified which are not adequately controlled by regulations, the appropriate permits, etc. and thus an EPP has not been proposed and is not needed.

**2.5 Technical Specifications**

Implementation of Technical Specifications prior to fuel load could also constitute a potential condition to the license. The Technical Specifications have typically been an appendix to the operating license and that precedent may be followed for COLs as well.

**2.6 Emergency Planning Actions**

Execution of Letters of Agreement with State and local entities identifying the specific nature of arrangements in support of emergency preparedness and certifying the agency's concurrence with the emergency action levels prior to the full-participation exercise is a potential condition to the license. A proposed license condition is provided in section 3 below.

Submittal of a fully developed set of site-specific Emergency Action Levels (EALs) to the NRC in accordance with NEI 99-01, Revision 5 at least 180 days prior to initial fuel load is a potential condition to the license. A proposed license condition is provided in section 3 below.

RCOL2\_13.  
03-2  
RCOL2\_13.  
03-8

RCOL2\_13.  
03-1

**2.62.7 Others**

The current operating licenses have some typical license conditions in areas such as security, fire protection and others. These current license conditions may or may not apply to COLs.

**3. Specific Proposed License Conditions**

The license conditions identified thus far during the COL development and review are:

**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application**

**Part 10 - ITAAC and Proposed License Conditions**

**3. Specific Proposed License Conditions**

The license conditions identified thus far during the COL development and review are:

<u>Proposed License Condition</u>	<u>Source</u>
<p><u>The plant-specific PTS evaluation of the as-procured reactor vessel material properties will be submitted to the NRC within 12 months following acceptance of the reactor vessel.</u></p>	<p><u>Answer to RAI 2353 (CP RAI #8) question 05.03.02-3 as provided in TXNB-09028 dated August 7, 2009.</u></p>
<p><u>The licensee shall implement the programs or portions of programs identified in the table below on or before the associated milestones.</u></p>	<p><u>COLA FSAR Table 13.4-201 Items 3, 5, 6, 8, 9, 10, 12, 15, 18, and 19.</u></p>
<p>A. Prior to the full-participation exercise to be conducted in accordance with the requirements of Appendix E to 10 CFR Part 50, Luminant shall establish Letters of Agreement with the following entities:</p> <ul style="list-style-type: none"> <li>a. Governors Division of Emergency Management (GDEM), Texas Department of Public Safety</li> <li>b. Texas Department of State Health Services</li> <li>c. Hood County Judge</li> <li>d. Somervell County Judge</li> </ul> <p>These Letters of Agreement will identify the specific nature of arrangements in support of emergency preparedness for operation of the proposed new nuclear units and certify the agency's concurrence with the emergency action levels described in Comanche Peak Units 3 &amp; 4 Combined License Application Emergency Plan Procedure, "Assessment of Emergency Action Levels, Emergency Classification and Plan Activation."</p> <p>B. The licensee shall submit a fully developed set of site-specific Emergency Action Levels (EALs) to the NRC in accordance with NEI 99-01, Revision 5, with few differences or deviations. The fully developed site-specific EAL scheme shall be submitted to the NRC for confirmation at least 180 days prior to initial fuel load.</p>	<p><u>Answer to RAI 3295 (CP RAI #70) question 13.03-1 and RAI 3327 (CP RAI #78) questions 13.03-2 and 13.03-8.</u></p>

RCOL2\_13.03-1  
RCOL2\_13.03-2  
RCOL2\_13.03-8

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**Comanche Peak Units 3 and 4  
Luminant Generation Company LLC  
Docket No. 52-034 and 52-035**

**RAI NO.: 3327 (CP RAI #78)**

**SRP SECTION: 13.03 - Emergency Planning**

**QUESTIONS for Licensing and Inspection Branch (NSIR/DPR/LIB) (EP)**

**DATE OF RAI ISSUE: 9/24/2009**

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**QUESTION NO.: 13.03-3**

**SITE-2: On-site Emergency Response Organization (ERO)**

**Basis: 10 CFR 50, Appendix E.IV.A: 1, 2, 4, 5; NUREG-0654/FEMA-REP-1, Evaluation Criterion B1 through 9**

**SRP ACCEPTANCE CRITERIA (NUREG-0800, section 13.3): Requirements A and B; Acceptance Criteria 1 and 2.**

- B-1. Section II.B.7, "Corporate (Off-site) Support for the Plant Staff," states that the applicant is fully committed to providing management and personnel resources to assist the ERO, and that this arrangement preempts the need for a separate organization of off-site corporate personnel to be identified for, and incorporated in, the ERO. However, the applicant does not describe how this arrangement negates the use of Off-site corporate support. Describe, by position and function, how the ERO will be effectively staffed (24hrs) without the use of Off-site corporate support.
- B-2. Additional information is needed regarding employees and other non-employees with special qualifications. Describe the special qualifications by position and function to be performed of other employees and non-employees that may be called upon for assistance for emergencies. Include this information in the Emergency Plan.
- B-3. Section II.B.6, "Interfaces Between Functional Areas," (page II-22) identifies interfaces among Emergency Response Facilities, corporate support, and State and County government response organizations and includes a block diagram, Figure II-1, "Emergency Response Organization Interrelationships." However, there are differences between the organizations described and those identified in Figure II-1.
  - A. The Security Shift Supervisor described in Section II.B.1 is not shown in Figure II-2. Discuss why the security function is not included in Figure II-2, and revise Figure II-2 as appropriate.
  - B. The Emergency Repair & Damage Control Emergency Team described in Section II.B.1 is not shown in Figure II-2. Describe whether the function of emergency repair and damage

control is represented by Maintenance Personnel in Figure II-2. Revise Figure II-2 as appropriate.

- C. Describe the responsibilities of Communicators assigned to the Technical Support Center (TSC) and Emergency Operating Facility (EOF), and of the Team Communicator in the Operations Support Center (OSC). Include this information in the Emergency Plan (EP).
  - D. An EP Advisor is identified in Figure II-3, "Emergency Response Organization – Technical Support Center Manager as Emergency Coordinator," but this position is not defined. Describe the functional responsibilities of the EP Advisor, and include this information in the Emergency Plan.
  - E. Section II.B.5, "Plant Emergency Response Positions," includes a description of On-Site Survey Teams dispatched from the OSC; however, Figure II-4, "Emergency Response Organization – Operations Support Center," does not include an entry for On-Site Survey Teams. Clarify if the Radiation Protection Technicians shown in Figure II-4 are equivalent to the On-Site Survey Teams described in Section II.B.5.
  - F. Board Recorder, Clerical Support, Manpower Coordinator, Procurement Coordinator, and Contracts Coordinator positions are shown in Figures II-3, II-4, and II-5, but their responsibilities are not described. Describe the responsibilities for Board Recorders, Clerical Support, Manpower Coordinator, Procurement Coordinator, and Contracts Coordinator in Figure II-5, and positions shown in Figure II-6. Include this information in the Emergency Plan.
- B-4. Section B.5, "Plant Emergency Response Positions," of the Emergency Plan states that Luminant maintains emergency response staffing capability consistent with Table II-2, "Plant Staffing Requirements for Emergencies," which is based on the guidance provided in NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Nuclear Power Plants," and the provisions of the Emergency Plans of currently licensed Luminant nuclear facilities. Address the following questions regarding Table II-2:
- A. In Table II-2, "Plant Staffing Requirements for Emergencies," the Radwaste Operator, Mechanic, Electrician, and I & C Technician are identified as a minimum staffing position, which may be provided by on-shift or augmented by personnel assigned other functions. Clarify whether the job functions of the Radwaste Operator, Mechanic, Electrician, and I & C Technician are carried out by other on-shift staff and discuss whether this is a collateral duty. If this is a collateral duty, discuss its impact on the ability to fulfill ERO functions.
  - B. The Shift Manager, who assumes the role of Emergency Coordinator, is listed in Table II-2 as having the responsibility for approving the release of information to the public regarding an emergency at Comanche Peak. However, this responsibility is not included as part of the discussion in Section B of the Emergency Plan. Explain why this information was not included in the detailed responsibilities of the Emergency Coordinator in Section B of the Emergency Plan. also discuss whether this responsibility can be delegated.
  - C. Discuss the on-shift and augmented staffing levels provided in Table II-2 for each unit. Table II-2 should clearly show any sharing of staffing between each unit.
  - D. Discuss whether the personnel assigned to the fire brigade will also perform ERO functions as collateral duties. Table II-2 and Section B of the Emergency Plan should describe these collateral

duties and which member of the fire brigade will perform them and the impact on the ERO to perform its functions.

- E. The two columns titled, "Capabilities for Addition," that relate to augmentation staffing times in Table II-2 of the Emergency Plan are represented as 40 minutes and 70 minutes versus 30 minutes and 60 minutes as specified in Table B-1, "Minimum Staffing Requirements for NRC Licensees for Nuclear Power Plant Emergencies," of NUREG-0654/FEMA-REP-1. Provide staffing times consistent with NUREG-0654/FEMA-REP-1 or discuss why the extended augmentation times are acceptable for each function / task.
- F. Several positions (Mechanic, Electrician, I&C Technician) are identified with a note (f), which states that on-shift staffing is provided in Technical Specifications for these positions. Since the minimum on-shift maintenance staffing available for emergency response functions is not addressed in Technical Specifications, revise Table II-2 to identify the on-shift maintenance (Mechanical, Electrical, Instrumentation and Control) minimum staffing available for repair and corrective actions during an emergency.
- G. The on-shift Radiation Protection Technician (RPT) personnel responsible for on-site surveys and in-plant surveys are identified in Table II-2 with a note (f) that states the on-shift staffing is provided in Technical Specifications for these positions. Technical Specifications state that an RPT shall be onsite when fuel is in the reactor, and a single RPT may fulfill the requirements for both units. In addition, Table II-2 identifies two RPTs responsible for protective actions as part of the Radiological Accident Assessment and Support function that may be provided by on-shift or augmentation personnel assigned other functions.
  - G-1. The footnote (f) allows for no RPT staffing being present on-site when both reactors are defueled. If a declared emergency occurs with the reactors in this condition, discuss who would perform the functions of in-plant surveys, on-site surveys, and protective actions during this time.
  - G-2. Clarify the on-shift RPT staff that will perform in-plant surveys, on-site surveys, and protective actions as part of the overall Radiological Accident Assessment and Support function.
  - G-3. Explain why there are no augmentation RPT personnel to perform on-site (out-of-plant) surveys.
- H. Section B of the Emergency Plan states that on-site Survey Teams initially shall be composed of at least two members, at least one of which shall be a Radiation Protection Technician. Clarify who will assume the role of the second team member position based on the minimum shift staffing provided in Table II-2.
- I. Section B of the Emergency Plan states that Chemistry Technicians will perform in-plant chemistry sampling and analysis and function as part of the First Aid Team if there is an emergency at Comanche Peak until relieved by other members of the ERO. Table II-2 identifies the on-shift minimum chemistry staffing with a note (f), which states that the on-shift staffing is provided in Technical Specifications for these positions. Technical Specifications do not require chemistry personnel to be on-site when both units are in modes 5, 6, or defueled.
  - I-1. Discuss who will perform the in-plant chemistry sampling and analysis, and participate as part of the First Aid Team if both units are in modes 5, 6, or defueled, and there is an emergency at Comanche Peak.
  - I-2. Provide the rationale for assigning Chemistry technicians a collateral task on the First Aid Team.

- J. Table II-2 in the Emergency Plan indicates that the on-shift shift technical advisor (STA) will perform the major tasks of dose assessment and technical support. In addition, the STA position in Table II-2 is identified with note (a), which states that these tasks may be provided by on-shift or augmentation personnel assigned other functions. However, footnote (e) provided in FSAR Table 13.1-202, "Minimum Shift Crew Composition," states that the STA position may be filled by an on-shift SRO provided that an individual meets the dual role requirements described in the Commission Policy Statement on Engineering Expertise on-Shift and has dose assessment capability. Section B of the Emergency Plan states that the STA provides engineering expertise and advice regarding plant transient analysis, accident mitigation, core/thermal hydraulics, and other matters related to operational safety, including dose assessment.
- J-1. Explain the rationale for assigning the on-shift STA the potentially competing responsibilities of dose assessment and Engineering Technical support. In the discussion, address the training needed, and qualification process, for the STA to be assigned the off-site dose assessment task.
- J-2. Table II-2 does not include an augmentation responder for the Core / Thermal Hydraulics area of expertise. Discuss the on-shift compensation for providing this expertise or add an augmentation responder to Table II-2 of the CPNPP Emergency Plan.
- K. Table B-1 of NUREG-0654/FEMA-REP-1 identifies the need to augment the Electrical / I&C Maintenance capability within 30 minutes. Explain why Table II-2 does not include this capability.
- L. Table B-1 of NUREG-0654/FEMA-REP-1 identifies the need for Electrical and Mechanical Technical support within 60 minutes. Discuss the electrical and mechanical technical expertise of the four TSC Engineering team members identified as 70-minute augmentation staff in Table II-2.

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**ANSWER:**

- B-1. The Emergency Plan provides a complete discussion of the staffing and functions of the Emergency Response Organization (ERO) that can be staffed 24-hours per day during an emergency. This organization is capable of managing the emergency and assuring protection of public health and safety. Section II.B.7 discusses additional resources available to provide support on an ad hoc basis, which is the approach used for Units 1 and 2 and discussed in Section 1.2.1 of the Unit 1 and 2 Emergency Plan. As a single nuclear site licensee, Luminant does not maintain a Corporate nuclear organization, per se. All nuclear organizational components are located at the Comanche Peak site. Therefore, the types of support envisioned do not require a formal Corporate Emergency Support Organization and are typical of functions necessary for the normal conduct of business for a nuclear utility. These services include public information, materials procurement, contract manpower and construction, and legal and insurance support. These offsite corporate support functions are those functions that are performed routinely by the personnel and departments involved, and are not specific to the emergency plan.
- B-2. As discussed in the response to RAI No. 3327 (CP RAI #78) Question 13.03-13 (letter TXNB-09066 dated November 12, 2009), requirements for initial and continuing training for all personnel are described in Comanche Peak Units 1 and 2 Procedure No. TRA-105 "Emergency Preparedness Training," for the operating nuclear power reactors at Comanche Peak. The Emergency Response Organization Initial and Continuing Training Program Curricula outline the training requirements for specific positions on the Emergency Response Organization Roster. A copy of the current version of this procedure is provided as Attachment 13.03-13A for information purposes as it does not specifically address Units 3 and 4. A procedure with content similar to TRA-105 will be developed for Units 3 and 4.



All onsite personnel who are not members of the ERO receive necessary training regarding site assembly points and evacuation. Individuals who are not members of the ERO, but who may be called on for assistance, are many and varied. They are considered to be outside the Emergency Plan requirements and, as such, are not identified in the Emergency Plan. An example would be an environmental licensing specialist who would be called upon in the event of a chemical spill to perform reporting and interface with the environmental agency, thus removing this burden from the ERO. A second example would be a supply chain specialist for whom the processing of a material request is no different than what they do each day in their job. In short, the roles being discussed are not Emergency Plan roles, per se, and the functions do not need to be delineated in a separate emergency response function.

No change to the Emergency Plan is necessary.

B-3.A. Section II.B.1 of the Emergency Plan describes the principal responsibilities that are assigned to the Operations Shift until relieved by members of the ERO. The Security Shift Supervisor has been added to Figure II-2. In addition, Section II.B.1 has been revised by re-ordering the first two paragraphs, which should clarify that Figure II-2 is for the initial phase of an emergency.

B-3.B Section II.B.1 of the Emergency Plan describes the principal responsibilities that are assigned to the Operations Shift until relieved by members of the ERO. The Maintenance Personnel shown in Figure II-2 perform the Emergency Repair and Damage Control function initially, until such time as the Operations Support Center (OSC) is manned. Section II.B.5 includes a description of the Emergency Repair & Damage Control Emergency Team Coordinator as follows:

The OSC Emergency Response and Damage Control (ERDC) Coordinator directs the activities of the Maintenance personnel, and is responsible for coordinating emergency repair and damage control teams dispatched from the OSC.

There is no need to revise Figure II-2. However, as discussed in response to part B-3.A above, Section II.B.1 has been revised to improve clarity.

B-3.C The same approach used for the operating units will be adopted for Units 3 and 4. Duties and responsibilities of the Communicators are provided in Comanche Peak Units 1 and 2 Emergency Plan Procedures (EPPs) associated with Facility Activation for the operating nuclear power reactors at Comanche Peak:

EPP-204, "Activation and Operation of the Technical Support Center (TSC)"  
EPP-205, "Activation and Operation of the Operations Support Center (OSC)"  
EPP-206, "Activation and Operation of the Emergency Operations Facility (EOF)"  
EPP-207, "Activation and Operation of the Joint Information Center"

A copy of the current version of EPP-204, which is typical of these procedures, is provided as Attachment 13.03-03B for information purposes as it does not specifically address Units 3 and 4.

Appendix 5 of the Units 3 and 4 Emergency Plan indicates that a topical area to be addressed by EPPs is "Activation and Operation" of each emergency facility. Subsection II.B.5 of the Comanche Peak Units 3 and 4 COLA Emergency Plan has been revised to include a reference to the EPPs regarding activation of the emergency facilities and state that these include the duties and responsibilities of various Plant Emergency Response Positions.

EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50.

In response to Question 13.03-15 (below), Part 10, Appendix B.1 has been revised to include an EP-ITAAC addressing submittal of EPPs to the NRC at least 180 days prior to fuel load (see attached marked-up pages).

- B-3.D. The Emergency Planning Advisor assists the ERO activation of the TSC and provides expertise to TSC personnel concerning Comanche Peak and offsite supporting emergency facilities' capabilities, communications capabilities, personnel and equipment resources, and procedural requirements. This information has been added to Subsection II.B.5 of the Emergency Plan.
- B-3.E. The Radiation Protection Technicians shown in Figure II-4 are equivalent to the On-Site Survey Teams described in Section II.B.5. It is important to note that the second member of a two person team need not be an RPT. Figure II-4 has been revised to include "On-site Survey Teams."
- B-3.F. Board Recorder, Clerical Support, Manpower Coordinator, Procurement Coordinator, and Contracts Coordinator position responsibilities are described in the EPPs for the activation of the facilities as discussed in the response to question part B-3.C above. Subsection II.B.5 of the Comanche Peak Units 3 and 4 COLA Emergency Plan has been revised to include a reference to the EPPs regarding activation of the emergency facilities and state that these include the duties and responsibilities of various Plant Emergency Response Positions.
- B-4.A. As indicated in Table II-2, the Radwaste Operator "may be provided by on-shift or augmentation personnel assigned other functions." According to FSAR Subsection 13.1.2.1, Nuclear Equipment Operators work under the direction of a Shift Manager, Unit Supervisor, or Radwaste Supervisor. The Nuclear Equipment Operator responsibilities include operating equipment from the Control Room, and operating and servicing equipment remote from the Control Room at the direction of Control Room operators.

Therefore, a Radwaste Operator would be assigned from the shift complement of Nuclear Equipment Operators, which is inherently a collateral duty. This is consistent with the information currently provided in Table II-2. FSAR Table 13.1-202 specifies in Footnote h, "Additional minimum on-shift staffing requirements are contained in the CPNPP Units 3 and 4 Emergency Plan." Table II-2 incorrectly uses the term "Plant Equipment Operator," which has been corrected to the term "Nuclear Equipment Operator" as used in FSAR Table 13.1-202. Because the Mechanic, Electrician, and I&C Technician are required under the Emergency Plan, reference to Footnote f in Table II-2 of the Emergency Plan has been corrected to Footnote a. Once assigned ERO duties, these personnel would have no responsibilities that would negatively affect their duties or their ability to respond to the event. Collateral duties are discussed in response part B-4.D below.

- B-4.B. The principal responsibilities of the Shift Manager detailed in Subsection II.B.1 of the Units 3 and 4 Emergency Plan have been revised to include approving the release of public information. According to Table II-2, the Shift Manager performs this duty until relieved by the TSC Manager or the Company Spokesperson. At the onset of an event, the Shift Manager assumes the duty of Emergency Coordinator. The Shift Manager can delegate this responsibility. Section II.B.4 of the Emergency Plan details the actions for which the Emergency Coordinator cannot delegate the decision-making authority.

B-4.C. Table II-2 of the Units 3 and 4 Emergency Plan identifies the shift staffing levels during an emergency at one unit. The table identifies one Shift Manager (SRO), one Unit Supervisor (SRO), two Reactor Operators (RO), and two Nuclear Equipment Operators per unit.

FSAR Table 13.1-202 addresses the minimum number of personnel required for operations of a two-unit plant. The on-shift staffing in this table is cited as individuals per unit and is as defined in 10 CFR 50.54(m)(2)(i). As specified in Note g of FSAR Table 13.1-202, one of the Senior Reactor Operator (SRO) positions shown in Table 13.1-202, representing the Shift Manager, is shared between Units 3 and 4. The actual on-shift staffing must be established to satisfy all applicable FSAR and Emergency Plan requirements (see Note "h" to Table 13.1-202). In this specific case, because the Emergency Plan staffing requirements exceed those of the FSAR, the Emergency Plan establishes the controlling requirements for staffing of the Shift Manager Position and the Shift Manager is not shared between the Units.

According to Note "g" of FSAR Table 13.1-202, the Shift Technical Advisor (STA), Radiation Protection Technician (RPT), and Chemistry Technician positions shown in Table 13.1-202 are shared between Units 3 and 4. The actual on-shift staffing must be established to satisfy all applicable FSAR and Emergency Plan requirements (see Note "h" to Table 13.1-202). In this case, the STA, RPT, and Chemistry Technician would respond to the affected unit during an emergency. Any deficit in staffing for the unaffected unit would be remedied in accordance with Technical Specifications.

B-4.D. According to Table II-2 of the Emergency Plan, Fire Team Members are assigned per the FSAR. FSAR Subsection 13.1.2.1.5 states that the station is designed and the fire brigade is organized to be self-sufficient with respect to fire fighting activities. The fire brigade assigned for any shift does not include the Shift Manager or licensed operators. Fire brigade members for a shift are designated in accordance with established procedures at the beginning of the shift. Therefore, during an emergency involving a fire, the Fire Brigade members would be dedicated to fire response and other qualified shift personnel would be used to perform other on-shift ERO functions.

B-4.E Staffing times for augmentation shown in Table II-2 of the Emergency Plan are based on Luminant's experience and NRC acceptance associated with Units 1 and 2 emergency response capabilities. Upon further consideration, Luminant has revised Table II-2 to 30 minutes and 60 minutes to be consistent with the staffing times specified in Table B-1 of NUREG-0654/FEMA-REP-1.

B-4.F. As discussed in the response to part B-4.A, the staffing levels established in FSAR Table 13.1-202 and Table II-2 of the Units 3 and 4 Emergency Plan were developed for different purposes. The actual on-shift staffing must be established to satisfy all applicable FSAR and Emergency Plan requirements (see Note "h" to Table 13.1-202). In this specific case, because the Emergency Plan staffing requirements exceed those of the FSAR, the Emergency Plan establishes the controlling requirements for staffing of Mechanic, Electrician, and I&C Technician. The footnotes are taken directly from SRP 13.1.2-13.1.3.

Table II-2 has been revised as discussed in response to question part B-4.A.

B-4.G. As discussed in the response to part B-4.F above, required staffing levels are controlled by the most limiting document which, in the cited case, would be the Emergency Plan.

G-1. Permanent defueled conditions are not addressed in the Emergency Plan nor are they included in the COLA. Accordingly, at least one RPT will be onsite when fuel is present. Footnote "f" states, "On-shift staffing is provided in Technical Specifications for these

positions." This statement does not provide permission for staffing levels to fall below that required by the Emergency Plan.

Emergencies that can occur when the reactor core is offloaded, include fuel handling accidents, unplanned reactivity changes in the fuel pool, loss of power, hostile actions, fires and explosions, and impacts on the plant from natural phenomena, to name a few. Any of these emergencies resulting in the need for RPT support will be responded to in accordance with the Emergency Plan and associated EPPs. The full spectrum of emergencies during refueling conditions is addressed in Appendix 1 of the Emergency Plan.

- G-2. The same approach used for the operating units will be adopted for Units 3 and 4. The duties of the Radiation Protection Technician (RPT) staff are contained in Comanche Peak Units 1 and 2 Emergency Plan Procedure EPP-205 "Activation and Operation of the Operations Support Center (OSC)" for the operating nuclear power reactors at Comanche Peak. A copy of the current version of this procedure is provided as Attachment 13.03-03C for information purposes as it does not specifically address Units 3 and 4. This procedural level of detail is inappropriate for the Emergency Plan.

Appendix 5 of the Units 3 and 4 Emergency Plan indicates that a topical area to be addressed by EPPs is "Activation and Operation of the Operations Support Center (OSC)." As described in the response to part B-3.C above, Subsection II.B.5 of the Comanche Peak Units 3 and 4 Emergency Plan has been revised to include a reference to the EPPs regarding activation of the emergency facilities and state that these include the duties and responsibilities of various Plant Emergency Response Positions.

EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50.

In response to Question 13.03-15 below, COLA Part 10, Appendix B.1, has been revised to include an EP-ITAAC addressing submittal of EPPs to the NRC at least 180 days prior to fuel load (see attached marked-up pages).

- G-3. Table II-2 shows RPT support for "In-Plant Survey" and "On-site Surveys." "On-site Surveys" is used by Luminant for "on-site (out-of-plant) surveys" referred to in the Question. Table II-2 indicates that two RPTs are provided on-shift for "Radiological Accident Assessment and Support of Operational Accident Assessment" that includes these surveys. Under "Capabilities for Additions," Table II-2 specifically shows augmented support at 70 minutes by two RPTs for "In-Plant Survey" and one RPT for "On-site Surveys." As noted in the response to part B-4.E above, Luminant has revised Table II-2 to 30 minutes and 60 minutes to be consistent with the staffing times specified in Table B-1 of NUREG-0654/FEMA-REP-1 (see attached marked-up pages).
- B-4.H. The same approach used for the operating units will be adopted for Units 3 and 4. Section 4.2.2 of the Comanche Peak Units 1 and 2 Emergency Plan Procedure, EPP-309 "Onsite/In-Plant Radiological Surveys and Offsite Radiological Monitoring" for the operating nuclear power reactors at Comanche Peak, states that on-site Survey Teams initially are composed of at least two members, at least one of which is an RPT. This section further states that the primary consideration for team size reduction is the safety of the individual being dispatched. Thus any available on-site personnel permitted access into Radiation Areas can serve as the second member of the team. A copy of the current version of this procedure is provided as Attachment 13.03-03D for information purposes as it does not specifically address Units 3 and 4.

Appendix 5 of the Units 3 and 4 Emergency Plan indicates that a topical area to be addressed by EPPs is "Onsite/In-Plant Radiological Surveys and Offsite Radiological Monitoring." As described in the response to part B-3.C above, Subsection II.B.5 of the Comanche Peak Units 3 and 4 Emergency Plan has been revised to include a reference to the EPPs regarding activation of the emergency facilities and state that these include the duties and responsibilities of various Plant Emergency Response Positions.

EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50.

In response to Question 13.03-15 below, COLA Part 10, Appendix B.1 has been revised to include an EP-ITAAC addressing submittal of EPPs to the NRC at least 180 days prior to fuel load (see attached marked-up pages).

- B-4.I-1 As discussed in the response to part B-4.F above, the staffing levels established in FSAR Table 13.1-202 and Table II-2 of the Emergency Plan were developed for different purposes. The actual on-shift staffing must be established to satisfy all applicable FSAR and Emergency Plan requirements (see Note (h) to Table 13.1-202). In this specific case, because the Emergency Plan staffing requirements exceed those of the FSAR, the Emergency Plan establishes the controlling requirements for staffing of Chemistry and Radiation Protection Technicians. Because the Chemistry Technician is required under the Emergency Plan under all modes of operation of the plant, reference to Footnote "f" in Table II-2 of the Emergency Plan has been corrected to Footnote "a."
- B-4.I-2. According to Table B-1 of NUREG-0654, Rescue Operations and First-Aid may be provided by shift personnel assigned other functions. Luminant has assigned this function to the on-shift Chemistry Technician consistent with our experience in operating Units 1 and 2.
- B-4.J-1. The roles of Engineering Technical Support and Dose Assessment are not competing but rather complimentary in that the Shift Technical Advisor (STA) has situational awareness and understanding of evolving plant conditions that allows him to quickly fulfill the dose assessment role. Training for STAs includes operation of the computer-based dose assessment program. Additionally, with the exception of a rapidly evolving accident, it is anticipated that the offsite dose assessment function is performed by qualified dose assessors located in the Technical Support Center or Emergency Operations Facility.

The same approach used for the operating units will be adopted for Units 3 and 4. Proper assessment and classification of the emergency is important not only to accident mitigation, but also to ensure proper resources and predetermined protective measures are employed to protect plant personnel and the public. Upon recognition of an abnormal or emergency condition, plant operations personnel implement prearranged response procedures. The Control Room staff evaluates conditions and, if appropriate, classifies the emergency into one of four Emergency Classifications. To accomplish this, operational parameters and radiation monitoring instrument readings, or other symptoms indicative of system degradation would be evaluated against the EAL criteria. These criteria are provided in the appropriate EPPs. The EALs provided in these procedures are based on instrument readings or identified abnormal conditions which relate to the classification. The necessary guidance is contained in Comanche Peak Units 1 and 2 Emergency Plan Procedures, EPP-201 "Assessment Of Emergency Action Levels Emergency Classification And Plan Activation" and EPP-109 "Duties and Responsibilities of the Emergency Coordinator/Recovery Manager" for the operating nuclear power reactors at Comanche Peak. Copies of the current versions of these procedures are provided as Attachments 13.03-03E and 13.03-03F for information purposes as they do not specifically address Units 3 and 4.

Appendix 5 of the Units 3 and 4 Emergency Plan indicates that topical areas to be addressed by EPPs are "Assessment of Emergency Action Levels Emergency Classification and Plan Activation" and "Duties and Responsibilities of the Emergency Coordinator/Recovery Manager." As described in the response to part B-3.C above, Subsection II.B.5 of the Comanche Peak Units 3 and 4 Emergency Plan has been revised to include a reference to the EPPs regarding activation of the emergency facilities and state that these include the duties and responsibilities of various Plant Emergency Response Positions.

EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50.

In response to Question 13.03-15 below, COLA Part 10, Appendix B.1 has been revised to include an EP-ITAAC addressing submittal of EPPs to the NRC at least 180 days prior to fuel load (see attached marked-up pages).

- B-4.J-2. The augmentation responder for the Core/Thermal Hydraulics area of expertise is a member of the TSC Engineering Team. The duties of the TSC Engineering Team are discussed in Subsection II.B.5 of the Units 3 and 4 Emergency Plan, including core reactivity monitoring and damage assessment and engineering data analysis, including core thermal hydraulics. The same approach used for the operating units will be adopted for Units 3 and 4. Comanche Peak Units 1 and 2 Emergency Plan Procedure, EPP-204 "Activation and Operation of the Technical Support Center (TSC)" for the operating nuclear power reactors at Comanche Peak contains further information on the responsibilities of the TSC Engineering Team. Section 4.1.5 of this procedure contains the technical issues that are the responsibilities of the TSC Engineering Team, including assessing plant status and core thermal hydraulics. A copy of the current version of this procedure is provided as Attachment 13.03-03B for information purposes as it does not specifically address Units 3 and 4. Subsection II.B.1 of the COL Emergency Plan states "Figure II-2 illustrates the CPNPP Units 3 and 4 ERO. EPPs provide details regarding ERO position functions." Therefore there is no need to modify the Plan.

EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50.

In response to Question 13.03-15 below, COLA Part 10, Appendix B.1 has been revised to include an EP-ITAAC addressing submittal of EPPs to the NRC at least 180 days prior to fuel load.

- B-4.K. Footnote \*\* of Table B-1 of NUREG-0654/FEMA-REP-1 indicates that these positions "May be provided by shift personnel assigned other functions." Table II-2 has incorrectly assigned Footnote "f" to these functions rather than the correct Footnote "a." Augmentation times for the Electrical Maintenance and I&C Technician are based on operational experience at Units 1 and 2, which was reflected in Table II-2. This approach has been acceptable to NRC for operating plant emergency response. As discussed in the response to part B-4.E above, the augmentation response times on Table II-2 have been revised to 30 and 60 minutes.
- B-4.L. As specifically stated in subsection II.B.5 of the Emergency Plan, the TSC Engineering Team provides technical support for "damage assessment (Mechanical/Electrical/I&C) and corrective action development." The same approach used for the operating units will be adopted for Units 3 and 4. Responsibilities of the TSC Engineering Team Coordinator and the TSC Engineering Team are contained in the Comanche Peak Units 1 and 2 Emergency Plan Procedure EPP-204 "Activation and Operation of the Technical Support Center (TSC)" for the operating nuclear power reactors at Comanche Peak. This procedure specifies in Section 4.1.4, that the

Engineering Team Coordinator has the responsibility, amongst other things, to assure that "... engineering support personnel of various disciplines are in position". Section 4.1.5 delineates the technical issues that are the responsibilities of the TSC Technical Support team. A copy of the current version of this procedure is provided as Attachment 13.03-03B for information purposes as it does not specifically address Units 3 and 4. The individuals assigned to these teams are appropriately trained and assigned to provide the required support. Any discussion of the qualifications of these personnel is beyond the scope of the COL Emergency Plan.

As discussed in the response to part B-4.E above, the "Capabilities for Addition" times on Table II-2 have been revised to 30 and 60 minutes, respectively.

#### Impact on R-COLA

See attached markup of Emergency Plan Draft Revision 1 pages II-14, II-18, II-19, II-24, II-26, and II-29, and COLA Part 10 Draft Revision 1 Table B-1 Sheet 37.

#### Impact on S-COLA

None.

#### Impact on DCD

None.

