



**Luminant**

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CP-201001247  
Log # TXNB-10064

Ref. # 10 CFR 52

September 16, 2010

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  
SUPPLEMENTAL INFORMATION FOR RESPONSE TO REQUEST FOR ADDITIONAL  
INFORMATION NO. 3295

Dear Sir:

Luminant Generation Company LLC (Luminant) submits herein supplemental information for the response to Request for Additional Information (RAI) No. 3295 for the Combined License Application for Comanche Peak Nuclear Power Plant Units 3 and 4. The RAI involves the Emergency Action Levels in the Emergency Plan and the additional information supplements letter TXNB-10019 submitted on March 5, 2010 (ML100700262).

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

There are no commitments in this letter.

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

Executed on September 16, 2010.

Sincerely,

Luminant Generation Company LLC

  
Rafael Flores *for*

Attachment: Supplemental Response to Request for Additional Information No. 3295 (CP RAI #70)

D090

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Luminant Records Management (.pdf files only)

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**SUPPLEMENTAL 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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#### **Supplemental Information:**

In response to this question, Luminant submitted letter TXNB-09072 on November 18, 2009 (ML093240321) committing to provide an update to the Emergency Action Levels (EALs) provided in Appendix 1 of the CPNPP Emergency Plan and proposing the following license condition:

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.

In letter TXNB-09082, submitted December 21, 2009 (ML093570266), Luminant provided Emergency Plan Revision 1 Update Tracking Report Revision 0 that included the update to Appendix 1 committed to in letter TXNB-09072. Luminant submitted letter TXNB-10004 on January 21, 2010 (ML100250427), providing a complete version of Appendix 1 of the CPNPP Emergency Plan to support the NRC in its review of the EAL scheme for CPNPP Units 3 and 4.

Based on a conference call conducted with the NRC on December 9, 2009, Luminant submitted letter TXNB-10019 on March 5, 2010 (ML100700262) clarifying the wording of the proposed license condition provided in letter TXNB-09072:

The licensee shall complete development of the site-specific Emergency Action Levels (EALs) presented in Appendix 1 to the Comanche Peak Nuclear Power Plant Units 3 & 4 Combined License Application Emergency Plan in accordance with 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.

As agreed during a conference call with NRC staff on August 16, 2010, Luminant is revising the proposed license condition to revert back to the original wording included in Letter TXNB-09072. In addition, Luminant is revising Appendix 1 from the Emergency Plan based on that conference call by deleting the EAL information currently in Appendix 1 and replacing that information with a table identifying differences and deviations between the Comanche Peak Units 3 and 4 EALs and NEI 99-01, Revision 5.

Impact on R-COLA

See attached marked-up COLA Part 10 Revision 1 Section 3 page 4.

See attached CPNPP Units 3 and 4 Emergency Plan Appendix 1 pages A1-1 through A1-11, which replace the existing appendix in its entirety.

Impact on DCD

None.

**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application  
Part 10 - ITAAC and Proposed License Conditions**

Proposed License Condition	Source
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.	Answer to RAI 2353 (CP RAI #8) question 05.03.02-3 as provided in TXNB-09028 dated August 7, 2009.
The licensee shall implement the programs or portions of programs identified in the table below on or before the associated milestones.	COLA FSAR Table 13.4-201 Items 3, 5, 6, 8, 9, 10, 12, 15, 18, and 19.  <u>COLA FSAR Subsection 10.2.3.5</u>
<p><u>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:</u></p> <p><u>a. Governors Division of Emergency Management (GDEM), Texas Department of Public Safety</u></p> <p><u>b. Texas Department of State Health Services</u></p> <p><u>c. Hood County Judge</u></p> <p><u>d. Somervell County Judge</u></p> <p><u>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."</u></p> <p><u>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.</u></p>	<p>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.</p>

RCOL2\_10.0  
2.03-2

RCOL2\_13.0  
3-1

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3-2

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3-8

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3-1 S01

RCOL2\_13.0  
3-1 S02

Operational Programs to be implemented per License Condition above:

