

## PMComanchePeakPEm Resource

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**From:** Conly, John [John.Conly@luminant.com]  
**Sent:** Wednesday, June 01, 2011 12:14 PM  
**To:** Aitken, Diane; Barrie, Ashley; Bell, Russ; Bird, Bobby; Borsh, Gina; Buschbaum, Denny; Bywater, Russell; Caldwell, Jan; Carver, Ronald; Certrec; Ciocco, Jeff; Clouser, Tim; Collins, Elmo; Conly, John; Cosentino, Carolyn; Degeyter, Brock; Evans, Todd; Flores, Rafael; Frantz, Steve; Freitag, Al; Hamzehee, Hossein; Hill, Yukako; Hoshi, Masaya; Ishida, Mutsumi; Johnson, Michael; Kawanago, Shinji; Keithline, Kimberley; Kellenberger, Nick; Koenig, Allan; Kolhekar, Aditi; Kramer, John; Lucas, Mitch; Madden, Fred; Matthews, David; Matthews, Tim; McConaghy, Bill; Monarque, Stephen; Moore, Bill; ComanchePeakCOL Resource; Onozuka, Masanori; Paulson, Keith; Plisco, Loren; Reible, Robert; Rund, Jon; Simmons, Jeff; Singal, Balwant; Sprengel, Ryan; Takacs, Michael; Tapia, Joe; Tindell, Brian; Turner, Bruce; Volkening, David; Vrahoretis, Susan; Williamson, Alicia; Willingham, Michael; Woodlan, Don Hill, Craig  
**Cc:**  
**Subject:** Luminant Submits Three Letters to the NRC  
**Attachments:** TXNB-11036 FSAR UTR R7.pdf; TXNB-11037 QAPD UTR R1.pdf; TXNB-11038 RAI 216.pdf

Luminant has submitted the attached three letters to the NRC:

TXNB-11036 FSAR UTR Rev 7 Attachment 2 contains SUNSI. Attachments not included herein due to size (100 mB). Luminant Records Management will receive uploaded files. Stephen Monarque received a CD with both attachments.

TXNB-11037 QAPD UTR Rev 1

TXNB-11038 Response to RAI 5652 (CP RAI #268)

If there are any questions regarding these letters, please contact me or contact Don Woodlan (254-897-6887, [Donald.Woodlan@luminant.com](mailto:Donald.Woodlan@luminant.com)).

Thanks,

*John J. Conly*

**COLA Project Manager**  
**(254) 897-5256**

Confidentiality Notice: This email message, including any attachments, contains or may contain confidential information intended only for the addressee. If you are not an intended recipient of this message, be advised that any reading, dissemination, forwarding, printing, copying or other use of this message or its attachments is strictly prohibited. If you have received this message in error, please notify the sender immediately by reply message and delete this email message and any attachments from your system.

**Hearing Identifier:** ComanchePeak\_COL\_Public  
**Email Number:** 1386

**Mail Envelope Properties** (D7A32D47A61872409CE74F57B83C8B011C9F5BEE12)

**Subject:** Luminant Submits Three Letters to the NRC  
**Sent Date:** 6/1/2011 12:14:24 PM  
**Received Date:** 6/1/2011 12:15:11 PM  
**From:** Conly, John

**Created By:** John.Conly@luminant.com

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<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	1340	6/1/2011 12:15:11 PM
TXNB-11036 FSAR UTR R7.pdf		146165
TXNB-11037 QAPD UTR R1.pdf		292994
TXNB-11038 RAI 216.pdf		188678

**Options**  
**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**



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CP-201100754  
Log # TXNB-11036

Ref. # 10 CFR 52  
10 CFR 2.390

May 31, 2011

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  
FINAL SAFETY ANALYSIS REPORT UPDATE TRACKING REPORT REVISION 7  
(FSAR CHAPTERS 1, 2, 3, 8, 9, AND 19)

Dear Sir:

Luminant Generation Company LLC (Luminant) submits herein Update Tracking Report (UTR) Revision 7 for the Final Safety Analysis Report, which is Part 2 of the Combined License Application (COLA) for Comanche Peak Nuclear Power Plant Units 3 and 4. The UTR reflects changes to maintain consistency with US-APWR Design Control Document (DCD) Revision 3 and responses to Requests for Additional Information for the DCD; provides simplified drawings; reflects the updated DCD Probabilistic Risk Assessment; and includes editorial changes or clarifications. The tracking report revision list provides a summary of and a reason for each change, and addresses any differences in page numbers between COLA Revision 1 and the UTR.

Attachment 1 is the public version of the UTR, but Attachment 2 contains Sensitive Unclassified Non-Safeguards Information and should be withheld from public disclosure. Both attachments are provided to the NRC on a single CD. This letter is unclassified upon removal of Attachment 2.