#### Attachments (on CD as Attachment 4 to this letter)

13.03-03A – TRA-105, "Emergency Preparedness Training"

13.03-03B - EPP-204, "Activation and Operation of the Technical Support Center (TSC)"

13.03-03C - EPP-205, "Activation and Operation of the Operations Support Center (OSC)"

13.03-03D - EPP-309, "Onsite/In-Plant Radiological Surveys and Offsite Radiological Monitoring"

13.03-03E - EPP-201, "Assessment of Emergency Action Levels Emergency Classification and Plan Activation"

13.03-03F – EPP-109, "Duties and Responsibilities of the Emergency Coordinator/Recovery Manager"

**Comanche Peak Nuclear Power Plant, Units 3 and 4  
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**B. On-site Emergency Organization**

On-shift responsibilities for Luminant emergency response are defined in this section of the Plan. Staffing for initial accident response in key functional areas is maintained continuously during the course of an emergency. Timely augmentation of response capabilities is available, and the interfaces among various on-site response activities and off-site support and response activities are described.

**1. On-site Emergency Organization**

~~Figure II-2 illustrates the CPNPP Units 3 and 4 ERO. EPPs provide details regarding ERO position functions.~~

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13.03-03

The initial response starts with the normal Operations Shift. The operating organization, along with minimum on-shift complement is discussed in the FSAR, Section 13.1.

Figure II-2 illustrates the CPNPP Units 3 and 4 ERO. EPPs provide details regarding ERO position functions.

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13.03-03

The Operations Shift is responsible for the safe operation of the plant and provides for 24-hour per day emergency response. The Operations Shift responds to abnormal and emergency events and takes action as necessary to mitigate the consequences of an event. Details regarding these actions are specified in the EPPs.

The following principal responsibilities are assigned to the Operations Shift until relieved by members of the ERO.

Shift Manager

- At the onset of an event, assess, classify, and declare the emergency.
- Assume the duties and responsibilities of the Emergency Coordinator.
- Implement response actions based upon the emergency classification declared.
- Approve release of public information from Luminant

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13.03-03

Shift Technical Advisor

- Provide engineering expertise and advice regarding plant transient analysis, accident mitigation, core/thermal hydraulics, and other matters related to operational safety.
- Perform dose assessment.

Control Room Communications

- Notify the ERO of the event.
- Notify the State of Texas and Somervell and Hood County agencies by initial and follow-up notifications.
- Notify the NRC of the event.



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guidance provided in Table B-1 of NUREG-0654 and the provisions of the Emergency Plans of currently-licensed Luminant nuclear facilities.

The ERO, when fully activated, includes the positions described in Table II-2. Additional personnel may be designated by site management or the EOF Manager as emergency responders providing special expertise deemed beneficial, but not mandatory, to the planned response. The individuals assigned as emergency response personnel are designated by site management or the EOF Manager based on the technical requirements of the position.

The ERO positions and principal responsibilities not previously discussed in Section II.B.1 and II.B.2 are discussed below. Further information regarding the duties and responsibilities of ERO positions are contained in EPPs addressing "Activation and Operation" of the various ERFs.

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13.03-03

Control Room Operations Advisor

The CR Operations Advisor serves as the contact point between the operating crew and the TSC staff.

Technical Support Center Manager

The TSC Manager relieves the Shift Manager of Emergency Coordinator duties. The TSC Manager is responsible for activation and control of emergency response activities conducted in the TSC. The TSC Manager relieves CR personnel of administrative functions and decisions and maintains direction and control of on-site emergency response activities conducted within the Protected Area which are required to place a plant in a safe, stable condition.

Technical Support Center Communications Coordinator

The TSC Communications Coordinator is responsible for coordinating communications activities in the TSC. Prior to EOF activation, the position is also responsible for administrative and logistical support.

Technical Support Center On-Site Radiological Assessment Coordinator

Once the TSC is activated, responsibilities for on-site and off-site radiological assessment and survey activities shall be assumed by the TSC On-Site Radiological Assessment Coordinator. The position provides backup dose assessment capabilities and is responsible for directing the on-site radiological assessment activities and ensuring the radiological safety of personnel on-site.

Once the EOF is activated, overall responsibility for off-site radiological assessment shall be assumed by the EOF Radiation Protection Coordinator (RPC).

Technical Support Center Operations Coordinator

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The TSC Operations Coordinator serves as the Operations representative to the TSC staff and as the contact point between the TSC and the operating crew.

Emergency Planning Advisor

The Emergency Planning Advisor assists the ERO activation of the TSC and provides expertise to TSC personnel concerning: Comanche Peak and offsite supporting emergency facilities capabilities; communications capabilities; personnel and equipment resources; and procedural requirements.

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13.03-03

Technical Support Center Engineering Team Coordinator

The TSC Engineering Team Coordinator is responsible for directing and coordinating activities of the TSC Engineering Team to assess plant status and severity of emergency conditions.

Technical Support Center Engineering Team

The TSC Engineering Team is composed of at least four individuals with the experience and competence to provide technical support to the CR Staff in the following areas:

- Core reactivity monitoring and damage assessment
- Damage assessment (Mechanical/Electrical/I&C) and corrective action development
- Operations data and procedure interface
- Engineering data analysis, including core thermal hydraulics

With the location of the TSC being in close proximity to the CR (less than two minute transit time), contact is made with the CR staff for assistance and if necessary, or requested, an engineer(s) can promptly relocate to the CR.

Operations Support Center Manager

The OSC Manager is responsible for activation and control of emergency response activities conducted in the OSC. The OSC Manager is also responsible for dispatching and coordinating personnel to assist in emergency repair and damage control activities, performing radiological surveys, personnel rescue operations, establishing controlled areas, and implementing recovery actions.

Operations Support Center Radiation Protection Coordinator

The OSC Radiation Protection Coordinator directs the activities of the Radiation Protection Technicians and is responsible for providing radiological protective measures for teams dispatched from the OSC.

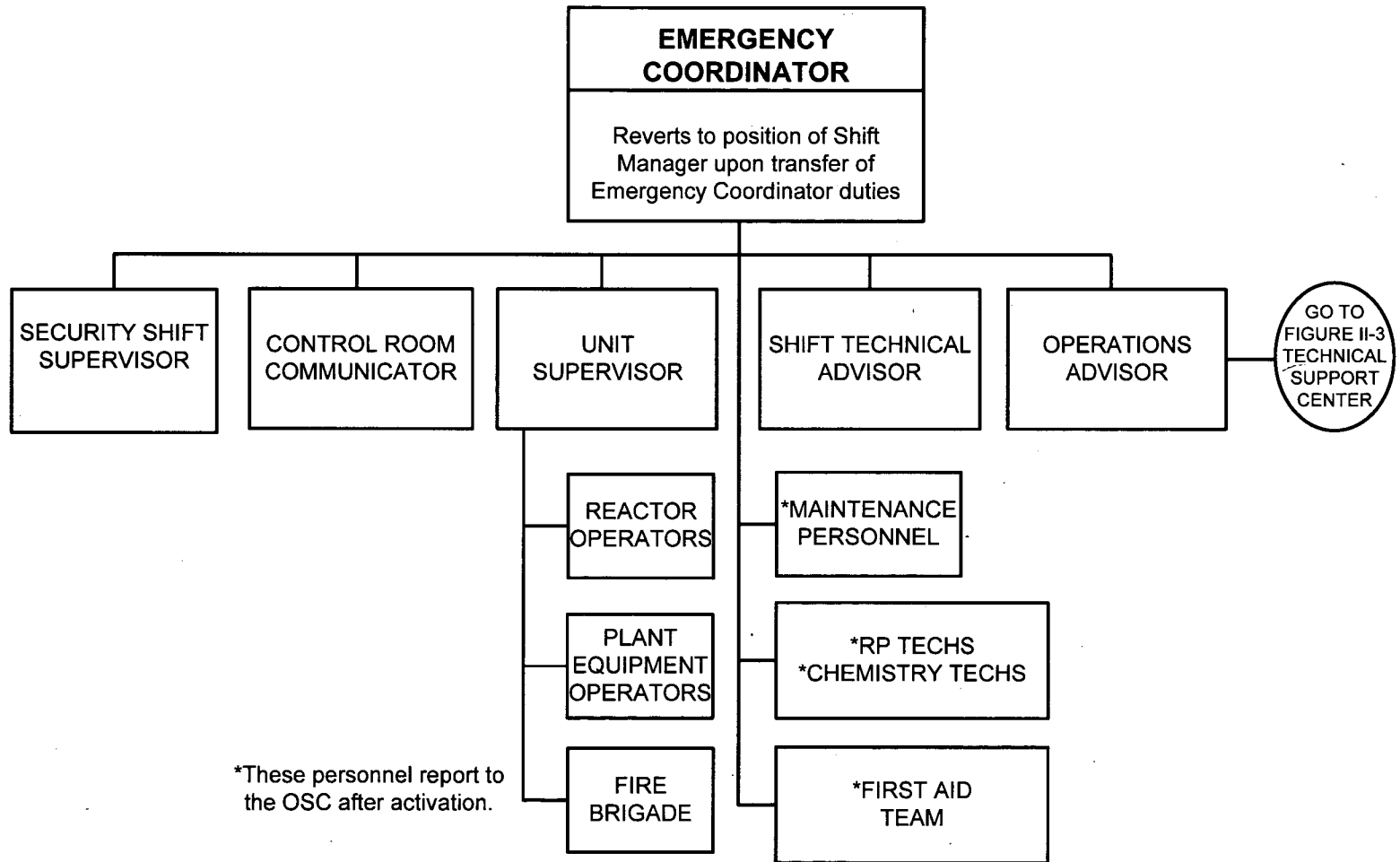
Operations Support Center Chemistry Coordinator

The OSC Chemistry Coordinator directs the activities of the Chemistry Technicians and is responsible for coordinating requests

**Comanche Peak Nuclear Power Plant, Units 3 and 4  
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**Figure II-2**

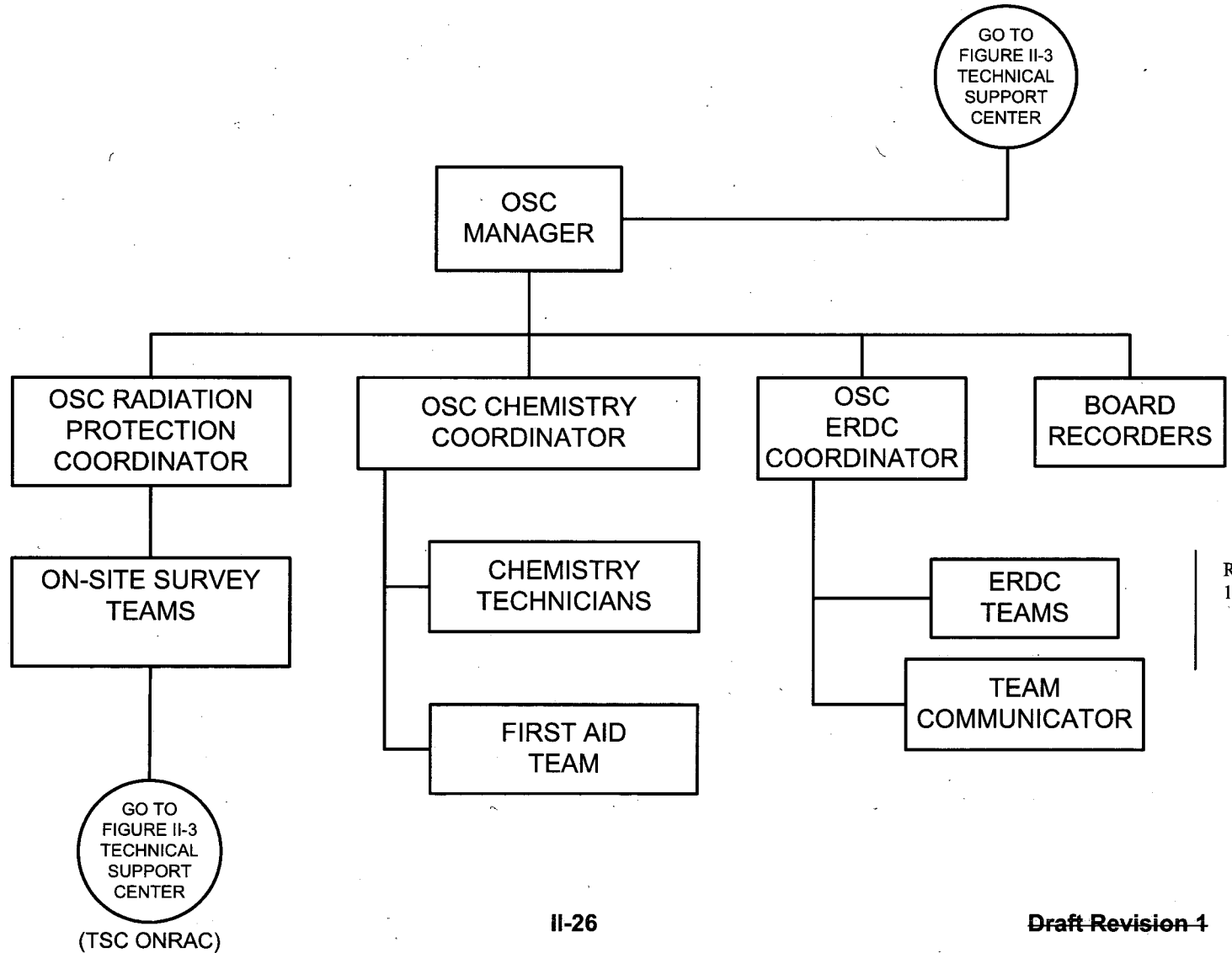
**Emergency Response Organization – Shift Manager as Emergency Coordinator**



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Comanche Peak Nuclear Power Plant, Units 3 and 4  
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Figure II-4 Emergency Response Organization – Operations Support Center



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**Comanche Peak Nuclear Power Plant, Units 3 and 4  
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<b>Table II-2 Plant Staffing Requirements for Emergencies</b>				
FUNCTIONAL AREA	TASK	ON-SHIFT <sup>c</sup>	CAPABILITIES FOR ADDITION <sup>e</sup>	
			40-30 MINUTES	70-60 MINUTES
Station Operations	Plant operations and assessment of operational aspects	1 – Shift Manager (SRO) <sup>d</sup>		
		1 – Unit Supervisor (SRO) <sup>d</sup>		
		2 – Reactor Operators (RO) <sup>d</sup>		
		2 – Plant Nuclear Equipment Operators <sup>d</sup>		
Emergency Direction and Control	Direction and control of on-site emergency activities as Emergency Coordinator	1 – Shift Manager (SRO) <sup>b</sup>		1 – TSC Manager 1 – EOF Manager
Notification/Communications	Notify station, local, state and federal personnel and maintain communications	1 – Communicator <sup>d</sup> 1 – Communicator <sup>a</sup>		1 – TSC Communications Coord. 1 – TSC ENS Communicator 1 – EOF Communications Coord.
Radiological Accident Assessment and Support of Operational Accident Assessment	In-Plant Survey	Radiation Protection Technician <sup>f</sup>		2 – Radiation Protection Technician
	Chemistry/Radiochemistry	Chemistry Technician <sup>fa</sup>		1 – Chemistry Technician
	On-site Surveys	Radiation Protection Technician <sup>f</sup>		1 – Radiation Protection Technician
	Off-site Surveys		2 – Radiation Protection Technician	2 – Vehicle Driver
	Dose Assessment	1 – Shift Technical Advisor <sup>a</sup>	1 – TSC OnRAC	1 – EOF Dose Assessor
	Protective Actions	2 – Radiation Protection Technician <sup>a</sup>	2 – Radiation Protection Technician	2 – Radiation Protection Technician
	Coordination/Control	1 – Shift Manager <sup>a,b</sup>	1 – TSC OnRAC <sup>a</sup>	1 – EOF RP Coordinator
Station System Engineering	Coordination/Control			1 – TSC Engineering Team Coord.
	Technical Support	1 – Shift Technical Advisor <sup>a</sup>		4 – TSC Eng. Team Members 1 – OSC Manager
System Repair/Corrective Action	Emergency repair and damage control	1 – Radwaste Operator <sup>a</sup>		1 – Plant Equipment Operator
		Mechanic <sup>fa</sup>		1 – Mechanic
		Electrician <sup>fa</sup>		1 – Electrician
		I&C Technician <sup>fa</sup>		1 – I&C Technician
Fire	Fire fighting and rescue operations	Per Final Safety Analysis Report	Local Support	
Medical	First Aid	2 – First Aid Team Member <sup>a</sup>	Local Support	
Security	Site access control and personnel accountability, security	Per Security Plan	Local Support	1 – EOF Security Coordinator
Public Information	Approve release of public information from Luminant	1 – Shift Manager <sup>a,b</sup>		1 – TSC Manager <sup>a</sup> 1 – Company Spokesperson
Logistics	Obtain/expedite needed resources for the Luminant Emergency Response Organization	1 – Shift Manager <sup>a,b</sup>		1 – TSC Communications Coord. <sup>a</sup> 1 – EOF Logistical Support Coord.