Program Title	Milestone
Environmental Qualification Program	Prior to Initial Fuel Load
Reactor Vessel Material Surveillance Program	Prior to Initial Criticality

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

**EAL Differences and Deviations from NEI Guidance**

RCOL2\_13.0  
3-1 S02

NEI 99-01, Rev. 5		NEI 07-01, Rev. 0 (see Note 1)		CPNPP Units 3 & 4 Preliminary EALS		Justification
IC		IC		IC		
None		CU7	<p><u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT</u></p> <p><u>UNPLANNED Partial Loss of Indicating, Monitoring and Control Functions for ≥ 15 Minutes.</u></p> <p><u>Operating Mode Applicability: Cold Shutdown, Refueling</u></p> <p><u>Example Emergency Action Level Threshold:</u></p> <p><i>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time.</i></p> <p>1. <u>UNPLANNED partial Loss of [Site specific] Indicating, Monitoring, and Control Functions for 15 minutes or longer.</u></p>	CU9	<p><u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT</u></p> <p><u>UNPLANNED partial loss of indicating, monitoring and control functions for ≥ 15 Minutes.</u></p> <p><u>Operating MODE Applicability: Cold Shutdown, Refueling</u></p> <p><u>Emergency Action Level Threshold:</u></p> <p>1. <u>UNPLANNED partial loss of Protection and Safety Monitoring System (PSMS) and Plant Control and Monitoring System (PCMS) indicating, monitoring and control functions for 15 minutes or longer.</u></p>	<p><b>Deviation:</b> <u>There is no analogous Cold Shutdown or Refueling IC in NEI 99-01. NEI 99-01 considers an analog control and annunciators for the current fleet of reactors. The US-APWR incorporates an advanced digital instrumentation and control system. Guidance provided in NEI 07-01, Rev. 0, was used to develop the loss of digital I&amp;C for the US-APWR. The digital I&amp;C systems used in the US-APWR are comparable to the Westinghouse AP1000 specifically addressed in NEI 07-01.</u></p> <p><b>Differences:</b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p>
None		CA7	<p><u>Initiating Condition – ALERT</u></p> <p><u>Inability to Monitor and Control the Plant for ≥ 15 Minutes.</u></p> <p><u>Operating Mode Applicability: Cold Shutdown, Refueling</u></p> <p><u>Example Emergency Action Level Threshold:</u></p> <p><i>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time.</i></p> <p>1. <u>UNPLANNED Loss of [Site specific] Digital Monitoring and Control Functions for 15 minutes or longer.</u></p>	CA9	<p><u>Initiating Condition – ALERT</u></p> <p><u>Inability to Monitor and Control the Plant for ≥ 15 Minutes.</u></p> <p><u>Operating MODE Applicability: Cold Shutdown, Refueling</u></p> <p><u>Emergency Action Level Threshold:</u></p> <p>1. <u>UNPLANNED Loss of all PSMS, PCMS, and DAS digital monitoring and control function for 15 minutes or longer.</u></p>	<p><b>Deviation:</b> <u>There is no analogous Cold Shutdown or Refueling IC in NEI 99-01. NEI 99-01 considers an analog control and annunciators for the current fleet of reactors. The US-APWR incorporates an advanced digital instrumentation and control system. Guidance provided in NEI 07-01, Rev. 0, was used to develop the loss of digital I&amp;C for the US-APWR. The digital I&amp;C systems used in the US-APWR are comparable to the Westinghouse AP1000 specifically addressed in NEI 07-01.</u></p> <p><b>Differences:</b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p>