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

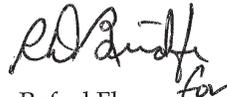
There are no commitments in this letter.

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

Executed on May 31, 2011.

Sincerely,

Luminant Generation Company LLC

  
Rafael Flores *for*

- Attachments:
1. COL Application Part 2 FSAR Revision 1, Update Tracking Report Revision 7 (Public)
  2. COL Application Part 2 FSAR Revision 1, Update Tracking Report Revision 7 (Security-Related)

cc: Stephen Monarque w/Attachments (on CD)

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## **Attachment 1**

### **COLA Part 2 FSAR Revision 1, Update Tracking Report Revision 7 (Public Version)**

(Because of text being added and deleted, the page numbers in the attachment may not correspond exactly with the page numbers in COLA Part 1 Revision 1)

{ Information withheld from public disclosure is designated by single braces. }

## **Attachment 2**

### **COLA Part 2 FSAR Revision 1, Update Tracking Report Revision 7 (Security-Related Version)**

(Because of text being added and deleted, the page numbers in the attachment may not correspond exactly with the page numbers in COLA Part 1 Revision 1)

{ Information to be withheld from public disclosure is designated by single braces. }



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CP-201100755  
Log # TXNB-11037

Ref. # 10 CFR 52

May 31, 2011

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  
COMBINED LICENSE APPLICATION PART 11 UPDATE TRACKING REPORT  
REVISION 1, QUALITY ASSURANCE PROGRAM DESCRIPTION

Dear Sir:

Luminant Generation Company LLC (Luminant) submits herein the Comanche Peak Nuclear Power Plant Units 3 and 4 Combined License Application Part 11 Update Tracking Report (UTR) Revision 1, Quality Assurance Program Description (QAPD). The UTR revises the QAPD to adopt NEI 06-14A Revision 7, corrects inconsistencies among references, and replaces NEI QAPD template text in Part IV with plant-specific conformance. The tracking report revision list provides a summary of and a reason for each change, and addresses any differences in page numbers between COLA Revision 1 and the UTR.

Should you have any questions regarding the UTR, please contact Don Woodlan (254-897-6887, Donald.Woodlan@luminant.com) or me. Addressees on the distribution list will receive the UTR via e-mail rather than on CD.

There are no commitments in this letter.

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

Executed on May 31, 2011.

Sincerely,

Luminant Generation Company LLC

  
Rafael Flores *for*

**Attachment:** COL Application Part 11, Enclosures Revision 1, Update Tracking Report Revision 1, Quality Assurance Program Description (on CD)

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May 23, 2011

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

**Part 11**

**Enclosures Revision 1**

**Update Tracking Report**

**Revision 1**

Quality Assurance Program Description

## Revision History

Revision	Date	Update Description
-	11/20/2009	COLA Revision 1 Transmittal  See Luminant Letter no. TXNB-09074 Date 11/20/2009
0	6/18/2010	Updated QAPD  Changed Policy Statement to match NEI 06-14 Revision 9  Changed numbering for all pages and Table of Contents  PART I Added and removed text to match NEI 06-14 Revision 9  PART II Added and removed text to match NEI 06-14 Revision 9  PART II Change in Luminant Organization  PART IV REGULATORY COMMITMENTS Added additional regulatory guides as listed in NEI 06-14 Revision 9  Added PART V ADDITIONAL QUALITY ASSURANCE AND ADMINISTRATIVE CONTROLS FOR THE PLANT OPERATIONAL PHASE
1	5/23/2011	Updated QAPD to adopt NEI 06-14A Revision 7. Corrected inconsistencies among references. PART IV changed to replace NEI QAPD template text with plant-specific conformance discussions

## Tracking Report Revision List

Change ID No.	Section	QAPD Page*	Reason for change	Change Summary	Rev. of QAPD T/R
CTS-01129	Policy Statement	ii	Update to NEI 06-14 Revision 9	Added to company name  Amended first paragraph to match template.  Title change to signer	0
CTS-01129	PART I Section 1 1.1	1	Update to NEI 06-14 Revision 9	Added ITACC statement	0
CTS- 01129	PART II Section 1	3 through 5 [3 through 7]	Update to reflect changes to Luminant Organization	Changed titles and responsibilities for Luminant organization due to corporate changes within Luminant	0
CTS- 01129	PART II Figure II.1 Figure II.1-2 II.1-3	8 through 10 [9 through 14]	Update to reflect changes to Luminant Organization	New organizational charts to reflect changes to Luminant Organization	0
CTS- 01129	PART II Section 2	11 [15]	Update to NEI 06-14 Revision 9	Added and removed text to match NEI 06-14 Revision 9  Changed responsibility for plant construction	0
CTS- 01129	PART II Section 2	12 [16]	Update to NEI 06-14 Revision 9	Added and removed text to match NEI 06-14 Revision 9	0
CTS- 01129	PART II Section 2 2.6	13 [17 through 18]	Update to NEI 06-14 Revision 9	Added and removed text to match NEI 06-14 Revision 9	0
CTS-01129	PART II Section 2 2.7	[18 through 20]	Update to NEI 06-14 Revision 9	Moved PART II Section 2.7 to PART V	0
CTS- 01129	PART II Section 6 6.1	23 [29]	Update to NEI 06-14 Revision 9	Spelled out Operations Review Committee  Changed "PART II" to "PART V"	0