(a) May be provided by on-shift or augmentation personnel assigned other functions.  
(b) Shift Manager serves in this capacity until relieved by a designated individual

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**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application**

**Part 10 - ITAAC and Proposed License Conditions**

**Table B-2-1 (Sheet 37 of 37)  
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria**

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>15.0 Radiological Emergency Response Training</b>			
<u>10 CFR 50.47(b)(15) – Radiological emergency response training is provided to those who may be called upon to assist in an emergency.</u>	<u>15.1 Site-specific emergency response training has been provided for those who may be called upon to provide assistance in the event of an emergency. [O.1]</u>	<u>15.1 An inspection of training records will be performed.</u>	<u>15.1 Site-specific emergency response training has been provided for local fire departments, law enforcement, ambulance, and hospital personnel.</u>
<b>16.0 Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans</b>			
<u>10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.</u>	<u>16.1 The emergency response plans have been forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. [P.5]</u>	<u>16.1 An inspection of the distribution letter will be performed.</u>	<u>16.1 The Comanche Peak Nuclear Power Plant Unit 3 &amp; 4 COL Application Emergency Plan was forwarded to the Texas Governor's Division of Emergency Management, the Hood County Judge and the Somervell County Judge.</u>
<b>17.0 Implementing Procedures</b>			
<u>10 CFR Part 50, App. E.V – No less than 180 days before the scheduled date for initial loading of fuel for a combined license under part 52 of this chapter, the applicant's or licensee's detailed implementing procedures for its emergency plan shall be submitted to the Commission.</u>	<u>17.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.</u>	<u>17.1 An inspection of the submittal letter will be performed.</u>	<u>17.1 Luminant has submitted detailed emergency plan procedures for the onsite emergency plan, to the NRC, no less than 180 days prior to fuel load.</u>

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**Comanche Peak Units 3 and 4  
Luminant Generation Company LLC  
Docket No. 52-034 and 52-035**

**RAI NO.: 3327 (CP RAI #78)**

**SRP SECTION: 13.03 - Emergency Planning**

**QUESTIONS for Licensing and Inspection Branch (NSIR/DPR/LIB) (EP)**

**DATE OF RAI ISSUE: 9/24/2009**

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**QUESTION NO.: 13.03-7**

**SITE 8: Emergency Facilities and Equipment**

Basis: 10 CFR 50.47(b)(8), Planning Standard H; 10 CFR 50, Appendix E.IV.E.1 through 3; 10 CFR 52.79(a)(17), Three Mile Island Requirements; Appendix E.IV.E.4; Appendix E.IV.E.8; Appendix E.VI Emergency Response Data System; Appendix E.VI. Maintaining Emergency Response Data System; 10 CFR 50.34(f)(2)(xxv); 10 CFR 50, Appendix E.IV.G.; Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements," NUREG-0654/FEMA-REP-1, Evaluation Criterion H1 through H12

SRP ACCEPTANCE CRITERIA (NUREG-0800, section 13.3): Requirements A and B; Acceptance Criteria 1, 2, 4, 5, 12, 25, and 26

- H-1. Section N.2.a, "Communications Drills," (page II-79) states that communications between CPNPP and Federal agencies and the State of Texas are tested quarterly; however, ERDS is not specifically stated to be tested quarterly. Clarify whether ERDS will be tested quarterly. Include this information in the Emergency Plan.
- H-2. Section 9.5.2.2, "System Description," of Section 9.5.2, "Communication Systems," of the US-APWR Design Control Document (DCD) (page 9.5-19) lists and describes the physically independent communication systems, and states emergency telephones are dedicated for the emergency notification system, local and state notification, health physics network, plant security and Offsite support center. Clarify whether the "Offsite support center" listed in DCD Section 9.5.2.2.2.2 is the Operations Support Center (OSC). If not, discuss whether there are emergency telephones used for communication to the Operations Support Center. Include this information in the Emergency Plan.
- H-3. Section H.1, "On-Site Emergency Response Facilities," "Technical Support Centers," (page II-46) states that display capability in the TSC includes a workstation that provides a minimum required Safety Parameter Display System (SPDS) parameters. Discuss how the TSC data will provide at least 2 hours of pre-event and 12 hours of post-event data, consistent with NUREG-0696. Include this information in the Emergency Plan.

- H-4. Section H.2 states that the EOF is sized to provide work space for EOF assigned personnel, Data Display Equipment, communication equipment and access to it, storage and access to plant records and historical data, and private space for NRC consultations; however, information is needed regarding the reliability of the electrical supply relative to vital EOF functions or data storage or data system unavailability.
- A. Discuss whether circuit transients or power supply failures and fluctuations will result in a loss of stored data vital to the EOF functions. Include this information in the Emergency Plan.
  - B. Discuss whether data storage for the EOF data is sufficient to store at least 2 hours of pre-event data and 12 hours of post-event data. Include this information in the Emergency Plan.
  - C. Discuss whether the EOF data system unavailability is less than 0.01 during all plant conditions above cold shutdown, as discussed in NUREG-0696. Include this information in the Emergency Plan.
- H-5. Section H.2, "Off-site Emergency Response Facilities, Emergency Operations Facility," (page II-49) states that security protection is upgraded to restrict access to personnel assigned to the EOF when it is activated, but information is needed regarding security during non-activated times, to ensure its readiness for use. Discuss whether the EOF has industrial security during non-activated times. Include this information in the Emergency Plan.
- H-6. Section H.1, "On-Site Emergency Response Facilities," "Technical Supports Centers," (page II-47) states that display capabilities in the TSC includes a workstation that is capable of displaying parameters required for a Safety Parameter Display System (SPDS); however, information is needed regarding the reliability of equipment. Section H.2, "Off-Site Emergency Response Facilities," (page II-48) states that the EOF also has technical data displays; however, information is needed regarding the reliability of equipment. Discuss whether data indicators and associated circuitry in the TSC and EOF are of a reliable design. Include this information in the Emergency Plan.
- H-7. Section H.2, "Off-site Emergency Response Facilities, Emergency Operations Facility," (page II-48) states that the EOF has space for storage and access to plant records, historical data, procedures, emergency plans and references; however, additional information is needed regarding whether the drawings, diagrams, procedures and other references are accurate, complete and the current version, and whether the US-APWR Design Control Document (DCD) is available as a reference. Discuss whether the plant drawings, diagrams, procedures and other references are accurate, complete and the current version and whether the US-APWR Design Control Document (DCD) is available as a reference at the Emergency Operations Facility (EOF). Include this information in the Emergency Plan.
- H-8. TSC personnel are notified at an Alert or higher emergency classification and should activate the TSC as soon as possible with a goal of 60 minutes. Discuss how the goal of 60 minutes to activate the Technical Support Center (TSC) meets the guidance in NUREG-0696, Section 2.3, "Staffing and Training," which states that the TSC shall achieve full functional operation within 30 minutes. Include this information in the Emergency Plan.
- H-9. Section H.2, "Off-site Emergency Response Facilities," (page II-48) states that the EOF is designed and equipped for continuous operations over an extended time period; however, information is needed regarding the indoor environmental system. Describe the environmental



or heating, ventilation, and air conditioning (HVAC) system that provides temperature, humidity and cleanliness suitable for personnel and equipment in the EOF. Include this information in the Emergency Plan.

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**ANSWER:**

H-1. The same approach used for the operating units will be adopted for Units 3 and 4. Guidance for required testing of Emergency Communication Equipment is included in Comanche Peak Units 1 and 2 Emergency Plan Procedure, EPP-100 "Maintaining Emergency Preparedness," for the operating nuclear power reactors at Comanche Peak. Attachment 4 of this EPP states that the Emergency Response Data System (ERDS) is tested in accordance with instructions furnished by the NRC in Generic Letter GL-93-01. A copy of the current version of this procedure is provided as Attachment 13.03-07A for information purposes as it does not specifically address Units 3 and 4. GL-93-01 recommends a schedule for efficiently accomplishing the required quarterly testing.

Appendix 5 of the Units 3 and 4 Emergency Plan indicates that one of the topical areas to be addressed by plant procedures is "Maintaining Emergency Preparedness." Subsection II.N.2.a of the Comanche Peak Units 3 and 4 Emergency Plan has been revised to indicate that ERDS is tested quarterly and is discussed in the EPP that addresses "Maintaining Emergency Preparedness."

EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50.

In response to Question 13.03-15 below, COLA Part 10, Appendix B.1 has been revised to include an EP-ITAAC addressing submittal of EPPs to the NRC at least 180 days prior to fuel load.

H-2. Tier 2, Subsection 13.3.4 of the US-APWR DCD specifies that "the COL Applicant is to develop the description of the operation support center." The "offsite support center" listed in DCD Subsection 9.5.2.2.2 is not the Operations Support Center (OSC) discussed in the Comanche Peak Units 3 and 4 Emergency Plan. Communications for the OSC are addressed in Subsection II.F.1 of the Emergency Plan. According to Subsection II.F.1, Luminant maintains systems and procedures that provide for rapid communications between its ERFs, and between CPNPP and off-site ERFs. Also, Subsection II.F.1.c states that "voice and facsimile communications capability is provided via the PABX telephone system between the CR, TSC, EOF, OSC, the Luminant Corporate Office, NRC, State agencies and county Sheriff's offices."

No changes are required to the Comanche Peak Units 3 and 4 Emergency Plan.

H-3. Design aspects for the US-APWR reactor technology, including the Technical Support Center (TSC) and the Safety Parameter Display System (SPDS) function are addressed in the US-APWR DCD. As indicated in Subsection II.H.1 of the Comanche Peak Units 3 and 4 Emergency Plan, the TSC is described in DCD Sections 7.1, 7.5, 9.4, 9.5, and 13.3. Additionally, Subsection II.H.1 of the Emergency Plan states that display capabilities in the TSC include a workstation that, at a minimum, is capable of displaying the parameters that are required of the SPDS function. Operational displays are also provided for information only (i.e., no control capability) in the TSC. Information to support emergency response operations is also provided at the Emergency Operations Facility (EOF). The SPDS function design is described in DCD Subsection 7.5.1.4. Additionally, DCD Subsection 7.5.2.4 indicates that the SPDS function design is based on the

requirements of 10 CFR 50.34(f)(2)(iv) and NUREG-0737, Supplement 1. The SPDS is discussed further in Section 4.2.5.b of Topical Report MUAP-07004.

On October 30, 1980, the NRC staff issued NUREG-0737, which incorporated into one document all TMI-related items approved for implementation by the Commission at that time. NUREG-0737 stated that the requirements for the SPDS function were being developed in NUREG-0696. Supplement 1 to NUREG-0737 provided additional clarification regarding SPDS.

Subsection II.H of the Units 3 and 4 Emergency Plan, states that the TSC is designed consistent with the guidance provided in NUREG-0696 and the clarification in NUREG-0737, Supplement 1, as applicable. Luminant has incorporated the US-APWR standard TSC design with no departures and, as such, is committed to the guidance provided in NUREG-0696, including the ability to provide at least 2 hours pre-event and 12 hours of post-event data, as well as the other design-related guidance that is not specifically discussed in the Emergency Plan.

For the standard US-APWR design undergoing NRC review for certification, applicable design information concerning the SPDS function is provided in the DCD and is incorporated by reference in the Emergency Plan. The DCD is currently undergoing NRC review for approval. The Emergency Plan only references design-related information provided in the DCD as emergency response will rely on this equipment, as approved by NRC. Accordingly, no changes to the Emergency Plan are needed.

DCD Table 2.5.4-2 provides an ITAAC stating that information systems important to safety, including the SPDS function, are appropriately displayed and alarmed in the TSC. This ITAAC is incorporated by reference in COLA Part 10, Appendix B Table B-2. As discussed in the response to Question 13.03-15 Part S-14, Table B-2 has been renumbered as Table B-1.

H-4.A. The proposed Comanche Peak Units 3 and 4 Emergency Operations Facility (EOF) is the same facility currently used for Units 1 and 2, which has been evaluated by NRC inspectors for more than 20 years. The adequacy of the existing EOF is discussed in Supplements 3 and 22 of NUREG-0797, "Safety Evaluation Report related to the operation of Comanche Peak Steam Electric Station, Units 1 and 2" (SER). Additionally, Subsection 6.4.8, "Instrumentation, Data System Equipment, and Power Supplies," of the Comanche Peak Units 1 and 2 Emergency Plan contains the following discussion:

The EOF Data System is provided as part of the integrated Emergency Response Facility (ERF) Computer System. The ERF Computer System gathers, stores, and displays data needed in the EOF to analyze the plant conditions. The EOF Data System performs its function independent of action in the CR and without degradation or interfering with CR and plant functions.

Subsection 2.4.4 of the Supplement 22 of the SER addresses the adequacy of emergency facilities and equipment. According to the Emergency Plan Evaluation:

The staff's evaluation of this element was presented in Appendix G (Section 3.H) of SSER 3 (Supplement 3 of the SER). Section 6 of the revised CPSES plan provides a comprehensive description of the applicant's emergency facilities and equipment. In addition to a Technical Support Center (TSC), Operational Support Center, and EOF, the plan now includes a Logistical Support Center (LSC) for coordinating personnel, supplies, transportation, and financial resources in response to an emergency at CPSES.

The plan describes ERFs consistent with the guidance criteria of NUREG-0654 and Supplement 1 to NUREG-0737. The applicant has revised the plan (Revision 11) to include activation of the TSC and EOF as soon as possible, with a goal of 60 minutes, following an Alert classification.

The ERFs were reviewed during the onsite EPIA conducted June 5-9, 1989. Also, the ERFs were used during emergency preparedness drills and exercises during the period 1983-1985 and in 1989, and NRC inspectors identified no violations or deviations in this area.

On the basis of the staff's review of the CPSES plan and the results of the previous emergency preparedness drills and exercises, the staff finds that adequate emergency facilities and equipment to support emergency response on site are provided and maintained.

The existing EOF will be modified to include Units 3 and 4 data displays described in the US-APWR DCD. According to Subsection 7.1 of the US-APWR DCD, operational displays are also provided for information only (i.e., no control capability) at the TSC. Information to support emergency response operations (the same as provided on operational displays) is provided at the EOF.

DCD Subsection 7.1.1.9 discusses the data communication system (DCS) that consists of the plant-wide unit bus, safety bus for each safety-related protection and safety monitoring system (PSMS) train, and maintenance network for each PSMS train and the non safety-related plant control and monitoring system (PCMS) (five maintenance networks total). The DCS also contains data links for point-to-point communication and an input/output (I/O) bus for each controller. This includes information and controls for the Control Room, the Remote Shutdown Room, and TSC (monitoring only at the TSC). The DCS interfaces with the station bus, which is an information technology network (i.e., not I&C). The station bus provides information to plant personnel and to the EOF.

Thus circuit transients or power supply failures and fluctuations which could potentially affect the EOF will not result in a loss of stored data vital to the EOF functions.

Because the Emergency Plan incorporates the US-APWR DCD by reference, no changes to the Emergency Plan are necessary.

- H-4.B. Subsection II.H.2 of the COLA Emergency Plan states that the EOF is equipped with technical data displays to assist EOF personnel in diagnosis of plant conditions and to evaluate potential or actual release of radioactive materials to the environment.

DCD Subsection 7.1.1.5.4 indicates that the SPDS is displayed on operational displays in the Main Control Room (MCR), TSC and EOF. The primary function of the SPDS is to aid MCR operating personnel to make quick assessments of plant safety status. Duplication of the SPDS displays in the TSC and EOF improves the exchange of information between these facilities and the control room and assists plant management in the decision-making process. The SPDS operates during normal operations and during all classes of emergencies. The SPDS displayed information in the MCR, TSC, and EOF is identical.

The response to questions H.3, above discusses data storage at least 2 hours pre-event and 12 hours post-event for the TSC which, in terms of SPDS function, is identical to the EOF.

No changes to the COL Emergency Plan are required.

H-4.C. Data system reliability is discussed in the appropriate Topical Reports including Topical Report MUAP-07004 "Safety I&C System Description and Design Process."

As discussed in the above responses, the data systems are described in Subsection 7 of the US-APWR DCD. The COLA incorporates this section with no departures.

No changes to the COL Emergency Plan are required.

H-5. The EOF is a dedicated-use facility and remains locked when it is not being used for emergency response or emergency preparedness related activities such as training, drills and exercises. Only personnel authorized by Luminant management have access to the facility. The Emergency Plan accurately reflects this information and Luminant sees no need to provide additional detail in the Emergency Plan as this additional information is not required for emergency response. Accordingly, no changes to the Emergency Plan are required.

H-6. The information requested in the question is design-related. The SPDS function is described in DCD Subsection 7.5.1.4. According to the DCD, the computer that processes SPDS functions and all related human-system interface components are redundant, to ensure operation is not adversely affected by credible malfunctions. SPDS signals originate in plant instrumentation or within the controllers of the plant control and monitoring system (PCMS) and the protection safety and monitoring system (PSMS). These signals are interfaced to the PCMS via the redundant unit bus, described in Section 7.9 of the US-APWR DCD. The data interface to the PSMS is physically and functionally isolated so as not to affect the safety system in the event of SPDS component failure. The SPDS is developed through an augmented quality program, which includes software verification and validation.

The information provided above is incorporated by reference in the Emergency Plan. No changes to the Emergency Plan are required.