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

**EAL Differences and Deviations from NEI Guidance**

RCOL2\_13.0  
3-1 S02

NEI 99-01, Rev. 5		NEI 07-01, Rev. 0 (see Note 1)		CPNPP Units 3 & 4 Preliminary EALS		Justification
IC		IC		IC		
SU3	<p><u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT</u></p> <p><u>UNPLANNED loss of safety system annunciation or indication in the control room for 15 minutes or longer.</u></p> <p><u>Operating Mode Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown</u></p> <p><u>Example Emergency Action Level:</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time.</u></p> <p>1. <u>UNPLANNED loss of greater than approximately 75% of the following for 15 minutes or longer:</u></p> <p>a. <u>(Site specific control room safety system annunciation)</u></p> <p><u>OR</u></p> <p>b. <u>(Site specific control room safety system indication)</u></p>	None		None		<p><b><u>Deviation:</u></b></p> <p><u>There is no analogous IC for a digital control system. Hence, loss of monitoring and control immediately escalates to ALERT via SA7. NEI 99-01 considers analog control and annunciators for the current fleet of reactors. The US-APWR incorporates an advanced digital instrumentation and control system. Guidance provided in NEI 07-01, Rev. 0, was used to develop the loss of digital I&amp;C for the US-APWR. The digital I&amp;C systems used in the US-APWR are comparable to the Westinghouse AP1000 specifically addressed in NEI 07-01.</u></p>



**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application  
Part 5 - Emergency Plan  
EAL Differences and Deviations from NEI Guidance**

RCOL2\_13.0  
3-1 S02

NEI 99-01, Rev. 5		NEI 07-01, Rev. 0 (see Note 1)		CPNPP Units 3 & 4 Preliminary EALS		Justification
IC		IC		IC		
<u>SA4</u>	<p><u>Initiating Condition – ALERT</u></p> <p><u>UNPLANNED loss of safety system annunciation or indication in the control room with EITHER (1) a SIGNIFICANT TRANSIENT in progress, or (2) compensatory indicators unavailable.</u></p> <p><u>Operating Mode Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown</u></p> <p><u>Example Emergency Action Level:</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time.</u></p> <p>1.</p> <p>a. <u>UNPLANNED loss of greater than approximately 75% of the following for 15 minutes or longer:</u></p> <ul style="list-style-type: none"> <li>• <u>(Site specific control room safety system annunciation)</u></li> </ul> <p><u>OR</u></p> <ul style="list-style-type: none"> <li>• <u>(Site specific control room safety system indication)</u></li> </ul> <p>b. <u>EITHER of the following:</u></p> <ul style="list-style-type: none"> <li>• <u>A SIGNIFICANT TRANSIENT is in progress.</u></li> <li>• <u>Compensatory indications are unavailable</u></li> </ul>	<u>SA7</u>	<p><u>Initiating Condition – ALERT</u></p> <p><u>UNPLANNED Partial Loss of Indicating, Monitoring and Control Functions for ≥ 15 Minutes.</u></p> <p><u>Operating Mode Applicability: Power Operation, Startup, Hot Standby/Shutdown, Safe/Stable Shutdown</u></p> <p><u>Example Emergency Action Level Threshold:</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time.</u></p> <p>1. <u>UNPLANNED partial Loss of [Site specific] Indicating, Monitoring and Control Functions for 15 minutes or longer.</u></p>	<u>SA7</u>	<p><u>Initiating Condition – ALERT</u></p> <p><u>UNPLANNED Partial Loss of Indicating, Monitoring and Control Functions for ≥ 15 Minutes.</u></p> <p><u>Operating MODE Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown</u></p> <p><u>Emergency Action Level Threshold:</u></p> <p>1. <u>UNPLANNED Loss of All Protection and Safety Monitoring System (PSMS) and Plant Control and Monitoring System (PCMS) Indicating and Monitoring Functions for 15 minutes or longer.</u></p>	<p><b>Deviation:</b> <u>NEI 99-01 considers analog control and annunciators for the current fleet of reactors. The US-APWR incorporates an advanced digital instrumentation and control system. Guidance provided in NEI 07-01, Rev. 0, was used to develop the loss of digital I&amp;C for the US-APWR. The digital I&amp;C systems used in the US-APWR are comparable to the Westinghouse AP1000 specifically addressed in NEI 07-01.</u></p> <p><b>Differences:</b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p>