Change ID No.	Section	QAPD Page*	Reason for change	Change Summary	Rev. of QAPD T/R
CTS- 01129	PART II Section 7 7.1	24 [30]	Update to NEI 06-14 Revision 9	Added and removed text to match NEI 06-14 Revision 9	0
CTS- 01129	PART II Section 7 7.2	25 through 26 [31 through 32]	Update to NEI 06-14 Revision 9	Added new sections on calibration facility requirements	0
CTS- 01129	PART II Section 10 10.3	29 through 30 [36 through 37]	Update to NEI 06-14 Revision 9	Added and removed text to match NEI 06-14 Revision 9	0
CTS- 01129	PART II Section 13 13.2	34 through 35 [41 through 42]	Update to NEI 06-14 Revision 9	Added new NQA-1 subparts 2.1 and 2.3	0
CTS-01129	PART II Section 17 17.2	39 [46]	Update to NEI 06-14 Revision 9	Clarified statement for use of optical disks	0
CTS-01129	PART II Section 18 18.1	40 [47]	Update to NEI 06-14 Revision 9	Changed "NuBuild Quality Manager" to "Luminant manager responsible for Quality Assurance"	0
CTS-01129	PART II Section 18 18.2	41 [48 through 49 ]	Update to NEI 06-14 Revision 9	Added and removed text to match NEI 06-14 Revision 9	0
CTS-01129	PART IV	48 through 53 [55 through 61]	Update to NEI 06-14 Revision 9	Changed from "Luminant commits to the applicable regulatory position guidance provided in this regulatory guide for CPNPP Units 3 & 4 with no exceptions." to the standard exceptions listed in NEI 06-14A Revision 9 <i>Quality Assurance Program Description</i>	0
CTS-01129	PART V	54 through 65 [62 through 73]	Update to NEI 06-14 Revision 9	Added PART V ADDITIONAL QUALITY ASSURANCE AND ADMINISTRATIVE CONTROLS FOR THE PLANT OPERATIONAL PHASE	0
RCOL2_17.5-12S01	PART II	40, 44	Adopt NEI 06-14A Revision 7	Added text to match NEI 06-14A Revision 7	-

Change ID No.	Section	QAPD Page*	Reason for change	Change Summary	Rev. of QAPD T/R
RCOL2_17.5-12S01	PART IV	55, 58, 59	Adopt NEI 06-14A Revision 7	Revised text to be consistent with NEI 06-14A Revision 7	-
CTS-01263	PART IV	55, 56, 57, 58, 59, 60, 61	Replace generic template words with plant-specific information	PART IV changed to describe conformance and exceptions to listed Regulatory Guides	1

\*Page numbers for the attached marked-up pages may differ from the original page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

## PART IV REGULATORY COMMITMENTS

### NRC Regulatory Guides and Quality Assurance Standards

This section identifies the NRC Regulatory Guides (RG) and the other quality assurance standards, which have been selected to supplement and support the Luminant QAPD. Luminant complies with these standards to the extent described or referenced. Commitment to a particular RG or standard does not constitute a commitment to ~~other the~~ RGs or standards that may be referenced therein.

RCOL2\_17.5-12  
S01

#### Regulatory Guides:

See FSAR Chapter 1 for the Luminant evaluation of conformance with the guidance in NRC Regulatory Guides in effect six months prior to the submittal date of the application.

RCOL2\_17.5-12  
S01

#### Regulatory Guide 1.8, Revision 3, May 2000 – Qualification and Training of Personnel for Nuclear Power Plants

Regulatory Guide 1.8 provides guidance that is acceptable to the NRC staff regarding qualifications and training for nuclear power plant personnel.