H-7. As discussed in Subsection II.H.2 of the COLA Emergency Plan, the EOF has ready access to plant records, procedures, and emergency plans needed to exercise overall management of emergency response resources. These documents are kept current and are complete records as described in document control procedures. The DCD will also be available as a reference in the EOF because it is a foundation document for the FSAR. Subsection II.H.2 of the Emergency Plan has been revised to include the DCD and indicate that documents provided at the EOF are maintained current.

H-8. The same approach used for the operating units will be adopted for Units 3 and 4. EPP-204 "Activation and Operation of the Technical Support Center (TSC)" describes the activation requirement for the operating plant. A copy of the current version of the procedure is provided as Attachment 13.03-07B for information purposes as it does not specifically address Units 3 and 4. Section 4.4.1 states that personnel assigned to the TSC are notified at an Alert or higher classification and should activate the facility as soon as possible with a goal of sixty (60) minutes.

EPP-204 has been used effectively in numerous drills and exercises and NRC graded exercises and has been found to be acceptable.

Appendix 5 of the Units 3 and 4 Emergency Plan indicates that one of the topical areas to be addressed by plant procedures is "Activation and Operation of the TSC." EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50.

In response to Question 13.03-15 below, COLA Part 10, Appendix B.1 has been revised to include an EP-ITAAC addressing submittal of EPPs to the NRC at least 180 days prior to fuel load.

No changes to the Emergency Plan are required.

H-9. As previously described in the response to H-4 above, the EOF is the same facility currently used for Units 1 and 2. Figure II-1 of the Units 3 and 4 Emergency Plan indicates that the EOF would be shared by the two existing units and proposed Units 3 and 4. Subsections 6.4.5 and 6.4.6 of the Comanche Peak Unit 1 and 2 Emergency Plan describe the EOF as a well-engineered building meeting the Uniformed Building Code. It is designed for the expected life of the plant. The walls and ceilings are approximately eight inches of concrete. The ventilation system and structure are not seismically qualified.

The EOF has special shielding and ventilation provisions for habitability. The EOF is shielded to provide a gamma protection factor of >15. The dedicated ventilation system has a High Efficiency Particulate (HEPA) filter which filters the incoming air. The ventilation system maintains a slight positive pressure in the EOF.

Additional information is included in EPP-206, "Activation and Operation of the Emergency Operations Facility (EOF)," for the operating reactors. A copy of the current version of this procedure is provided as Attachment 13.03-07C for information purposes as it does not specifically address Units 3 and 4. According to Subsection 4.8.1 of EPP 206, the following systems/equipment are in place to ensure that the EOF is and remains habitable for occupancy during a declared emergency:

- permanent facility shielding;
- HVAC system whereas a realignment of ventilation flow paths can filter incoming air through High Efficiency Particulate Absorbers (HEPA) filters and provide a slight positive pressure;
- retractable gamma shield entrance door; and
- capability for continuous radiological monitoring of the facility.

Appendix 5 of the Units 3 and 4 Emergency Plan indicates that one of the topical areas to be addressed by plant procedures is "Activation and Operation of the EOF." EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50.

In response to Question 13.03-15 below, COLA Part 10, Appendix B.1 has been revised to include an EP-ITAAC addressing submittal of EPPs to the NRC at least 180 days prior to fuel load.

Subsection II.H.2 of the Units 3 and 4 Emergency Plan has been revised to include the information contained in Subsections 6.4.5 and 6.4.6 of the Comanche Peak Units 1 and 2 Emergency Plan regarding the EOF and to indicate that additional information regarding habitability of the EOF is discussed in the EPP that addresses "Activation and Operation of the EOF."

#### Impact on R-COLA

See attached markup of Emergency Plan Draft Revision 1 pages II-49, II-50, and II-80, and COLA Part 10 Draft Revision 1 Table B.1 Sheet 37.

Impact on S-COLA

None

Impact on DCD

None

Attachments (on CD as Attachment 4 to this letter)

Attachment 13.03-07A - EPP-100, "Maintaining Emergency Preparedness"

Attachment 13.03-07B - EPP-204, "Activation and Operation of the Technical Support Center (TSC)"

Attachment 13.03-07C – EPP-206, "Activation and Operation of the Emergency Operations Facility (EOF)"

**Comanche Peak Nuclear Power Plant, Units 3 and 4**  
**COL Application**  
**Part 5 - Emergency Plan**

Personnel assigned to the OSC are notified at an Alert or higher emergency classification and should activate the facility as soon as possible with a goal of sixty (60) minutes in accordance with EPPs.

**2. Off-site Emergency Response Facilities**

Emergency Operations Facility

The EOF is located in the NOSF which is located 0.1 miles west of the exclusion area boundary on the Plant Road.

The EOF provides the following functions:

- Management of overall response during an emergency condition
- Coordination of radiological and environmental assessment
- Determination of recommended public protective actions
- Coordination of emergency response activities with Federal, State, and local agencies

Anticipated occupants of the EOF are the EOF Organization and appropriate Federal, State and local agency representatives.

The EOF is a well engineered building meeting the Uniformed Building Code. It is designed for the expected life of the plant. The walls and ceilings are approximately eight (8) inches of concrete. The ventilation system and structure are not seismically qualified. The EOF has special shielding and ventilation provisions for habitability. The EOF is shielded to provide a gamma protection factor of >15. The dedicated ventilation system has a High Efficiency Particulate (HEPA) filter which filters the incoming air. The ventilation system maintains a slight positive pressure in the EOF.

Additional details regarding EOF habitability are described in the EPP that addresses "Activation and Operation of the EOF."

The EOF working space is sized for 35 persons, including Federal, State, and local emergency response personnel. The EOF floor space is approximately 2,625 square feet (ft). The EOF has been designed and is equipped to support continuous operations over an extended period of time.

The EOF is large enough to provide the following:

- Work space for the personnel assigned to the EOF
- Space for the EOF Data Display Equipment
- Space for unhindered access to communication equipment by EOF personnel
- Space for storage of and/or access to plant records and historical data.
- A separate room for private NRC consultations

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**Comanche Peak Nuclear Power Plant, Units 3 and 4  
COL Application  
Part 5 - Emergency Plan**

Section II.H.5 of this Plan provides a description of the radiological monitoring of the EOF.

The EOF has redundant two-way communications with the TSC and appropriate off-site support agencies. Section II.F of this Plan provides a description of the communications capabilities provided in the EOF.

The EOF is equipped with technical data displays to assist EOF personnel in diagnosis of plant conditions and to evaluate potential or actual release of radioactive materials to the environment.

The EOF has ready access to plant records, procedures, and emergency plans needed to exercise overall management of CPNPP Units 3 and 4 emergency response resources. These documents are kept current and are maintained as described in document control procedures. The EOF reference material includes:

- CPNPP Units 3 and 4 FSAR
- Plant Technical Specifications
- Operating Instructions, Both Normal and Emergency
- Off-Site Population Distribution Data
- Evacuation Plans
- US-APWR DCD

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Personnel assigned to the EOF are notified at an Alert or higher emergency classification and should activate the facility as soon as possible with a goal of sixty (60) minutes if a SAE or GE is declared in accordance with EPPs. When the EOF is activated, security protection will be upgraded to restrict access to those personnel assigned to the facility.

Should evacuation of the EOF be required, the EOC in the Hood County Law Enforcement Center may be used as an alternate location. Radiological assessment activities may also be relocated to the State's mobile radiological laboratory.

**3. State/County Emergency Operating Centers**

The State of Texas and Somervell and Hood Counties' Plans establish EOCs for use in directing and controlling their emergency response functions. Appendix 8 of this Plan provides a cross-reference to these provisions in State and local Plans, as applicable.

**4. Activation and Staffing of Emergency Response Facilities**

Section II.H.2 of this Plan provides a description of the activation and staffing of the ERFs.

The State of Texas and Somervell and Hood County emergency response personnel also staff their ERFs consistent with the requirements of their respective plans. Appendix 8 of this Plan



**Comanche Peak Nuclear Power Plant, Units 3 and 4  
COL Application  
Part 5 - Emergency Plan**

c. Remedial Exercises

A remedial exercise is required if it is determined that the emergency plan was not satisfactorily demonstrated during the biennial exercise such that the NRC cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency.

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**2. Drills**

Luminant maintains adequate emergency response capabilities between biennial exercises by conducting drills, including at least one drill involving a combination of some of the principal functional areas of on-site emergency response capabilities, including activities such as: management and coordination of emergency response, accident assessment, protective action decision-making, and plant system repair and corrective actions. The drills follow preplanned scenarios developed to thoroughly test response of personnel involved. On the spot performance corrections may be made and demonstration of proper performance offered by the drill controller during drills. Upon request, Luminant encourages the State of Texas and Somervell and Hood County governments to participate in the drills.

During these drills, activation of the ERFs may not be necessary. Luminant may use the drills to consider accident management strategies, provide supervised instruction, allow the operating staff to resolve problems and focus on internal training objectives. Luminant may include one or more drills as portions of an exercise.

The activities undertaken in the event of an actual declared emergency may be used to satisfy emergency drill requirements, provided that these activities demonstrate adequate execution of the specified activities.

The drill program includes the following:

a. **Communications Drills**

Communications links between CPNPP Units 3 and 4, the DPS, and Somervell and Hood County EOCs are tested monthly. Communications between CPNPP Units 3 and 4, Federal agencies and the State of Texas are tested quarterly. Communications between CPNPP Units 3 and 4, State and local EOCs and radiological monitoring teams are tested annually. Communications tests evaluate both the operability of the system(s) and the ability to understand message content.

ERDS is tested quarterly in accordance with Generic Letter GL-93-01. Additional information regarding the quarterly test is contained in the EPP addressing "Maintaining Emergency Preparedness."

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**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application**

**Part 10 - ITAAC and Proposed License Conditions**

**Table B-2-1 (Sheet 37 of 37)  
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria**

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>15.0 Radiological Emergency Response Training</b>			
<u>10 CFR 50.47(b)(15) – Radiological emergency response training is provided to those who may be called upon to assist in an emergency.</u>	<u>15.1 Site-specific emergency response training has been provided for those who may be called upon to provide assistance in the event of an emergency. [O.1]</u>	<u>15.1 An inspection of training records will be performed.</u>	<u>15.1 Site-specific emergency response training has been provided for local fire departments, law enforcement, ambulance, and hospital personnel.</u>
<b>16.0 Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans</b>			
<u>10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.</u>	<u>16.1 The emergency response plans have been forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. [P.5]</u>	<u>16.1 An inspection of the distribution letter will be performed.</u>	<u>16.1 The Comanche Peak Nuclear Power Plant Unit 3 &amp; 4 COL Application Emergency Plan was forwarded to the Texas Governor's Division of Emergency Management, the Hood County Judge and the Somervell County Judge.</u>
<b>17.0 Implementing Procedures</b>			
<u>10 CFR Part 50, App. E.V – No less than 180 days before the scheduled date for initial loading of fuel for a combined license under part 52 of this chapter, the applicant's or licensee's detailed implementing procedures for its emergency plan shall be submitted to the Commission.</u>	<u>17.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.</u>	<u>17.1 An inspection of the submittal letter will be performed.</u>	<u>17.1 Luminant has submitted detailed emergency plan procedures for the onsite emergency plan, to the NRC, no less than 180 days prior to fuel load.</u>

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

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**Comanche Peak Units 3 and 4  
Luminant Generation Company LLC  
Docket No. 52-034 and 52-035**

**RAI NO.: 3327 (CP RAI #78)**

**SRP SECTION: 13.03 - Emergency Planning**

**QUESTIONS for Licensing and Inspection Branch (NSIR/DPR/LIB) (EP)**

**DATE OF RAI ISSUE: 9/24/2009**

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**QUESTION NO.: 13.03-15**

**SITE – 18: ITAAC**

Regulatory Basis: 10 CFR 50.47; 10 CFR 52.80(a)

SRP Acceptance Criteria (NUREG-0800, section 13.3): Requirement E; Acceptance Criterion 23

S-1. Regulatory Guide (RG) 1.206 Table C.II.1-B1, "Emergency Planning-Generic Inspection, Test, Analyses, and Acceptance Criteria (EP-ITAAC)," provides an acceptable set of generic emergency planning ITAAC. Table B-2 of the COL application EP-ITAAC does not address nine generic ITAAC Planning Standards, listed below. Revise the ITAAC to address these ITAAC, or explain why they are not required.

1. Assignment of Responsibility – Organizational Control
2. Onsite Emergency Organization
3. Emergency Response Support and Resources
4. Radiological Exposure Control
5. Medical and Public Health Support.
6. Recovery and Reentry Planning and Post-Accident Operations
7. Radiological Emergency Response Training
8. Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans
9. Implementing Procedures

S-2. In COL application Part 10, Table B-2, "Emergency Plan Inspection, Tests, Analyses, and Acceptance Criteria", the acceptance criteria are prefaced with the phrase, "A Report exists that confirms." In NRC Regulatory Issue Summary (RIS) 2008-05, "Lessons Learned to Improve

Inspections, Tests, Analyses, and Acceptance Criteria Submittal," dated February 27, 2008, the following guidance is provided in regard to the use of such a phrase.

If applicants use the phrase, "a report exists and concludes that....," they should consider specifying the scope and the type of report. For example, they should explain whether the scope of the report includes the design, the as-built construction (as reconciled with the design), or any other information.

Consistent with RIS 2008-05, discuss the type and scope of the reports cited in ITAAC Table B-2, including how the reports will serve to provide accurate and reliable confirmation that the acceptance criteria have been met for the as-built facility. In the alternative, provide a revised ITAAC table without the words "test records demonstrate" or "a report exists that confirms."

S-3. Table B-2, "Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria," Acceptance Criteria 2.1 in Part 10 of the COL Application does not include language regarding notification of State and Local agencies within 15 minutes. Revise Acceptance Criteria 2.1 to be consistent with Table C.II.1-B1 of RG 1.206, Acceptance Criteria 5.1, or propose an acceptable alternative.

S-4. Table B-2, "Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria," in Part 10 of the COL application, Acceptance Criteria 2.2 does not provide the specific acceptance criteria for determination of successful test completion of mobilizing the CPNPP emergency response organization. Revise Table B-2 Acceptance Criteria 2.2 to include the specific acceptance criteria, or explain why it is not required.

S-5. Table B-2, "Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria," in Part 10 of the COL Application, references Tier 1 of the US-APWR Design Control Document (DCD) Revision 0 for Program Elements 3.1, 3.2, and 5.1; Inspection, Test, Analyses 3.1, 3.2, and 5.1; and Acceptance Criteria 3.1, 3.2, and 5.1. However, the Tier 1 US-APWR Design Control Document (DCD) provided by the Licensee is Revision 1. Revise the previously listed sections to reflect DCD Revision 1, provide Revision 0 for reference use, or discuss why this reference is correct as written.

S-6. Table B-2, "Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria," in Part 10 of the COL Application, Acceptance Criteria 4.1 describes a Joint Information Center that is located in the Granbury City Hall. The acceptance criteria do not list the requirements of Appendix B of RG 1.206, which states "The licensee has provided space, which may be used for a limited number of news media." Revise Acceptance Criteria 4.1 to be consistent with RG 1.206 Acceptance Criteria 7.1, which includes the number of news media to be accommodated, or propose an acceptable alternative.

S-7. In RG 1.206, "Emergency Planning-Generic Inspection, Test, Analyses, and Acceptance Criteria (EP-ITAAC)," Table C.II.1-B1, acceptance criteria 8.1.6 and 8.1.7 include the bracketed statement that "The COL applicant will adopt design certification criteria, if applicable, or otherwise specify OSC location and identify specific capabilities." Table B-2, Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria," In Part 10 of the COL application, acceptance criteria 5.1.2.1, and 5.1.2.2 do not take credit for DCD criteria, or list OSC specific capabilities. Revise the acceptance criteria to include the criteria listed in RG 1.206, or explain why it is not required.

S-8. Table B-2, "Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria," in Part 10 of the COL application, Acceptance Criteria 6.2 does not include the complete criteria of RG 1.206, Acceptance Criteria, which states that in addition to the criteria listed in 6.2, it must also include the following: "and the magnitude of the release of radioactive materials based on plant system parameters

and effluent monitors.” Revise the acceptance criteria to include the criteria listed in RG1.206, or propose an acceptable alternative.

S-9. Table B-2, “Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria,” in Part 10 of the COL application, Acceptance Criteria 6.3 does not include the complete criteria of RG 1.206, Acceptance Criteria, which states the licensee must possess the means “to continuously assess the impact of the release of radioactive materials to the environment”. Revise the acceptance criteria to include the criteria listed in RG1.206, or propose an acceptable alternative.

S-10. Table B-2, “Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria,” in Part 10 of the COL application, Acceptance Criteria 6.4 describes specified meteorological data being available to the control room, TSC, and EOF. RG 1.206, Table C.II.1-B corresponding Acceptance Criteria 9.4 describes the need to demonstrate the ability to communicate meteorological data to the control room, TSC, EOF, offsite NRC center and to the state. Revise Acceptance Criteria 6.4 to be consistent with Table C.II.1-B Acceptance Criteria 9.4 or, propose an acceptable alternative.

S-11. Table B-2, “Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria,” in Part 10 of the COL application, Acceptance Criteria 8.1.2.2 addresses RG 1.206 Table C.II.1-B1 Acceptance Criteria 14.1.2, however, it does not include the word “successfully”, as it relates to emergency responder performance. Revise the acceptance criteria to include the word “successfully” or explain why it is not required.