**Comanche Peak Nuclear Power Plant, Units 3 & 4  
COL Application  
Part 5 - Emergency Plan  
EAL Differences and Deviations from NEI Guidance**

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3-1 S02

NEI 99-01, Rev. 5		NEI 07-01, Rev. 0 (see Note 1)		CPNPP Units 3 & 4 Preliminary EALS		Justification
IC		IC		IC		
SS6	<p><u>Initiating Condition – SITE AREA EMERGENCY</u></p> <p><u>Inability to monitor a SIGNIFICANT TRANSIENT in progress.</u></p> <p><u>Operating Mode Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown</u></p> <p><u>Example Emergency Action Level:</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time.</u></p> <p>1.</p> <p>a. <u>UNPLANNED loss of greater than approximately 75% of the following for 15 minutes or longer:</u></p> <ul style="list-style-type: none"> <li>• <u>(Site specific control room safety system annunciation)</u></li> </ul> <p><u>OR</u></p> <ul style="list-style-type: none"> <li>• <u>(Site specific control room safety system indication)</u></li> </ul> <p><u>AND</u></p> <p>b. <u>A SIGNIFICANT TRANSIENT is in progress.</u></p> <p><u>AND</u></p> <p>c. <u>Compensatory indications are unavailable.</u></p>	SS7	<p><u>Initiating Condition – SITE AREA EMERGENCY</u></p> <p><u>Inability to Monitor and Control the Plant for ≥ 15 minutes.</u></p> <p><u>Operating Mode Applicability: Power Operation, Startup, Hot Standby/Shutdown, Safe/Stable Shutdown</u></p> <p><u>Example Emergency Action Level Threshold:</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time.</u></p> <p>1. <u>UNPLANNED Loss of [Site specific] Digital Monitoring and Control Functions for 15 minutes or longer.</u></p>	SS7	<p><u>Initiating Condition – SITE AREA EMERGENCY</u></p> <p><u>Inability to Monitor and Control the Plant for ≥ 15 minutes.</u></p> <p><u>Operating MODE Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown</u></p> <p><u>Emergency Action Level Threshold:</u></p> <p>1. <u>UNPLANNED Loss of all PSMS, PCMS, and DAS digital monitoring and control function for 15 minutes or longer.</u></p>	<p><b>Deviation:</b> <u>NEI 99-01 considers analog control and annunciators for the current fleet of reactors. The US-APWR incorporates an advanced digital instrumentation and control system. Guidance provided in NEI 07-01, Rev. 0, was used to develop the loss of digital I&amp;C for the US-APWR. The digital I&amp;C systems used in the US-APWR are comparable to the Westinghouse AP1000 specifically addressed in NEI 07-01.</u></p> <p><b>Differences:</b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p>