Luminant identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in the text below: ~~commits to the applicable regulatory position guidance provided in this regulatory guide for CPNPP Units 3 & 4 with no exceptions.~~

This regulatory guide endorses ANSI/ANS-3.1-1993, "Selection, Qualification, and Training of Personnel for Nuclear Power Plants," with certain additions and exceptions that are listed in the r~~Regulatory p~~Position of this guide. ~~Some of the exceptions are endorsements of certain sections of two other standards, ANSI N18.7-1976 (ANS-3.2), "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants," and ANSI/ASME NQA-1-1983, "Quality Assurance Program Requirements for Nuclear Power Plants."~~ Rather than commit to those Standards in the QAPD, appropriate requirements have been directly incorporated into the text if not found in NQA-1-1994. These requirements are consistent with the identified acceptance criteria in SRP Section 17.5. ~~With regard to cold licensed operators when the selection, training, and qualification requirements of ANSI/ANS-3.1-1993 may not be met, NEI 06-13A, (NRC approval as Rev. 1) (NEI published Rev. 2) provides acceptable alternatives.~~

CTS-01263

CTS-01129

- As a further alternative to the selection and qualification requirements for licensed operators contained in ANS-3.1-1993, the requirements fo NEI 06-13-A, Revision1 may be used for cold-licensing of operators.
- Where reference is made to training and qualification requirements of ANSI/ASME NQA-1-1983, Luminant conforms to the applicable equivalent requirements of NQA-1-1994 as clarified in Part II, Section 2.
- Luminant conforms to the qualifications requirements described in Part V, Section 2 for independent review personnel discussed in Regulatory Positions C.2.14 and C.2.15.

~~– Regulatory Positions C.1.1 through C.1.4 address definitions in ANSI/ANS-3.1-1993. Conformance with ANSI/ANS-3.1-1993 and those Regulatory Positions should be addressed by FSAR Chapter 13.~~

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- ~~–Regulatory Position C.2.1 (2.1.1, 2.1.2, and 2.1.3) address alternatives and substitutions for education and experience for quality assurance personnel. Those alternatives and substitutions are reflected in Part II, Section 2.6 of the QAPD template.~~
- ~~–Regulatory Position C.2.2 through C.2.10 are not directly applicable to quality assurance personnel, but are relevant to the overall quality assurance organization described in Part II, Section 1 of the QAPD and the operating organization described in FSAR Chapter 13. Those Regulatory Positions should be addressed by FSAR Chapter 13.~~
- ~~–Regulatory Position C.2.11 addresses ANSI/ANS 3.1-1993 Section 4.5.5, Quality Control. The QAPD identifies an alternative for this regulatory position in Part II, Section 2.8. As documented in SER ML070510300, the qualification criteria in the QAPD is acceptable and consistent with SRP Section 17.5, paragraph II.T.~~
- ~~–Regulatory Position C.2.12 addresses ANSI/ANS 3.1-1993 Section 4.5.6, Quality Assurance. The QAPD identifies an alternative for this regulatory position in Part II, Section 2.8. As documented in SER ML070510300, the qualification criteria in the QAPD is acceptable and consistent with SRP Section 17.5, paragraph II.S.~~
- ~~–Regulatory Position C.2.13 is not directly applicable to quality assurance personnel, but is relevant to the overall quality assurance organization described in Part II, Section 1 of the QAPD and the operating organization described in FSAR Chapter 13. This Regulatory Position should be addressed by FSAR Chapter 13.~~
- ~~–Regulatory Positions C.2.14 and C.2.15 address ANSI/ANS 3.1-1993 Sections 4.7.1 and 4.7.2 relative to Independent Review qualifications. The QAPD identifies an alternative for this regulatory position in Part VII, Section 2.27. As documented in SER ML070510300, the QAPD template follows SRP Section 17.5, paragraph II.W for providing guidance to the applicant to establish an independent review program for activities occurring during the operational phase.~~

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**Regulatory Guide 1.26**, Revision 4, March 2007 – Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants

Regulatory Guide 1.26 defines classification of systems and components.

Luminant identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 1.

~~Luminant commits to the applicable regulatory position guidance provided in this regulatory guide for CPNPP Units 3 & 4 with no exception.~~

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~~This Regulatory Guide provides guidance on establishing quality group classifications for components of the nuclear plant and the appropriate industry standards to apply that ensure proper quality requirements. Regulatory Positions C.1 through C.3 provide guidance in establishing quality group classifications of components that correspond to ASME Section III, Class 2 and 3, and those that are not part of the reactor coolant system but may contain radioactive material. Table 1 of the RG identifies the industry standards that would be applied to establishing appropriate quality requirements. The classification of components would be addressed through the FSAR (and associated DCD) Section 3.2. The application of specific~~

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~~standards would be addressed in the FSAR/DCD sections that describe the identified components.~~

**Regulatory Guide 1.28**, Revision 3, August 1985 – Quality Assurance Program Requirements (Design and Construction)

Regulatory Guide 1.28 describes a method acceptable to the NRC staff for complying with the provisions of Appendix B with regard to establishing and implementing the requisite quality assurance program for the design and construction of nuclear power plants.