S-12. In RG 1.206, “Emergency Planning-Generic Inspection, Test, Analyses, and Acceptance Criteria (EP-ITAAC),” Table C.II.1-B1 acceptance criteria 14.1.1 includes the bracketed statement that “The COL applicant will identify exercise objectives and associated acceptance criteria.” Table B-2, Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria,” In Part 10 of the COL application, Planning Standard 8.0, Exercises and Drills, Acceptance Criteria 8.1.1.2 states that exercise objectives, including, including specific acceptance criteria, addressed each of the eight listed emergency planning program elements. However, Table B-2 does not identify what the exercise objectives and associated acceptance criteria are in order to clearly identify what the requirements are, and to provide the ability to determine whether they have been met. Revise the acceptance criteria to include specific exercise objectives and associated acceptance criteria, or explain why it is not required.

S-13. In RG 1.206, “Emergency Planning-Generic Inspection, Test, Analyses, and Acceptance Criteria (EP-ITAAC),” C.II.1-B1 acceptance criteria 14.1.3 addresses offsite exercise objectives associated with the full participation exercise. However, Table B-2, “Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria,” Part 10 of the COL application does not include acceptance criteria to reflect the offsite exercise objectives associated with the full participation exercise. Revise Table B-2 to include the appropriate acceptance criteria, or explain why it is not required.

S-14. In RG 1.206, “Emergency Planning-Generic Inspection, Test, Analyses, and Acceptance Criteria (EP-ITAAC),” Table C.II.1-B1 acceptance criteria 14.1.2 includes the bracketed statement that “The COL applicant will identify responsibilities and associated criteria.” In Table B-2, Acceptance Criteria 8.1.2.1 and 8.1.2.2 do not identify any responsibilities and associated acceptance criteria, in relation to the onsite emergency response personnel successfully performing their assigned responsibilities. Revise Table B-2 Acceptance Criteria 8.1.2.1 and 8.1.2.2 to include the appropriate criteria, or explain why it is not required.

**ANSWER:**

S-1.1. Regulatory Guide (RG) 1.206 Table C.II.1-B1, Acceptance Criterion 1.1, identifies the need for either an emergency plan implementing procedure or a staffing roster that demonstrates that staff exists to provide a 24-hour per day emergency response capability. Luminant recognizes that a number of EPPs must be developed in order to effectively implement the Emergency Plan and to satisfy the 16 Planning Standards provided in 10 CFR 50.47(b). Luminant identified the need for an EPP to address activation of the emergency response organization in Appendix 5 of the Emergency Plan. Appendix 5 includes EPPs that address "Activation and Operation of the Technical Support Center (TSC)," "Activation and Operation of the Operations Support Center (OSC)," and "Activation and Operation of the Emergency Operations Facility (EOF)." In accordance with Appendix E to 10 CFR Part 50, these procedures must be submitted to the NRC 180 days prior to initial fuel load. However, Luminant has revised Table B-2 in Appendix B of COLA Part 10 to include the suggested Acceptance Criteria.

S-1.2. RG 1.206 Table C.II.1-B1, Acceptance Criterion 2.1, "Onsite Emergency Organization," identifies the need for either an emergency plan implementing procedure or a staffing roster that demonstrates that staff exists to provide minimum and augmented on-shift staffing levels. Luminant recognizes that a number of EPPs must be developed in order to effectively implement the Emergency Plan and to satisfy the 16 Planning Standards provided in 10 CFR 50.47(b). Luminant identified the need for an EPP to address the onsite emergency response organization in Appendix 5 of the Emergency Plan. Appendix 5 includes EPPs that address "Activation and Operation of the Technical Support Center (TSC)," "Activation and Operation of the Operations Support Center (OSC)," and "Activation and Operation of the Emergency Operations Facility (EOF)." In accordance with Appendix E to 10 CFR Part 50, these procedures must be submitted to the NRC 180 days prior to initial fuel load.

COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC.

S-1.3. RG 1.206 Table C.II.1-B1, Acceptance Criterion 3.0, "Emergency Response Support and Resources," is not used in RG 1.206 Table C.II.1-B1. According to subsection II.C.1.2.10 of RG 1.206, "ITAAC for Emergency Planning (SRP Section 1.4.3.10)," states, "the applicant may provide proposed EP-ITAAC that are consistent with those provided in Table C.II.1-B1 of Appendix C.II.1-B and are modified, as necessary, to accommodate site-specific impacts or features. With regard to ITAAC 3.0, consistent with Table C.II.1-B1, Luminant identified no additional site-specific impacts or features where additional ITAAC would be warranted. The Emergency Plan submitted as Part 5 of the COLA included Certification Letters and Letters of Agreement documenting supporting organizations commitment to support the emergency response for Comanche Peak. In order to preserve the numbering scheme in Table C.II.1-B1, Part 10, Appendix B Table B-2 has been revised to include the ITAAC with an explanation indicating the Acceptance Criterion is not used.

S-1.4. RG 1.206 Table C.II.1-B1, Acceptance Criteria 11.1 through 11.4, "Radiological Exposure Control," identifies that a means exists to provide onsite radiation protection; a 24-hour per day capability to determine the doses received by emergency personnel and maintain dose records; to decontaminate relocated onsite and emergency personnel, including waste disposal; and to provide onsite contamination control measures. Luminant recognizes that a number of EPPs must be developed in order to effectively implement the Emergency Plan and to satisfy the 16 Planning Standards provided in 10 CFR 50.47(b). Luminant identified the need for an EPP to address radiological exposure control in Appendix 5 of the Emergency Plan. Appendix 5 includes EPPs that address "Emergency Exposure Guidelines and Personnel Dosimetry" and

“Decontamination.” In accordance with Appendix E to 10 CFR Part 50, these procedures must be submitted to the NRC 180 days prior to initial fuel load. COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC.

S-1.5.RG 1.206 Table C.II.1-B1, Acceptance Criteria 12.1 through 12.3, “Medical and Public Health Support,” identifies that arrangements have been implemented for local and backup hospital and medical services having the capability for evaluation of radiation exposure and intake; and the means exist for onsite first aid capability. The Emergency Plan contains agreements with Lake Granbury Medical Center and Walls Regional Hospital addressing arrangements for treating contaminated injured workers. Testing of medical capabilities must be tested annually as required by COL Emergency Plan Subsection II.N.2.c. COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC.

S-1.6.RG 1.206 Table C.II.1-B1, Acceptance Criterion 13.0, “Recovery and Reentry Planning and Post-Accident Operations,” is not used in RG 1.206 Table C.II.1-B1. According to subsection II.C.1.2.10 of RG 1.206, “ITAAC for Emergency Planning (SRP Section 1.4.3.10),” states, “the applicant may provide proposed EP-ITAAC that are consistent with those provided in Table C.II.1-B1 of Appendix C.II.1-B and are modified, as necessary, to accommodate site-specific impacts or features. With regard to ITAAC 13.0, consistent with Table C.II.1-B1, Luminant identified no additional site-specific impacts or features where additional ITAAC would be warranted. Luminant recognizes that a number of EPPs must be developed in order to effectively implement the Emergency Plan and to satisfy the 16 Planning Standards provided in 10 CFR 50.47(b). Luminant identified the need for an EPP to address recovery and reentry in Appendix 5 of the Emergency Plan. Appendix 5 includes EPPs that address “Reentry, Recovery and Closeout.” In accordance with Appendix E to 10 CFR Part 50, these procedures must be submitted to the NRC 180 days prior to initial fuel load. In order to preserve the numbering scheme in Table C.II.1-B1, COLA Part 10, Appendix B, Table B-2 has been revised to include the ITAAC with an explanation indicating the Acceptance Criterion is not used.

S-1.7.RG 1.206 Table C.II.1-B1, Acceptance Criterion 15.1, “Radiological Emergency Response Training,” identifies that site-specific emergency response training has been provided for those who may be called upon to provide assistance in the event of an emergency. Subsection II.O.1 of the COL Emergency Plan requires Luminant to implement a training program that provides for initial training and periodic retraining for individuals who have been assigned emergency response duties. Luminant identified the need for supporting procedures to address distribution of emergency plans in Appendix 5 of the Emergency Plan. Appendix 5 includes supporting procedures that address “Emergency Preparedness Training.” Additionally, the effectiveness of training is specifically addressed through the exercise performance demonstrations required in ITAAC Table B-2 Acceptance Criterion 8.1.2.2. COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC.

S-1.8.RG 1.206 Table C.II.1-B1, Acceptance Criterion 16.0, “Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans,” identifies that emergency response plans have been forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. Luminant recognizes the importance of distributing emergency plans to all organizations with emergency preparedness responsibilities and to satisfy the 16 Planning Standards provided in 10 CFR 50.47(b). Luminant identified the need for supporting procedures to address distribution of emergency plans in Appendix 5 of the Emergency Plan. Appendix 5 includes supporting procedures that address “Maintaining Emergency Preparedness.” COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC.

S-1.9.RG 1.206 Table C.II.1-B1, Acceptance Criterion 17.0, "Implementing Procedures," identifies that the licensee has submitted detailed implementing procedures for the onsite emergency plan no less than 180 days prior to fuel load. As previously stated, EPPs are required to be submitted to the NRC at least 180 days prior to the scheduled date for initial fuel load as required by Section V of Appendix E to 10 CFR Part 50. This section states "No less than 180 days before... the scheduled date for initial loading of fuel for a combined license under part 52 of this chapter, the applicant's or licensee's detailed implementing procedures for its emergency plan shall be submitted to the Commission as specified in § 50.4." Luminant fully intends to comply with the regulation. COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC.

S-2. The use of the phrase, "a report exists that confirms..." was incorporated into the Acceptance Criteria in Table 3.8-1 for consistency with Acceptance Criteria presented in the US-APWR DCD. Upon further review, it has been determined that those Acceptance Criteria associated with conducting a drill or exercise should retain this phrase. However, the phrase, "a report exists that confirms..." has been removed from the following Acceptance Criteria in Table B-2:

1.1.1, 1.1.2, 4.1, 5.1.2.1, 5.1.2.2, 5.2.1, 5.2.2, 6.2, 6.3, 6.4, 6.5, and 6.7

The insertion of additional elements to the ITAAC table previously described in the responses to part S-1, above, resulted in renumbering. Accordingly, this information appears in the new sections:

4.1.1, 4.1.2, 7.1, 8.1.2.1, 8.1.2.2, 8.2.1, 8.2.2, 9.2, 9.3, 9.4, 9.5, and 9.7

S-3. Section II.E.1 of the COLA Emergency Plan provides information regarding the notification of the State of Texas and Somervell and Hood Counties' Emergency Response Organizations (EROs). As described in the Plan, initial notifications shall begin no later than fifteen minutes after one of the following: initial declaration of an emergency classification, escalation of an emergency classification, initial Protective Action Recommendation, emergency termination and reclassification, emergency termination. Acceptance Criterion 2.1, "Notification Methods and Procedures," was included in the proposed set of Emergency Planning ITAAC in the COLA. However, the Acceptance Criterion was not provided consistent with the guidance offered in RG 1.206. Table B-2 has been revised to provide clarification regarding initial notification to the State of Texas and Somervell and Hood Counties. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1, above, resulted in renumbering. Accordingly, this information appears in the new section 2.1.

COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC.

S-4. Acceptance Criterion 2.2, "Notification Methods and Procedures," was included in the proposed set of Emergency Planning ITAAC in the COLA. However, the Acceptance Criterion was not entirely consistent with the guidance offered in RG 1.206. Table B-2 will be revised to indicate that notifications have been performed. The insertion of additional elements to the ITAAC table previously described in the responses to RAI S-1, above, will result in renumbering. Accordingly, this information appears in the new section 5.2.

COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC. The Acceptance Criterion addressing mobilization of the emergency response organization has been provided in Acceptance Criterion 14.1.1.2.B.1.b.

S-5. Table B-2 has been revised to remove the revision number of the US-APWR DCD Tier 1 document. Refer to COLA Part 2, FSAR Chapter 1 for the current revision of the US-APWR DCD Tier 1 document. The insertion of additional elements to the ITAAC table previously described in



the responses to part S-1 above, will result in renumbering. Accordingly, this information appears in sections 6.1, 6.2, and 8.1.

- S-6. Section II.G.3 of the COL Emergency Plan provides information regarding the Joint Information Center (JIC). As described in the Plan, the JIC is located in the Granbury City Hall and space is provided for approximately 75 media personnel. Acceptance Criterion 4.1 was included in the proposed set of Emergency Planning ITAAC in the COLA. However, the Acceptance Criterion was not entirely consistent with the guidance provided in RG 1.206. Table B-2 has been revised to specify that the JIC has sufficient space for approximately 75 news media personnel. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1, above, has resulted in renumbering. Accordingly, this information appears in the new Section 7.1.
- S-7. RG 1.206 Acceptance Criteria 8.1.6 and 8.1.7 were included in the proposed set of Emergency Planning ITAAC in the COLA. However, the Acceptance Criterion was not entirely consistent with the guidance provided in RG 1.206. Acceptance Criterion 5.1.2.1 was consistent with RG 1.206 Acceptance Criterion 8.1.6. The US-APWR DCD does not specify a location for the OSC. This is the responsibility of the COL Applicant consistent with Tier 2, Subsection 13.3.4 of the US-APWR DCD. COL Information Item 13.3(7) states the COL Applicant is to develop the description of the OSC. As discussed in Subsection II.H.1 of the Units 3 and 4 Emergency Plan, the OSC is located in the Maintenance Building between Units 3 and 4.
- Luminant has revised Acceptance Criterion 5.1.2.2 to be consistent with Acceptance Criterion 8.1.7 in RG 1.206 Table C.II.1-B1. COLA Part 10, Appendix B, Table B-2 has been revised to reflect the requested ITAAC. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1, above, has resulted in renumbering. Accordingly, this information appears in the new Section 8.1.2.2.
- S-8. Acceptance Criteria 6.2, "Accident Assessment," was included in the proposed set of Emergency Planning ITAAC in the COLA. However, the Acceptance Criterion was not entirely consistent with the guidance provided in RG 1.206. Table B-2 has been revised to include the requested language. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1 above, has resulted in renumbering. Accordingly, this information appears in the new Section 9.2.
- S-9. Acceptance Criteria 6.3, "Accident Assessment," was included in the proposed set of Emergency Planning ITAAC in the COLA. However, the Acceptance Criterion was not entirely consistent with the guidance provided in RG 1.206. Table B-2 has been revised to include the requested language. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1 above, has resulted in renumbering. Accordingly, this information appears in the new section 9.3.
- S-10. Luminant has revised Acceptance Criterion 6.4 to be consistent with Acceptance Criterion 9.4 in RG 1.206 Table C.II.1-B1. Table B-2 has been revised to reflect the requested ITAAC. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1 above, has resulted in renumbering. Accordingly, this information appears in the new Section 9.4.
- S-11. The phrase used in RG 1.206, Table C.II.1-B1 Acceptance Criterion 14.1.2, "and they successfully performed their assignments," is subjective. Objectively, exercise performance "success" will be based on the absence of any noted deficiencies. Accordingly, Acceptance Criterion 8.1.2.2 includes the phrase, "and there were no uncorrected onsite exercise deficiencies" and provides objective criteria that can be met." Therefore, no changes to this

Acceptance Criteria are needed. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1 above, have resulted in renumbering. Accordingly, this information appears in the new Section 14.1.2.2.

- S-12. Luminant recognizes that exercise planning and conduct is a cooperative effort with State and local agencies. Integral to this planning effort is the development of specific exercise objectives and performance Acceptance Criteria. While Luminant considers unilateral development of exercise objectives and performance Acceptance Criteria to be premature at this stage of licensing of Comanche Peak Units 3 and 4, onsite objectives and associated performance Acceptance Criteria have been added to Table B-2. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1 above, has resulted in renumbering. Accordingly, this information appears in the new Section 14.1.1.2.
- S-13. Luminant recognizes that a full participation exercise must be conducted prior to initial fuel load and the offsite exercise objectives must be met or deficiencies addressed prior to operation above 5% power. Luminant's reluctance to include the suggested ITAAC is based on NRC regulations (10 CFR 52.80) that require ITAAC to be "performed" by the licensee. By regulation (Section IV.F.2(a)(ii) of Appendix E to 10 CFR Part 50), the Federal Emergency Management Agency/Department of Homeland Security (FEMA/DHS), not Luminant, determines whether or not offsite exercise objectives have been met. However, to satisfy the NRC's concern, an ITAAC has been added to Part 10 of the COLA. Acceptance Criterion 14.1.3 has been added, reflecting the insertion of additional elements to the ITAAC table previously described in the responses to part S-1 above.
- S-14. Acceptance Criteria 8.1.2.1 and 8.1.2.2 were developed consistent with other COLA EP-ITAAC. Sections II.B.1 through II.B.7 of the Units 3 and 4 Emergency Plan provide information regarding the responsibilities of the onsite emergency response organization. Luminant recognizes that a full participation exercise must be conducted prior to initial fuel load and the Commission must find that the state of emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. However, to satisfy the NRC's concern, Acceptance Criterion 8.1.2.2 has been revised to identify responsibilities and associated Acceptance Criteria for the onsite emergency response organization. The insertion of additional elements to the ITAAC table previously described in the responses to part S-1 above, has resulted in renumbering. Accordingly, this information appears in the new Section 14.1.2.2.