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

**EAL Differences and Deviations from NEI Guidance**

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<u>NEI 99-01, Rev. 5</u>		<u>NEI 07-01, Rev. 0 (see Note 1)</u>		<u>CPNPP Units 3 &amp; 4 Preliminary EALS</u>		<u>Justification</u>
<u>IC</u>		<u>IC</u>		<u>IC</u>		
<u>CU2</u>	<p><u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT</u></p> <p><u>UNPLANNED loss of RCS/RPV Inventory</u></p> <p><u>Operating Mode Applicability: Refueling</u></p> <p><u>Example Emergency Action Levels (1 or 2)</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time.</u></p> <p>1. <u>UNPLANNED RCS/RPV level drop as indicated by either of the following:</u></p> <ul style="list-style-type: none"> <li>• <u>RCS/RPV water level drop below the RPV flange for 15 minutes or longer when the RCS/RPV level band is established above the RPV flange.</u></li> <li>• <u>RCS/RPV water level drop below the RCS level band for 15 minutes or longer when the RCS/RPV level band is established below the RPV flange.</u></li> </ul> <p>2. <u>RCS/RPV level cannot be monitored with a loss of RCS/RPV inventory as indicated by an unexplained level rise in (site specific sump or tank).</u></p>	<u>CU2</u>	<u>Not applicable to US-APWR</u>	<u>CU2</u>	<p><u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT</u></p> <p><u>UNPLANNED loss of RCS/RV Inventory</u></p> <p><u>Operating MODE Applicability: Refueling</u></p> <p><u>Emergency Action Level Thresholds: (1 or 2)</u></p> <p>1. <u>UNPLANNED RCS/RV level drop indicated by RCS/RV water level drop below the RV flange {site-specific Threshold Value on RCS Level wide range (L-402)} for 15 minutes or longer.</u></p> <p>2. <u>RCS/RV level cannot be monitored with a loss of RCS/RV inventory as indicated by an unexplained level rise in ANY one of the following:</u></p> <ul style="list-style-type: none"> <li>• <u>Refueling Water Storage Pit Level on L-1400, L-1401, L-1402, L-1403</u></li> <li>• <u>Containment Vessel Reactor Coolant Drain Tank (CVDT) Level on L-1000</u></li> <li>• <u>Pressurizer Relief Tank Level on L-560</u></li> <li>• <u>CCW Surge Tank (Train A &amp; B) Level on L-1200 and L-1201 for Train A, L-1210 and L-1211 for Train B.</u></li> <li>• <u>Containment Sump Level on L-1083</u></li> </ul>	<p><b><u>Deviation:</u></b> <u>EAL Threshold #1 deviates from NEI 99-01 because an EAL Threshold is not provided for an established RCS/RV level band as being above or below the RV flange prior to the "UNPLANNED RCS/RV level drop." As stated in the NEI 99-01 basis, "Refueling evolutions that decrease RCS water level below the RPV flange are carefully planned and procedurally controlled." If already below the flange due to a planned evolution, an unplanned RCS drop will simply expedite the transition to an Alert. The EAL Threshold provided accommodates an unplanned RCS/RV level drop below the RV flange.</u></p> <p><b><u>Differences:</u></b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p> <p><u>Note:</u> <u>CPNPP preliminary EAL is consistent with NEI 99-01 EAL Threshold #2.</u></p>

Comanche Peak Nuclear Power Plant, Units 3 & 4  
 COL Application  
 Part 5 - Emergency Plan  
EAL Differences and Deviations from NEI Guidance

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 3-1 S02

NEI 99-01, Rev. 5		NEI 07-01, Rev. 0 (see Note 1)		CPNPP Units 3 & 4 Preliminary EALS		Justification
IC		IC		IC		
HA1	<u>Initiating Condition – ALERT</u>  Natural or destructive phenomena affecting VITAL AREAS.  <u>Operating Mode Applicability: All</u>  <u>Example Emergency Action Levels: (1 or 2 or 3 or 4 or 5 or 6)</u>  1. <u>Turbine failure-generated PROJECTILES resulting in VISIBLE DAMAGE to or penetration of ANY of the following structures containing safety systems or components OR control room indication of degraded performance of those safety systems:</u>  (site specific structure list)	HA1	Not applicable to US-APWR		EAL Threshold #4 not included.	<u>Deviation: The turbine-generator of the US-APWR is configured in such a way that damage to components indicated in this EAL is not possible.</u>  <u>Note:</u> <u>CPNPP preliminary EALs are consistent with NEI 99-01 EAL Thresholds #1, 2, 3, 5, and 6.</u>