~~Luminant commits to the applicable regulatory position guidance provided in this regulatory guide for CPNPP Units 3 & 4 with no exceptions.~~

Luminant identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in the text below:

- This regulatory guide endorses the basic and supplementary requirements in ANSI/ASME NQA-1-1983, "Quality Assurance Program Requirements for Nuclear Power Plants" and the ANSI/ASME NQA-1a-1983 Addenda along with the regulatory positions discussed below for the establishment and execution of quality assurance programs during the design and construction phases of nuclear power plants. The Luminant QAPD provides adequate guidance for establishing a quality assurance program that complies with Appendix B to 10 CFR Part 50 by conformance with using ASME NQA standard NQA-1-1994, as supplemented by additional regulatory guidance and industry guidance in lieu of the 1983 Edition as clarified in Parts II, IV, and V. ~~Reference approval for Exelon submittal to use NQA-1-1994 as documented in ADAMS Accession number ML023440300.~~
- Regulatory Position C.1 addresses the qualification of inspection and test personnel. The Luminant QAPD provides an alternative to this position and conforms to these requirements as clarified in Part II, Section 2.7. ~~As documented in SER ML070510300, the qualification criteria in the QAPD is acceptable and consistent with SRP Section 17.5, paragraph II.T. Note that SRP Section 17.5 paragraph II.T.5 and 6 represent alternatives to this regulatory position that were approved in SER ML050700416.~~
- Regulatory Position C.2 addresses quality assurance records. ~~Guidance is included in the QAPD, Part II, Section 17.1 for the applicant to address this regulatory position.~~ Luminant conforms with these requirements and the record types and retention times listed in Table 1 of the regulatory guide as clarified in Part II, Section 17.
- Regulatory Position C.3 addresses requirements for ~~scheduling of audits.~~ Luminant conforms with these requirements as clarified in Part II, Sections 7 and 18. ~~In establishing the independent audit program, the QAPD template commits the applicant to comply with the quality standards described in NQA-1-1994, Basic Requirement 18 and Supplement 18S-1. It follows SRP Section 17.5, paragraph II.R, for establishing the necessary measures to implement audits to verify that activities covered by the QAPD are performed in conformance with the requirements established. The scheduling of Internal Audits is addressed in QAPD Part II Section 18.2 and is consistent with position C.3.1 for the phase prior to placing the facility into operation. External Audits are addressed in QAPD Part II Section 7.1. The requirements are consistent with SRP paragraph II.R.11 and II.R.12. These requirements address regulatory position C.3.2.~~

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**Regulatory Guide 1.29**, Revision 4, March 2007 – Seismic Design Classification

-Regulatory Guide 1.29 defines systems required to withstand a safe shutdown earthquake (SSE).

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~~Luminant commits to the applicable regulatory position guidance provided in this regulatory guide for CPNPP Units 3 & 4 with no exceptions. Luminant identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in FSAR Chapter 1. the text below:~~

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~~This Regulatory Guide describes an acceptable method for identifying and classifying the features of nuclear power plants that must be designed to withstand the effects of the Safe Shutdown Earthquake (SSE). Regulatory Positions C.1 through C.3 provide guidance in establishing the SSCs, or portions thereof, classified as needing to meet seismic design requirements. The seismic design classification of SSCs would be addressed through the FSAR (and associated DCD) Section 3.7.~~

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~~-Regulatory Position C.4 addresses the application of the QA requirements of Appendix B to 10 CFR Part 50 to all activities affecting the safety-related functions of those portions of the SSCs that are covered by Regulatory Positions 2 and 3. Those in Regulatory Position 1 are considered safety-related. The QAPD described in Section 17.5 of the FSAR addresses the QA program requirements applied to safety-related activities.~~

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~~-Regulatory Position C.5 addresses the application of design requirements for portions of the fire protection SSCs as discussed in Regulatory Guide 1.189. The design and quality assurance requirements for fire protection SSCs is addressed in Section 9.5.1 of the FSAR (and associated DCD). Luminant conforms with the applicable regulatory position guidance provided in this regulatory guide for Comanche Peak 3 and 4 systems outside the scope of the DCD.~~

**Regulatory Guide 1.33**, Revision 2, February 1978 – Quality Assurance Program Requirements (Operations)

Regulatory Guide 1.33 describes a method acceptable to the NRC staff for complying with the Commission's regulations with regard to overall quality assurance program requirements for the operation phase of nuclear power plants.