COLA Part 10, Appendix B Table B-2 has been revised to reflect the requested ITAAC. Based on the Revisions to Table B-2, discussed above, Table B-1 has been deleted from Part 10, Appendix B and Table B-2 has been renumbered as Table B-1.

Impact on R-COLA

See attached markup COLA Part 10 Draft Revision 1 pages 38, 39, and Table B-1 (Sheets 1-37).

Impact on S-COLA

None.

Impact on DCD

None.

**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application**

**Part 10 - ITAAC and Proposed License Conditions**

**Part 10 - APPENDIX B.1**

**EMERGENCY PLANNING**

Luminant has reviewed guidance provided in Regulatory Guide 1.206 concerning Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) related to emergency planning. ~~Following this review, Luminant determined that specific ITAAC offered in the Regulatory Guide were not necessary for the CPNPP COLA. These ITAAC are identified in Table B-1. A few~~Several of the recommended ITAAC were addressed in the US-APWR DCD and are not repeated in the EP ITAAC, as noted in ~~the table~~Table B-1. ~~In addition, the ITAAC related to submittal of procedures is omitted from the CPNPP COLA as discussed in the table.~~

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Table B-2\_1 specifies the inspections, tests, analyses, and associated acceptance criteria for the Emergency Plan.

**Comanche Peak Nuclear Power Plant, Units 3 & 4  
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**Appendix B.1**

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**EP-ITAAC Not Required in CPNPP COLA**

<b>CPNPP COLA EP ITAAC</b>	<b>SECY-05-0197 EP ITAAC</b>	<b>Reg. Guide 1.206 EP ITAAC</b>	<b>Discussion</b>
None Specified	None Specified	1.1 2.1 8.3–8.6 9.5–9.6 10.2–10.4 11.1–11.4 12.1–12.3 15.1 16.1	Industry and NRC agreed to a set of generic EP ITAAC that were promulgated in SECY 05-0197. Additional EP ITAAC were included by the NRC staff in Regulatory Guide 1.206. In developing the set of EP ITAAC for the CPNPP COLA, the additional EP ITAAC from Reg. Guide 1.206 listed above were determined to be unnecessary because the Emergency Plan contains sufficient information on the content of future procedures to be written to implement the Emergency Plan and other EP ITAAC address topics the additional ITAAC offered in Reg. Guide 1.206. Accordingly, the CPNPP EP ITAAC do not include Reg. Guide 1.206 EP ITAAC 1.1, 2.1 8.3 through 8.6, 9.5, 9.6, 10.2 through 10.4, 11.1 through 11.4, 12.1 through 12.3, 15.1, and 16.1. This approach is consistent with the approach used on four other COLAs: Bellefonte, Lee, North Anna, and Grand Gulf.
4.1	4.1	4.1	
2.1–2.3	2.1–2.3	5.1–5.3	
3.1–3.2	3.1–3.2	6.1–6.2	3.1 and 3.2 are addressed in Design Commitments in the US-APWR DCD.
4.4	4.4	7.1	
5.1	5.1	8.1	5.1 is partially addressed through DCD Design Commitments for the TSC.
5.2	5.2	8.2	
6.1–6.4	6.1–6.4	9.1–9.4	
6.5–6.7	6.5–6.7	9.7–9.9	
7.1	7.1	10.1	
8.1	8.1	14.1	
None Specified	9.1	17.1	The regulatory requirement for submittal of emergency plan implementing procedures is explicit. Failure to comply with this regulation could delay fuel loading and could lead to NRC enforcement action. Accordingly, this ITAAC is not needed. This approach is consistent with the approach used on four other COLAs: Bellefonte, Lee, North Anna, and Grand Gulf.

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>1.0 Assignment of Responsibility – Organizational Control</b>			
<p><u>10 CFR 50.47(b)(1) – Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the EPZs have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principle response organization has staff to respond and to augment its initial response on a continuous basis.</u></p>	<p><u>1.1 The staff exists to provide 24-hour per day emergency response and manning of communications links, including continuous operations for a protracted period. [A.1.e, A.4**]</u></p> <p><u>[**References in brackets throughout this table correspond to with NUREG-0654/FEMA-REP-1 Evaluation Criteria]</u></p>	<p><u>1.1 An inspection of the emergency plan procedures will be performed.</u></p>	<p><u>1.1 Emergency plan procedures provide for 24-hour per day emergency response staffing and manning of communications links, including continuous operations for a protracted period.</u></p>
<b>2.0 Onsite Emergency Organization</b>			
<p><u>10 CFR 50.47(b)(2) – 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, and the interfaces among various onsite response activities and offsite support and response activities are specified.</u></p>	<p><u>2.1 The staff exists to provide minimum and augmented on-shift staffing levels, consistent with Table B-1 of NUREG-0654/FEMA-REP-1, Rev. 1. [B.5, B.7]</u></p>	<p><u>2.1 An inspection of the emergency plan procedures will be performed.</u></p>	<p><u>2.1 Emergency plan procedures provide minimum and augmented on-shift staffing levels, consistent with Table II-2 of the Comanche Peak Nuclear Power Plant Units 3 &amp; 4 Combined License (COL) Application Emergency Plan.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>3.0 Emergency Response Support and Resources</b>			
<p>10 CFR 50.47(b)(3) – Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee’s near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.</p>	<p>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</p>	<p>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</p>	<p>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</p>
<b>44.0 Emergency Classification System</b>			
<p>10 CFR 50.47(b)(4) – A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.</p>	<p>44.1 A standard emergency classification and emergency action level (EAL) scheme exists, and identifies facility system and effluent parameters constituting the bases for the classification scheme. [D.1**]</p> <p>[**D.1 corresponds to NUREG-0654 /FEMA-REP-1 evaluation criteria.]</p>	<p>44.1 An inspection of the control room, technical support center (TSC), and emergency operations facility (EOF) will be performed to verify that they have displays for retrieving facility system and effluent parameters in specific Emergency Action Levels (EALs) identified in the following list of EALs that constitute the bases for the classification scheme in Appendix 1, Section 5, of the Comanche Peak Units 3 and 4 COL Emergency Plan:</p> <p align="center">EALs in Emergency Plan Appendix 1, Section 5</p> <p>Abnormal Rad Levels/Radiological Effluent:</p>	<p>44.1.1 A report exists that confirms that the specific parameters identified in the EALs in Emergency Plan Appendix 1, Section 5 have been retrieved and displayed in the control room, TSC, and EOF.</p> <p>44.1.2 A report exists that confirms that the ranges available in the control room, TSC, and EOF encompassed the values for the specific parameters identified in the EALs in Emergency Plan Appendix 1, Section 5.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
		<p>AU1 EALs #1, 2, AU2 EAL #1, AA1 EALs #1, 2, AA2 EAL #2, AA3 EAL #1, AS1 EAL #1, AG1 EAL #1</p> <p>Cold Shutdown/Refueling System Malfunction: CU1, CU2, CU3, CU4, CU7, CU8, CA1, CA3, CA4, CS1, CG1</p> <p>Fission Product Barrier Thresholds: <u>Fuel Clad Barrier Threshold Values</u> 2. Primary Coolant Activity Level 3. Core Exit Thermocouple Readings 4. Reactor Vessel Water Level 4.1 (continued) 6. Containment Radiation Monitoring</p> <p><u>RCS Barrier Threshold Values</u> 2. RCS Leak Rate 4. SG Tube Rupture 6. Containment Radiation Monitoring</p> <p><u>Containment Barrier Threshold Values</u> 2. Containment Pressure 3. Core Exit Thermocouple Readings 4. SG Secondary Side Release with P to S Leakage 5. Containment Isolation Failure or Bypass 6. Containment Radiation Monitoring</p> <p>Hazards and Other Conditions Affecting Plant Safety: HU1 EAL #1, HA1 EAL #1</p>	

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
		<p>System Malfunctions: SU1, SU4, SU8, SA2, SA4, SA5, SS1, SS2, SS3, SS6, SG1, SG2</p>	
<b>25.0 Notification Methods and Procedures</b>			
<p>10 CFR 50.47(b)(5) – Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.</p>	<p>25.1 The means exist to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E.1]</p>	<p>25.1 A test will be performed of the capability to begin initial notification to State and local organizations no later than 15 minutes after the Luminant declares an emergency.</p>	<p>25.1 A report exists that confirms communications have been established via the a dedicated circuit between the control room and the following <u>agencies and notifications began no later than 15 minutes after the declaration of an emergency:</u></p> <ul style="list-style-type: none"> <li>• Somervell County Sheriff or Dispatcher</li> <li>• Hood County Sheriff or Dispatcher</li> <li>• Texas Department of Public Safety</li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>25.2 The means exist to notify emergency response personnel. [E.2]</p>	<p>25.2 A test will be performed of the capabilities.</p>	<p>25.2 A report exists that confirms notification to <u>the Comanche Peak Units 3 and 4 mobilize CPNPP</u> emergency response organization has<u>e</u> been performed.</p> <p>NOTE: Confirmation of the ability to mobilize the <u>Comanche Peak Units 3 and 4 emergency response organization is addressed in Acceptance Criterion 14.1.1.2.B.1.b.</u></p>
	<p>25.3 The means exist to notify and provide instructions to the populace within the plume exposure EPZ. [E.6]</p>	<p>25.3 NOTE: The required test is included in Inspections, Tests, Analyses §14.1.</p>	<p>25.3 NOTE: The means to notify and provide instructions to the populace within the plume exposure pathway EPZ are addressed by Acceptance Criteria §14.1.1.2.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>36.0 Emergency Communications</b>			
<p>10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.</p>	<p><del>36.1</del> The means exist for communications among the control room, TSC, EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F.1.d]</p> <p>NOTE: Tier 1 of the US-APWR Design Control Document (DCD), <del>Rev. 0</del>, addresses this EP Program Element in the following Design Commitments (DC):</p> <ul style="list-style-type: none"> <li>• Table 2.7.6.10-1, DC #2</li> <li>• Table 2.9-1, DC #71</li> </ul>	<p><del>36.1</del> NOTE: For communications among the control room, TSC, EOF, principal State and local emergency operations centers, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD), <del>Rev. 0</del>, addresses the following Inspections, Tests, Analyses:</p> <ul style="list-style-type: none"> <li>• Table 2.7.6.10-1, Item #2</li> <li>• Table 2.9-1, Item #71</li> </ul>	<p><del>36.1</del> NOTE: For communications among the control room, TSC, EOF, principal State and local emergency operations centers, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD), <del>Rev. 0</del>, addresses the following Acceptance Criteria:</p> <ul style="list-style-type: none"> <li>• Table 2.7.6.10-1, Item #2</li> <li>• Table 2.9-1, Item #71</li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>36.2 The means exist for communications from the control room, TSC, and EOF to the NRC headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) between the onsite computer system and the NRC Operations Center.) [F.1.f]</p> <p>NOTE: Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses this EP Program Element in the following Design Commitments (DC):</p> <ul style="list-style-type: none"> <li>• Table 2.7.6.10-1, DC #3</li> <li>• Table 2.10-1, DC #4</li> </ul>	<p>36.2 NOTE: For communications from the control room, TSC, and EOF to the NRC headquarters and regional office EOCs (including establishment of the ERDS [or its successor system] between the onsite computer system and the NRC Operations Center), Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Inspections, Tests, Analyses:</p> <ul style="list-style-type: none"> <li>• Table 2.7.6.10-1, DC #3</li> <li>• Table 2.10-1, DC #4</li> </ul>	<p>36.2 NOTE: For communications from the control room, TSC, and EOF to the NRC headquarters and regional office EOCs (including establishment of the ERDS [or its successor system] between the onsite computer system and the NRC Operations Center), Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Acceptance Criteria:</p> <ul style="list-style-type: none"> <li>• Table 2.7.6.10-1, DC #3</li> <li>• Table 2.10-1, DC #4</li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>47.0 Public Education and Information:</b>			
<p>10 CFR 50.47(b)(7) – Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.</p>	<p>47.1 The licensee has provided space which may be used for a limited number of the news media at the EOF. [G.3.b]</p>	<p>47.1 An inspection of the Joint Information Center will be performed to verify that space is provided for a limited number of the news media.</p>	<p>47.1 A report exists that confirms <del>the</del> The Joint Information Center has been located in the Granbury City Hall at 116 W. Bridge Street, Granbury, TX., with has space for approximately 75 media personnel.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>58.0 Emergency Facilities and Equipment</b>			
<p>10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.</p>	<p>58.1 The licensee has established a technical support center (TSC) and onsite operations support center (OSC). [H.1]</p> <p>NOTE: For the TSC, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses this EP Program Element in the following Design Commitments (DC):</p> <ul style="list-style-type: none"> <li>• Table 2.5.4-2, DC #1</li> <li>• Table 2.7.6.10-1, DC #4</li> <li>• Table 2.9-1, DC #7k</li> <li>• Table 2.10-1, DCs #1, 2, 3</li> </ul>	<p>58.1.1 NOTE: For the TSC, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Inspections, Tests, Analyses:</p> <ul style="list-style-type: none"> <li>• Table 2.5.4-2, DC #1</li> <li>• Table 2.7.6.10-1, DC #4</li> <li>• Table 2.9-1, DC #7k</li> <li>• Table 2.10-1, DCs #1, 2, 3</li> </ul> <p>58.1.2 An inspection of the as-built OSC will be performed.</p>	<p>58.1.1 For the TSC, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Acceptance Criteria:</p> <ul style="list-style-type: none"> <li>• Table 2.5.4-2, DC #1</li> <li>• Table 2.7.6.10-1, DC #4</li> <li>• Table 2.9-1, DC #7k</li> <li>• Table 2.10-1, DCs #1, 2, 3</li> </ul> <p>58.1.2.1 A report exists that confirms <del>the</del> OSC was in <u>ahas been</u> <u>located</u> <u>separately</u> from the control room and TSC.</p> <p>58.1.2.2 A report exists that confirms that OSC voice communication equipment is installed, and voice transmission and reception are accomplished. <del>The following e</del>Communications equipment has been provided in the OSC, and voice transmission and reception have been accomplished with:</p> <ul style="list-style-type: none"> <li>• <u>Control Room</u></li> <li>• <u>TSC</u></li> </ul>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	58.2 The licensee has established an emergency operations facility (EOF). [H.2]	58.2 An inspection of the EOF will be performed.	<del>58.2.1 A report exists that confirms the EOF has</del> at least 243 square meters (2,625 square feet).
			<del>58.2.2.1 A report exists that confirms the EOF meets the following habitability criteria:</del> <ul style="list-style-type: none"> <li>• EOF is constructed to meet Texas Building Code.</li> <li>• Protection factor (from direct radiation exposure) of greater than or equal to 5 in areas where dose assessments, communications, and decision making take place</li> <li>• Ventilation system has isolation with HEPA filters</li> <li>• <del>A backup EOF is located within 20 miles of the TSC</del></li> </ul> <p><u>8.2.2.2 The backup EOF is located within 10 to 20 miles of the TSC.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>§8.2.3 For the EOF, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Acceptance Criteria:</p> <ul style="list-style-type: none"> <li>• Table 2.5.4-2, DC #1</li> <li>• Table 2.7.6.10-1, Items #2, 3</li> <li>• Table 2.9-1, Item #71.</li> <li>• Table 2.10-1, Item #4</li> </ul>
<b>69.0 Accident Assessment</b>			
<p>10 CFR 50.47(b)(9) – Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.</p>	<p>§9.1 The means exist to provide initial and continuing radiological assessment throughout the course of an accident. [1.2]</p>	<p>§9.1 A test of the emergency plan will be conducted by performing an exercise or drill to verify the capability to perform radiological assessment.</p>	<p>§9.1 A report exists that confirms an exercise or drill has been accomplished including use of selected monitoring parameters identified in the EALs in Emergency Plan Appendix 1, Section 5, to assess simulated degraded plant and initiate protective actions in accordance with the following criteria:</p> <p>A. Accident Assessment and Classification</p> <p>1. Initiating conditions identified, EALs parameters determined, and the emergency correctly classified throughout the drill.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>69.1 (continued)                      B. Radiological Assessment and Control                      1. Onsite radiological surveys performed and samples collected.                      2. Radiation exposure to emergency workers monitored and controlled.                      3. Field monitoring teams assembled and deployed.                      4. Field team data collected and disseminated.                      5. Dose projections developed.                      6. The decision whether to issue radioprotective drugs to Luminant emergency workers made.                      7. Protective action recommendations developed and communicated to appropriate authorities.</p>