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NEI 99-01, Rev. 5		NEI 07-01, Rev. 0 (see Note 1)		CPNPP Units 3 & 4 Preliminary EALS		Justification
IC		IC		IC		
AU1	<p><u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT</u></p> <p><u>Any release of gaseous or liquid radioactivity to the environment greater than 2 times the Radiological Effluent Technical Specifications/ODCM for 60 minutes or longer.</u></p> <p><u>Operating Mode Applicability: All</u></p> <p><u>Example Emergency Action Levels: (1 or 2 or 3 or 4 or 5).</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the release duration has exceeded, or will likely exceed, the applicable time. In the absence of data to the contrary, assume that the release duration has exceeded the applicable time if an ongoing release is detected and the release start time is unknown.</u></p> <p>4. <u>VALID reading on perimeter radiation monitoring system reading greater than 0.10 mR/hr above normal* background for 60 minutes or longer. [for sites having telemetered perimeter monitors]</u></p> <p>5. <u>VALID indication on automatic real-time dose assessment capability indicating greater than (site specific value) for 60 minutes or longer. [for sites having such capability]</u></p> <p><u>*Normal can be considered as the highest reading in the past twenty-four hours excluding the current peak value</u></p>	AU1	Not applicable to US-APWR		EAL Thresholds #4 and 5 not included.	<p><b>Differences:</b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p> <p><b>Difference:</b> <u>Neither perimeter monitoring nor automatic real time dose assessment is installed in CPNPP Units 3 and 4.</u></p> <p><b>Note:</b> <u>CPNPP preliminary EALS are consistent with NEI 99-01 EAL Thresholds #1, 2, and 3.</u></p>

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NEI 99-01, Rev. 5		NEI 07-01, Rev. 0 (see Note 1)		CPNPP Units 3 & 4 Preliminary EALS		Justification
IC		IC		IC		
AA1	<p><b>Initiating Condition – ALERT</b></p> <p>Any release of gaseous or liquid radioactivity to the environment greater than 200 times the Radiological Effluent Technical Specifications/ODCM for 15 minutes or longer.</p> <p><u>Operating Mode Applicability: All</u></p> <p><u>Example Emergency Action Levels: (1 or 2 or 3 or 4 or 5)</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the release duration has exceeded, or will likely exceed, the applicable time. In the absence of data to the contrary, assume that the release duration has exceeded the applicable time if an ongoing release is detected and the release start time is unknown.</u></p> <p>4. <u>VALID reading on perimeter radiation monitoring system reading greater than 10.0 mR/hr above normal* background for 15 minutes or longer. [for sites having telemetered perimeter monitors]</u></p> <p>5. <u>VALID indication on automatic real-time dose assessment capability indicating greater than (site specific value) for 15 minutes or longer. [for sites having such capability]</u></p> <p><u>*Normal can be considered as the highest reading in the past twenty-four hours excluding the current peak value</u></p>	AA1	Not applicable to US-APWR		EAL Thresholds #4 and 5 not included.	<p><b>Difference:</b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p> <p><b>Difference:</b> <u>Neither perimeter monitoring nor automatic real time dose assessment is installed CPNPP Units 3 and 4.</u></p> <p><b>Note:</b> <u>CPNPP preliminary EALS are consistent with NEI 99-01 EAL Thresholds #1, 2, and 3.</u></p>

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<u>NEI 99-01, Rev. 5</u>		<u>NEI 07-01, Rev. 0 (see Note 1)</u>		<u>CPNPP Units 3 &amp; 4 Preliminary EALS</u>		<u>Justification</u>
<u>IC</u>		<u>IC</u>		<u>IC</u>		
<u>AS1</u>	<p><u>Initiating Condition – SITE AREA EMERGENCY</u></p> <p><u>Off-site dose resulting from an actual or IMMINENT release of gaseous radioactivity greater than 100 mrem TEDE or 500 mrem Thyroid CDE for the actual or projected duration of the release.</u></p> <p><u>Operating Mode Applicability: All</u></p> <p><u>Example Emergency Action Levels: (1 or 2 or 3 or 4)</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. If dose assessment results are available, declaration should be based on dose assessment instead of radiation monitor values. Do not delay declaration awaiting dose assessment results.</u></p> <p>3. <u>VALID perimeter radiation monitoring system reading greater than 100 mR/hr for 15 minutes or longer. [for sites having telemetered perimeter monitors]</u></p>	<u>AS1</u>	<u>Not applicable to US-APWR</u>		<u>EAL Threshold #3 not included.</u>	<p><b><u>Difference:</u></b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p> <p><b><u>Difference:</u></b> <u>Perimeter monitoring is not installed in CPNPP Units 3 and 4.</u></p> <p><b><u>Note:</u></b> <u>CPNPP preliminary EALs are consistent with NEI 99-01 EAL Thresholds #1, 2, and 4.</u></p>