~~Luminant commits to the applicable regulatory position guidance provided in this regulatory guide for CPNPP Units 3 & 4 with no exceptions. Luminant identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in the text below:~~

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~~• Regulatory Guide 1.33 identifies that the overall quality assurance program requirements for the operational phase that are included in ANSI N18.7-1976/ANS-3.2 are acceptable to the NRC staff and provide an adequate basis for complying with the quality assurance program requirements of Appendix B to 10 CFR Part 50, subject to the clarifications and supplementary guidance provided in the regulatory positions. In lieu of a commitment to ANSI N18.7-1976/ANS-3.2, Luminant conforms with the QA program requirements contained in~~

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NQA-1-1994 as clarified in the QAPD as well as the additional requirements specified in the QAPD.

- In meeting the intent of Regulatory Position C.1, Luminant prepares and controls procedures for the operational phase of the plant as described in Part II, Sections 5 and 6, and Part V, Section 3.
- In meeting the intent of Regulatory Position C.2, Luminant conforms with Regulatory Guides governing QA as specified in Parts II, IV, and V.
- In meeting the intent of Regulatory Position C.3, Luminant describes the requirements for independent review of technical specification changes and license amendments ~~by the IRC~~ in Part V, Section 2.2.
- In meeting the intent of Regulatory Position C.4, Luminant describes the internal audit function, scheduling, and frequency in Part II, Section 18.
- In meeting the intent of Regulatory Position C.5, Luminant has included comparable requirements in the QAPD to govern the operating phase QA program.

~~This Regulatory Guide endorses ANSI N18.7-1976/ANS-3.2 for complying with the quality assurance program requirements for the operation phase of nuclear power plants, subject to five regulatory positions. Attachment 2 to NEI 06-14, Rev. 9 Appendix 1 to NEI 06-14A, Rev 7, provides a comparison of QA requirements established within NQA-1-1994 and the template to provide an alternate method of meeting 10 CFR 50, Appendix B during the operational phase in lieu of committing to the requirements of ANSI N18.7-1976/ANS-3.2.~~

~~– Regulatory Position C.1 addresses “Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors.” QAPD Part II, Sections 5 and 6, and Part V, Section 3 address requirements for procedures consistent with requirements addressed in SRP 17.5 section II.F and ANSI N18.7-1976.~~

~~– Regulatory Position C.2 identifies additional standards referenced by ANSI N18.7-1976/ANS-3.2 and provides a cross reference for a regulatory Guide that addressed each of those standards. The QAPD identifies commitments to ASME NQA-1-1994 instead of the listed ANSI N45.2 series standards listed. Regulatory Guides 1.28, 1.37, 1.38, 1.39, 1.30, 1.94, 1.58, 1.116, 1.88, 1.74, 1.64, and 1.123 are listed for positions on the ANSI N45.2 series standards. RG 1.8, 1.17, and 1.54 are included as addressing other ANSI Standards. RG 1.8, 1.28, and 1.37 have been revised to reference newer standards and are discussed specifically in this section. RG 1.17, 1.58, 1.64, 1.74, 1.88, and 1.123 have been withdrawn. For RG 1.30, 1.38, 1.94 and 1.116 the QAPD provides an acceptable alternative using ASME NQA-1-1994, Subparts 2.2, 2.4, 2.5, and 2.8 as identified in Part II Sections 10.3 and 13.2 and SRP 17.5 Section II.U.2. For RG 1.39 the QAPD provides an acceptable alternative in Part II, Section 13.1, which is consistent with SRP Section 17.5, paragraph II.M. for operations; controls during design and construction are addressed in the commitment in Section 13.2. For applicability of RG 1.54, FSAR Chapter 6 should be consulted.~~

~~– Regulatory Position C.3 identifies a position related to Independent Review. The QAPD provides an alternative for this position by addressing Independent Review requirements specifically in Part V, Section 2.2 consistent with SRP 17.5 Section II.W rather than~~

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~~referencing ANSI N18.7. Item 2.2 c. specifically relates to the concern of this regulatory position.~~

~~Regulatory Position C.4 relates to provisions of the audit program. In establishing the independent audit program, the QAPD provides an alternative for this position by committing the applicant to comply with the quality standards described in NQA-1-1994, Basic Requirement 18 and Supplement 18S-1. Over the years, the utilities have modified their audit programs to provide alternatives to the amplified requirements of this Regulatory Position through risk-informed scheduling or controlling the scope of the scheduled audits. The licensee/applicant will need to provide the NRC with the rationale for any alternative to the amplified frequencies stated in the Regulatory Position. The QAPD template follows SRP Section 17.5, paragraph II.R, for establishing the necessary measures to implement audits to verify that activities covered by the QAPD are performed in conformance with the requirements established.~~

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~~Regulatory Position C.5 identifies concerns of the NRC with the usage of the verbs "should" and "shall" in ANSI N18.7-1976. The QAPD provides an alternative to this position by providing adequate guidance for establishing a quality assurance program that complies with Appendix B to 10 CFR Part 50 by using ASME NQA standard NQA-1-1994, as supplemented by the QAPD provisions in NEI 06-14A, Rev. 87. Additional regulatory guidance and industry guidance is identified in SRP Section 17.5.~~

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**Regulatory Guide 1.37**, Revision 1, March 2007 – Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants

Regulatory Guide 1.37 provides guidance on specifying water quality and precautions related to the use of alkaline cleaning solutions and chelating agents.