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	<p>69.2 The means exist to determine the source term of releases of radioactive material within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors. [I.3]</p>	<p>69.2 An analysis of emergency plan implementing procedures will be performed.</p>	<p>69.2 <u>The means has been established. A report exists that confirms a methodology has been established to determine the source term of releases of radioactive materials within plant systems and the magnitude of the release of radioactive materials based on within plant system parameters and effluent monitors.</u></p>
	<p>69.3 The means exist to continuously assess the impact of the release of radioactive materials to the environment, accounting for the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions. [I.4]</p>	<p>69.3 An analysis of emergency plan implementing procedures will be performed.</p>	<p>69.3 <u>The means has been provided to continuously assess the impact of the release of radioactive materials to the environment, accounting for. A report exists that confirms a methodology has been provided to establish the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p>69.4 The means exist to acquire and evaluate meteorological information. [1.5]</p>	<p>69.4 An inspection of the control room, TSC, and EOF will be performed to verify that the following meteorological data is available:</p> <ul style="list-style-type: none"> <li>· Wind speed (at 10 m and 60 m)</li> <li>· Wind direction (at 10 m and 60 m)</li> <li>· Air temperature (at 10 m and 60 m)</li> </ul>	<p><del>69.4.1 A report exists that confirms</del> the specified meteorological data was available at the control room, TSC, and EOF.</p> <p>9.4.2 The means exist to provide the specified meteorological data to the offsite NRC center and the State of Texas EOC.</p>
	<p>69.5 The means exist to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times. [1.8]</p>	<p>69.5 An analysis of emergency plan implementing procedures will be performed.</p>	<p><del>69.5 A</del> The report exists that confirms a methodology means has been established to provide rapid assessment of the actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.</p>
	<p>69.6 The capability exists to detect and measure radioiodine concentrations in air in the plume exposure EPZ, as low as <math>10^{-7}</math> <math>\mu\text{Ci/cc}</math> (microcuries per cubic centimeter) under field conditions. [1.9]</p>	<p>69.6 A test of Luminant field survey instrumentation will be performed to verify the capability to detect airborne concentrations as low as <math>1\text{E}-07</math> microcuries per cubic centimeters.</p>	<p>69.6 A report exists that confirms instrumentation used for monitoring I-131 to detect airborne concentrations as low as <math>1\text{E}-07</math> microcuries per cubic centimeters has been provided.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	<p><del>69.7</del> The means exist to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the EPA protective action guides (PAGs). [I.10]</p>	<p><del>69.7</del> An analysis of emergency plan implementing procedures will be performed, to verify that a methodology is provided to establish means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the following isotopes — Kr-88, Ru-106, I-131, I-132, I-133, I-134, I-135, Te-132, Xe-133, Xe-135, Cs-134, Cs-137, Ce-144.</p>	<p><del>69.7</del> A report exists that confirms the means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the specified isotopes has been established. The means has been established to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.</p>
<b>710.0 Protective Response</b>			

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<p>10 CFR 50.47(b)(10) – A range of protective actions has been developed for the plume exposure EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure EPZ appropriate to the locale have been developed.</p>	<p>710.1 The means exist to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator, including:[J.1]                      a. employees not having emergency assignments;                      b. visitors;                      c. contractor and construction personnel; and                      d. other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area.</p>	<p>710.1 A test of the onsite warning and communications capability will be performed during a drill or exercise.</p>	<p>710.1.1 A report exists that confirms that, during a drill or exercise, notification and instructions were provided to onsite workers and visitors, within the Protected Area, over the plant public announcement system.</p> <p>710.1.2 A report exists that confirms that, during a drill or exercise, audible warnings were provided to individuals outside the Protected Area, but within the Owner Controlled Area.</p> <p>710.1.3 A report exists that confirms that, during a drill or exercise, individuals within Squaw Creek Park were notified by Squaw Creek Park personnel of the appropriate protective response.</p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>11.0 Radiological Exposure Control</b>			
<p><u>10 CFR 50.47(b)(11) – Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity PAGs.</u></p>	<p><u>11.1 The means exists to provide onsite radiation protection. [K.2]</u></p>	<p><u>11.1 An analysis of site procedures will be performed.</u></p>	<p><u>11.1 Site procedures provide the means for onsite radiation protection.</u></p>
	<p><u>11.2 The means exists to provide 24-hour-per-day capability to determine the doses received by emergency personnel and maintain dose records. [K.3]</u></p>	<p><u>11.2 An analysis of emergency plan procedures will be performed.</u></p>	<p><u>11.2 Emergency plan procedures provide the means for 24- hour-per-day capability to determine the doses received by emergency personnel and maintain dose records.</u></p>
	<p><u>11.3 The means exists to decontaminate relocated onsite and emergency personnel, including waste disposal. [K.5.b, K.7]</u></p>	<p><u>11.3 An analysis of emergency plan procedures will be performed.</u></p>	<p><u>11.3 Emergency plan procedures provide a means to decontaminate relocated onsite and emergency personnel, including waste disposal.</u></p>
	<p><u>11.4 The means exists to provide onsite and contamination control measures. [K.6]</u></p>	<p><u>11.4 An analysis of site procedures will be performed.</u></p>	<p><u>11.4 Site procedures provide the means for onsite contamination control measures.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>12.0 Medical and Public Health Support</b>			
<u>10 CFR 50.47(b)(12) – Arrangements are made for medical services for contaminated, injured individuals.</u>	<u>12.1 Arrangements have been implemented for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake. [L.1]</u>	<u>12.1 An analysis of letters of agreement will be performed.</u>	<u>12.1 Arrangements have been implemented with Lake Granbury Medical Center (LGMC) in Granbury, Texas and the Texas Health Harris Methodist Hospital Cleburne (Formerly Walls Regional Hospital) in Cleburne, Texas for evaluation of radiation exposure and uptake.</u>
	<u>12.2 The means exists for onsite first aid capability. [L.2]</u>	<u>12.2 An analysis of emergency plan procedures will be performed.</u>	<u>12.2 Onsite procedures provide for onsite first aid capability.</u>
	<u>12.3 Arrangements have been implemented for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities. [L.4]</u>	<u>12.3 An analysis of letters of agreement will be performed.</u>	<u>12.3 Arrangements have been implemented for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities.</u>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>13.0 Recovery and Reentry Planning and Post-Accident Operations</b>			
<u>10 CFR 50.47(b)(13) – General plans for recovery and reentry are developed.</u>	<u>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</u>	<u>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</u>	<u>Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.</u>
<b>814.0 Exercises and Drills</b>			
10 CFR 50.47(b)(14) – Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.	814.1 Licensee conducts a full-participation exercise to evaluate major portions of emergency response capabilities, which includes participation by each State and local agency within the plume exposure EPZ, and each State within the ingestion control EPZ. [N.1]	814.1 A full-participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.	814.1.1.1 A report exists that confirms an exercise was conducted within the specified time periods of Appendix E to 10 CFR Part 50, onsite exercise objectives were met, and there were no uncorrected onsite exercise deficiencies.

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>814.1.1.2 A report exists that confirms the following exercise objectives were satisfied by meeting the, including specific performance acceptance criteria, addressed each of the following Emergency Planning (EP) Program Elements:            Emergency Classification            Notification and Emergency Communications            Emergency Public Information            Emergency Facilities and Equipment            Accident Assessment            Protective Response and Protective Action            Recommendations            Radiological Exposure Control            Recovery and Re-Entry</p>



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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>A. Accident Assessment and Classification</u></p> <p>1. <u>Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the exercise.</u></p> <p><u>Performance Criteria:</u></p> <p>a. <u>Determine the correct emergency classification level based on events which were in progress, considering past events and their impact on the current conditions, within 15 minutes from the time the initiating condition(s) or EAL is identified.</u></p> <p><u>B. Notifications</u></p> <p>1. <u>Demonstrate the ability to alert, notify and mobilize site emergency response personnel.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>Performance Criteria:</u></p> <p>a. <u>Complete the designated actions in accordance with emergency plan procedures and perform the announcement within 15 minutes of the initial event classification for an Alert or higher.</u></p> <p>b. <u>Mobilize site emergency responders in accordance with emergency plan procedures within 15 minutes of the initial event classification for an Alert or higher.</u></p> <p>2. <u>Demonstrate the ability to notify responsible State, local government agencies beginning no later than 15 minutes and the NRC no later than 60 minutes after declaring an emergency.</u></p> <p><u>Performance Criteria:</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>a. <u>Transmit information in accordance with approved emergency plan procedures no later than 15 minutes after event classification.</u></p> <p>b. <u>Transmit information in accordance with approved emergency plan procedures, no later than 60 minutes after last transmittal for a follow-up notification to State and local authorities.</u></p> <p>c. <u>Transmit information in accordance with emergency plan procedures no later than 60 minutes after event classification for an initial notification of the NRC.</u></p> <p>3. <u>Demonstrate the ability to warn or advise onsite individuals of emergency conditions.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>Performance Criteria:</u></p> <p>a. <u>Initiate notification of onsite individuals within 15 minutes of notification.</u></p> <p><u>C. Emergency Response</u></p> <p>1. <u>Demonstrate the capability to direct and control emergency operations.</u></p> <p><u>Performance Criteria:</u></p> <p>a. <u>Command and control is demonstrated by the Control Room in the early phase of the emergency, and the technical support center (TSC) within 60 minutes of declaration of an Alert or higher emergency classification.</u></p> <p>2. <u>Demonstrate the ability to transfer emergency direction from the control room (simulator) to the TSC upon activation.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>Performance Criteria:</u></p> <p>a. <u>Turnover briefings are conducted in accordance with emergency plan procedures.</u></p> <p>b. <u>Documentation of transfer of duties is completed in accordance with emergency plan procedures.</u></p> <p>4. <u>Demonstrate the ability to perform assembly and accountability for all onsite individuals within 30 minutes of an emergency requiring protected area assembly and accountability.</u></p> <p><u>Performance Criteria:</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>a. Protected area (PA) personnel assembly and accountability completed within 30 minutes of an emergency requiring protected area assembly and accountability.</u></p> <p><u>D. Emergency Response Facilities</u></p> <p><u>1. Demonstrate activation of the operational support center (OSC), and full functional operation of the TSC and EOF within 60 minutes declaration of Alert or higher emergency classification.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. The TSC, EOF and OSC are activated within about 60 minutes of the initial notification.</u></p> <p><u>2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC and EOF as appropriate.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>Performance Criteria:</u></p> <p>a. <u>Emergency equipment in the emergency response facilities as specified in emergency plan procedures was available to emergency responders.</u></p> <p>b. <u>The Security Shift Supervisor implements and follows applicable emergency procedures.</u></p> <p>c. <u>The TSC On-Site Radiological Assessment Coordinator implements designated responsibilities in accordance with emergency plan procedures if an onsite/offsite release has occurred.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>3. Demonstrate the adequacy of communications for all emergency support resources.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. Emergency response facility personnel are able to operate communication systems in accordance with emergency plan procedures.</u></p> <p><u>b. Clear primary and backup communications links are established and maintained for the duration of the exercise.</u></p> <p><u>E. Radiological Assessment and Control</u></p> <p><u>1. Demonstrate the ability to obtain onsite radiological surveys and samples.</u></p> <p><u>Performance Criteria:</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>a. Radiation Protection Technicians demonstrate the ability to obtain appropriate instruments (range and type) and perform surveys.</u></p> <p><u>b. Airborne samples are taken in accordance with emergency plan procedures.</u></p> <p><u>2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. Emergency workers are issued self reading dosimeters when radiation levels require, and exposures are controlled to 10 CFR Part 20 limits (unless the Emergency Coordinator authorizes emergency limits).</u></p> <p><u>b. Exposure records are available</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p>c. <u>Emergency workers include Security and personnel within all emergency facilities.</u></p> <p><u>3. Demonstrate the ability to assemble and deploy field monitoring teams within 60 minutes from the decision to do so.</u></p> <p><u>Performance Criteria:</u></p> <p>a. <u>One Field Monitoring team is ready to be deployed within 15 - 30 minutes of their arrival onsite. In addition, an offsite monitoring team must be able to be dispatched within 55-70 minutes of an Alert or higher emergency classification.</u></p> <p><u>4. Demonstrate the ability to collect and disseminate field team data.</u></p> <p><u>Performance Criteria:</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>a. Field team collects data for dose rate and airborne radioactivity levels in accordance with emergency plan procedures.</u></p> <p><u>b. Field team communicates data to the TSC and/or EOF in accordance with emergency plan procedures.</u></p> <p><u>5. Demonstrate the ability to develop dose projections.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. Timely and accurate dose projections are performed in accordance with emergency plan procedures.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>6. Demonstrate the ability to make the decision whether to issue radioprotective drugs (KI) to onsite emergency workers.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. KI is taken (simulated) if the estimated dose to the thyroid will exceed 25 rem committed dose equivalent (CDE).</u></p> <p><u>7. Demonstrate the ability to develop appropriate protective action recommendations (PARs) and notify appropriate authorities no later than 15 minutes after development.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. Total effective dose equivalent (TEDE) and CDE dose projections from the dose assessment computer code are compared in accordance with emergency plan procedures.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>b. PARs are developed no later than 15 minutes after data availability.</u></p> <p><u>c. PAR's are transmitted via voice or fax no later than 15 minutes after event classification and/or PAR development.</u></p> <p><u>F. Public Information</u></p> <p><u>1. Demonstrate the capability to develop and disseminate clear, accurate, and timely information to the news media in accordance with EPPs.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. The Joint Information Center (JIC) is activated within 60 minutes following the declaration of a Site Area Emergency or higher classification or following the Emergency Coordinator's or JIC Director's instruction to do so.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>b. Follow-up information is provided to the news media, during scheduled news conferences and media briefings.</u></p> <p><u>2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. Calls are answered in a timely manner with the correct information, in accordance with emergency plan procedures.</u></p> <p><u>b. Calls are returned or forwarded, as appropriate, to demonstrate responsiveness.</u></p> <p><u>c. Rumors are identified and addressed in accordance with emergency plan procedures.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			<p><u>G. Evaluation</u></p> <p><u>1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action.</u></p> <p><u>Performance Criteria:</u></p> <p><u>a. An exercise time line is developed, followed by an evaluation of the objectives.</u></p> <p><u>b. Significant problems in achieving the objectives are discussed to ensure understanding of why objectives were not fully achieved.</u></p> <p><u>c. Recommendations for improvement in non-objective areas are discussed.</u></p>

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			<p>§14.1.2.1 A report exists that confirms onsite emergency response personnel were mobilized to fill emergency response positions and there were no uncorrected onsite exercise deficiencies.</p> <p>§14.1.2.2 A report exists that confirms onsite emergency response personnel performed their assigned responsibilities as provided in <u>Section B of the Comanche Peak Units 3 and 4 Combined License Application Emergency Plan</u> and there were no uncorrected onsite exercise deficiencies.</p> <p>14.1.3 A report exists that <u>confirms the exercise was completed within the specified time periods of Appendix E to 10 CFR Part 50, offsite exercise objectives were met, and there are no uncorrected deficiencies or a licensee condition requires offsite deficiencies to be addressed prior to operation above 5% of rated power.</u></p>

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Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
<b>15.0 Radiological Emergency Response Training</b>			
<u>10 CFR 50.47(b)(15) – Radiological emergency response training is provided to those who may be called upon to assist in an emergency.</u>	<u>15.1 Site-specific emergency response training has been provided for those who may be called upon to provide assistance in the event of an emergency. [O.1]</u>	<u>15.1 An inspection of training records will be performed.</u>	<u>15.1 Site-specific emergency response training has been provided for local fire departments, law enforcement, ambulance, and hospital personnel.</u>
<b>16.0 Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans</b>			
<u>10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.</u>	<u>16.1 The emergency response plans have been forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. [P.5]</u>	<u>16.1 An inspection of the distribution letter will be performed.</u>	<u>16.1 The Comanche Peak Nuclear Power Plant Unit 3 &amp; 4 COL Application Emergency Plan was forwarded to the Texas Governor's Division of Emergency Management, the Hood County Judge and the Somervell County Judge.</u>
<b>17.0 Implementing Procedures</b>			
<u>10 CFR Part 50, App. E.V – No less than 180 days before the scheduled date for initial loading of fuel for a combined license under part 52 of this chapter, the applicant's or licensee's detailed implementing procedures for its emergency plan shall be submitted to the Commission.</u>	<u>17.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.</u>	<u>17.1 An inspection of the submittal letter will be performed.</u>	<u>17.1 Luminant has submitted detailed emergency plan procedures for the onsite emergency plan, to the NRC, no less than 180 days prior to fuel load.</u>

## **Attachment 4**

### **Electronic Attachments (on CD)**

- 13.03-03A – TRA-105, “Emergency Preparedness Training”
- 13.03-03B - EPP-204, “Activation and Operation of the Technical Support Center (TSC)”
- 13.03-03C - EPP-205, “Activation and Operation of the Operations Support Center (OSC)”
- 13.03-03D - EPP-309, “Onsite/In-Plant Radiological Surveys and Offsite Radiological Monitoring”
- 13.03-03E - EPP-201, “Assessment of Emergency Action Levels Emergency Classification and Plan Activation”
- 13.03-03F – EPP-109, “Duties and Responsibilities of the Emergency Coordinator/Recovery Manager”
- 13.03-07A - EPP-100, “Maintaining Emergency Preparedness”
- 13.03-07B - EPP-204, “Activation and Operation of the Technical Support Center (TSC)”
- 13.03-07C – EPP-206, “Activation and Operation of the Emergency Operations Facility (EOF)”