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NEI 99-01, Rev. 5		NEI 07-01, Rev. 0 (see Note 1)		CPNPP Units 3 & 4 Preliminary EALS		Justification
IC		IC		IC		
AG1	<p><u>Initiating Condition – GENERAL EMERGENCY</u></p> <p><u>Off-site dose resulting from an actual or IMMINENT release of gaseous radioactivity greater than 1000 mrem TEDE or 5000 mrem Thyroid CDE for the actual or projected duration of the release using actual meteorology.</u></p> <p><u>Operating Mode Applicability: All</u></p> <p><u>Example Emergency Action Levels: (1 or 2 or 3 or 4)</u></p> <p><u>Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. If dose assessment results are available, declaration should be based on dose assessment instead of radiation monitor values. Do not delay declaration awaiting dose assessment results.</u></p> <p>3. <u>VALID perimeter radiation monitoring system reading greater than 1000 mR/hr for 15 minutes or longer. [for sites having telemetered perimeter monitors]</u></p>	AG1	Not applicable to US-APWR		EAL Threshold #3 not included.	<p><b>Difference:</b> <u>The Emergency Director note was not included. This is procedural information incorporated in training.</u></p> <p><b>Difference:</b> <u>Perimeter monitoring is not installed in CPNPP Units 3 and 4.</u></p> <p><b>Note:</b> <u>CPNPP preliminary EALS are consistent with NEI 99-01 EAL Thresholds #1, 2, and 4.</u></p>
HU1	<p><u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT</u></p> <p><u>Natural or destructive phenomena affecting the PROTECTED AREA.</u></p> <p><u>Operating Mode Applicability: All</u></p> <p><u>Example Emergency Action Levels: (1 or 2 or 3 or 4 or 5)</u></p> <p>5. <u>(Site specific occurrences affecting the PROTECTED AREA).</u></p>	HU1	Not applicable to US-APWR		EAL Threshold # 5 not included.	<p><b>Difference:</b> <u>No site-specific occurrences affecting the Protected Area were identified.</u></p> <p><b>Note:</b> <u>CPNPP preliminary EALS are consistent with NEI 99-01 EAL Thresholds #1, 2, 3, and 4.</u></p>



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<u>IC</u>		<u>IC</u>		<u>IC</u>		
<u>SU8</u>	<u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT</u>  <u>Inadvertent criticality.</u>  <u>Operating Mode Applicability: Hot Standby, Hot Shutdown</u>  <u>Example Emergency Action Level:</u>  1. <u>UNPLANNED sustained positive startup rate observed on nuclear instrumentation. [PWR]</u>	<u>SU8</u>	<u>Not applicable to US-APWR</u>	<u>SU8</u>	<u>Initiating Condition – NOTIFICATION OF UNUSUAL EVENT.</u>  <u>Inadvertent criticality.</u>  <u>Operating Mode Applicability: Hot Standby, Hot Shutdown</u>  <u>Emergency Action Level Threshold:</u>  1. <u>UNPLANNED sustained positive startup rate observed.</u>	<u><b>Difference:</b></u> <u>Operators are trained and understand that a positive startup rate can only be observed on nuclear instrumentation. CPNPP Units 3 and 4 SU8 provides discussion on information and Basis.</u>

Note 1: NEI 07-01, Revision 0, is relevant to the US-APWR to address Initiating Conditions and Emergency Action Levels for digital instrumentation and control. All other Initiating Conditions and Emergency Action Levels are based on NEI 99-01, Revision 5.