~~Luminant commits to the applicable regulatory position guidance provided in this regulatory guide for CPNPP Units 3 & 4 with no exceptions. Luminant identifies conformance and exceptions for the applicable regulatory position guidance provided in this regulatory guide in the text below as clarified in Part II, Section 13.~~

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~~This Regulatory Guide finds that the provisions and recommendations included in ASME NQA-1-1994, Part II, Subpart 2.1 are generally acceptable for onsite cleaning of materials and components, cleanliness control, and preoperational cleaning and layup of water-cooled nuclear power plant fluid systems with three regulatory positions. QAPD Part II, Section 13.2 addresses the commitment to NQA-1-1994, Part II, Subpart 2.1.~~

~~Regulatory Position C.1 identifies that the applicability and acceptability of any of the codes, standards, and specifications referenced in the text are or will be addressed through other regulations or NRC guidance. FSAR Chapter 1 addresses the codes, standards, and other documents that are used in the COL and any exceptions or alternatives to those documents.~~

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~~Regulatory Position C.2 identifies the NRC position that the water quality for final flushes of fluid systems and associated components should be at least equivalent to the quality of the operating system water. Additional regulatory guidance and industry guidance is identified in FSAR Chapter 1 and SRP Section 17.5.~~

Comanche Peak Nuclear Power Plant, Units 3 and 4  
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~~Regulatory Position C.3 recommends following Sections 8.2.2 and 8.2.3 of ASME NQA-1-1994, Part II, Subpart 2.1 precautions related to the use of alkaline cleaning solutions and chelating agents, respectively, by the use of the guidance in nonmandatory Appendix 2.1 to ASME NQA-1-1994, Part III, Subpart 3.2. In addition, this position recommends that a suitable chloride stress-cracking inhibitor be added to the fresh water used to flush systems containing austenitic stainless steels. QAPD Part II, Section 13.2 addresses the commitment to NQA-1-1994, Part II, Subpart 3.2. Additional regulatory guidance and industry guidance is identified in FSAR Chapter 1 and SRP Section 17.5.~~

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Regulatory Guide 1.54, Revision 1, July 2000 - Service Level I, II, and III Protective Coatings Applied to Nuclear Power Plants

Regulatory Guide 1.54 provides guidance for the application of protective coatings within nuclear power plants to protect surfaces from corrosion, contamination from radionuclides, and for wear protection.

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~~For applicability of RG 1.54 and any clarifications or alternatives, FSAR Chapter 6 should be consulted.~~

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Luminant identifies conformance and exceptions for the applicable regulatory guidance provided in this regulatory guide in FSAR Chapter 1. In Table 1.9-201, Luminant identifies one exception where ASTM standard revision levels may differ from Regulatory Guide 1.54 in order to apply updated guidance when it becomes available.



**Luminant**

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CP-201100756  
Log # TXNB-11038

Ref. # 10 CFR 52

May 31, 2011

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  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION NO. 5652  
(SECTION 6.4)

Dear Sir:

Luminant Generation Company LLC (Luminant) submits herein the response to Request for Additional Information (RAI) No. 5652 for the Combined License Application for Comanche Peak Nuclear Power Plant Units 3 and 4. This RAI addresses the amounts of chemicals stored on-site.

Should you have any questions regarding this response, 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 May 31, 2011.

Sincerely,

Luminant Generation Company LLC

  
Rafael Flores *for*

Attachment: Response to Request for Additional Information No. 5652 (CP RAI #216)

Electronic distribution w/ attachment:

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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.: 5652 (CP RAI #216)**

**SRP SECTION: 06.04 - Control Room Habitability System**

**QUESTIONS for Containment and Ventilation Branch 1 (AP1000/EPR Projects) (SPCV)**

**DATE OF RAI ISSUE: 4/27/2011**

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**QUESTION NO.: 06.04-13**

In support of the applicant's documented conclusions of Comanche Peak Nuclear Power Plant, Units 3 and 4 COLA FSAR section 6.4.4.2, the staff performed confirmatory HABIL code modeling per the guidance of Regulatory Guide 1.78 and NUREG-0800 Standard Review Plan (SRP) 6.4. For the "CPNPP Units 3 & 4 Water Treatment Chemicals" of FSAR Table 2.2-214, the staff compared the results of its modeling to the applicant's modeling results as captured in Calculation 4CS-CP34-200800074. Calculation 4CS-CP34-200800074 "CPNPP Units 3 & 4 Control Room Habitability Analysis Following Postulated Toxic Chemical Release (Support Document)" was viewed through the applicant's "CPNPP 3&4 COLA Reading Room."

For the onsite chemicals of sulfuric acid, ammonia, hydrazine and morpholine, the staff observed differences in its own calculated initial mass values from those listed in the EXTRAN Input Files of 4CS-CP34-200800074. The differences in the calculated values were as large in magnitude as 3.5.

The staff used the following formula for calculating their initial mass values.

Initial Mass = (Number gallons of chemical) x (8.337 lb/gal) x (Specific Gravity of Chemical) x (short ton/2000 lb) x (907.185 kilograms/short ton)

The staff requests that the applicant explain how the initial mass values were determined for sulfuric acid, ammonia, hydrazine and morpholine in 4CS-CP34-200800074, Revision 0. Additionally, the staff requests additional information about the applicant's HABIL code modeling that may help explain the noted differences.

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**ANSWER:**

The basis for the initial mass value calculation is located in Section 2 of Calculation 4CS-CP34-200800074, Rev. 0. The initial mass value is determined by taking the product of weight percent, volume, density of water, and specific gravity, and the results are provided in Table 2 of the calculation. As can be

seen, the differences are due to incorporation of the weight percentages of the chemicals of concern. FSAR Table 2.2-214 has been revised to indicate these weight percentages.

Impact on R-COLA

See marked-up FSAR Revision 1 Table 2.2-214.

Impact on S-COLA

None.

Impact on DCD

None.

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

CP COL 2.2(1)

**Table 2.2-214  
Toxic Chemicals that do not Meet the Regulatory Guide 1.78  
Screening Criteria<sup>(a)</sup>**

Hazardous Chemical Location	Chemicals	Quantity	Distance to the Nearest Units 3 and 4 MCR Inlet	IDLH	Calculated Maximum Concentration in Control Room
Roadway FM 56	Chlorine	42,500 lb	1.4 mi	1.0E+01 ppm	5.7 ppm
DeCordova SES	Sodium hydroxide	15,294 lb	3.7 mi <sup>(b)</sup>	10 mg/m <sup>3</sup>	Not Analyzed <sup>(c)</sup>
	Sulfuric acid	45,981 lb		15 mg/m <sup>3</sup>	1.9E-4 mg/m <sup>3</sup>
Wolf Hollow 1, LP	Sodium hydroxide	19,118 lb	3.9 mi	10 mg/m <sup>3</sup>	Not Analyzed <sup>(c)</sup>
	Sulfuric acid	57,477 lb		15 mg/m <sup>3</sup>	2.0E-4 mg/m <sup>3</sup>
Sunoco Pipeline, LP	Hydrogen sulfide	1716 lb	0.33 mi	1.0E+02 ppm	4.17 ppm
CPNPP Units 1 and 2, Waste Management Bldg.	Sulfuric acid	1250 gal (19,159 lb)	733 ft	15 mg/m <sup>3</sup>	1.75E-03 mg/m <sup>3</sup>
CPNPP Units 1 and 2, Bulk Gas Storage	Liquefied petroleum gas	4000 gal	1400 ft	2.10E+03 ppm	3.63E+01 ppm
	Carbon dioxide	6000 lb		4.0E+04 ppm	1.46E+01 ppm
CPNPP Units 3 and 4, Water Treatment Chemicals	Morpholine, <u>40 wt%</u>	10,000 gal	<300 ft	1.4E+03 ppm	3.49E-01 ppm
	Dimethylamine, <u>40 wt%</u>	5000 gal	<300 ft	5.00E+02 ppm	1.65E+01 ppm
	Hydrazine, <u>35 wt%</u>	1000 gal	<300 ft	5.0E+01 ppm	9.29E-02 ppm
	Ammonia, <u>19 wt%</u>	1000 gal	<300 ft	3.0E+02 ppm	2.70E+01 ppm
	Sulfuric acid, <u>93 wt%</u>	10,000 gal	<1200 ft	15 mg/m <sup>3</sup>	6.19E-03 mg/m <sup>3</sup>
<u>CPNPP Units 3 and 4, Chiller Refrigeration</u>	<u>Refrigerant (R-134a used as typical)</u>	<u>≤ 2570 lbs at a vapor density of 9.369 lbs/m<sup>3</sup></u>	<u>104 ft<sup>(d)</sup> 123 ft<sup>(e)</sup></u>	<u>Asphyxiant</u>	<u>(f)</u>

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