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August 24, 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. 2218 AND 2708

Dear Sir:

Luminant Generation Company LLC (Luminant) hereby submits the attached responses to Requests for Additional Information No. 2218 (CP RAI #20) and No. 2708 (CP RAI #17) for the Combined License Application for Comanche Peak Nuclear Power Plant Units 3 and 4. Should you have any questions regarding the responses, 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 August 24, 2009.

Sincerely,

Luminant Generation Company LLC


Rafael Flores

- Attachments:
1. Response to Request for Additional Information No. 2218 (CP RAI #20)
 2. Response to Request for Additional Information No. 2708 (CP RAI #17)

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Electronic Distribution w/ attachments

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RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

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

RAI NO.: 2218 (CP RAI #20)
SRP SECTION: 01 - INTRODUCTION AND INTERFACES
QUESTIONS for USAPWR Projects Branch (NMIP)
DATE OF RAI ISSUE: 7/15/2009

QUESTION NO.: 01-1

The guidance in Regulatory Guide 1.206 states that the COL applicant who references a certified design should augment the information included in the referenced certified design by providing a supplemental table listing system drawings that were not included in the design certification. COL application FSAR Table 1.7-202 lists Figure 9.2.4-201, "Sanitary Wastewater Treatment System Flow Diagram." The NRC staff observed that this drawing was not included in COL FSAR, Chapter 9. Luminant is requested to provide this drawing.

ANSWER:

Figure 9.2.4-201 is not required in Chapter 9 because a sufficient description of the Sanitary Wastewater Treatment System is included in the Subsection 9.2.4.2 and 9.2.4.5 text. Therefore, Table 1.7-202 will be revised to remove Figure 9.2.4-201.

Impact on R-COLA

See attached marked-up FSAR Rev. 0 page 1.7-3.

Impact on S-COLA

None.

Impact on DCD

None.

Attachment

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

CP SUP 1.7(1)

Table 1.7-202

Site-Specific System Drawings

| Figure Number^(Note) | Subject | |
|---|--|------------|
| 9.2.1-1R | Essential Service Water System Piping and Instrumentation Diagram | |
| 9.2.4-1R | Potable and Sanitary Water System Flow Diagram | |
| 9.2.4-201 | Sanitary Wastewater Treatment System Flow Diagram | RCOL2_01-1 |
| 9.2.5-201 | Ultimate Heat Sink System Piping and Instrumentation Diagram | |
| 9.3.1-201 | Hydrogen and Nitrogen Gas Supply Configuration | |
| 9.4-201 | UHS ESW Pump House Ventilation System Flow Diagram | |
| 9.5.1-201 | Fire Protection Water Supply System | |
| 9.5.1-202 | CPNPP Units 3 & 4 Fire Main System | |
| 10.4.5-1R | Circulating Water System Piping and Instrumentation Diagram | |
| 10.4.5-201 | Circulating Water System Piping and Instrumentation Diagram (Site-specific portion) | |
| 10.4.8-1R | Steam Generator Blowdown System Piping and Instrumentation Diagram (Sheet 1 of 2) | |
| 10.4.8-2R | Steam Generator Blowdown System Piping and Instrumentation Diagram (Sheet 2 of 2) | |
| 10.4.8-201 | Steam Generator Blowdown System Piping and Instrumentation Diagram (Site-specific portion) | |
| 11.2-201 | Liquid Waste Management System | |
| 11.3-201 | Gaseous Waste Management System | |
| 11.4-201 | Solid Waste Management System | |

Note: Figure number with the designation "R" indicates that the figure has been revised and replaced.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

Comanche Peak, Units 3 and 4

Luminant Generation Company LLC

Docket Nos. 52-034 and 52-035

RAI NO.: 2708 (CP RAI #17)

SRP SECTION: 10.04.08 – Steam Generator Blowdown System

QUESTIONS for AP1000 Projects Branch 1 (NWE1)

DATE OF RAI ISSUE: 7/14/2009

QUESTION NO.: 10.04.08-1

Please revise Table 3.2-201 of the Comanche Peak COL FSAR to make the design requirements for the site-specific portion of the steam generator blowdown system (SGBDS) consistent with the US-APWR Design Certification Document (DCD). The Equipment classifications for the SGBDS are being changed in the DCD, based on the NRC staff's review of the appropriate design code (Refer to US-APWR RAI 10.04.08-8). The applicable codes and standards should be the same for both the standard and site-specific portions, and the DCD states that the non-safety SGBDS components will be designed according to RG 1.143.

ANSWER:

Table 3.2-201 has been revised to be consistent with the DCD changes. In addition, the wording "outside building (O/B)" in the column titled "Location" has been reworded as "outdoors" to be consistent with Subsection 10.4.8.2.1.

Impact on R-COLA

See attached marked-up FSAR Rev. 0 page 3.2-5.

Impact on S-COLA

None.

Impact on DCD

None.

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

Table 3.2-201 (Sheet 3 of 3)

Classification of Site-Specific Mechanical and Fluid Systems, Components, and Equipment

CP COL 3.2(4)
CP COL 3.2(5)

| System and Components | Equipment Class | Location | Quality Group | 10 CFR 60 Appendix B (Reference 3.2-8) | Code and Standards ⁽³⁾ | Seismic Category | Notes |
|--|-----------------|---|-----------------|--|-----------------------------------|---|-------|
| 4. Startup steam generator (SG) blowdown system | | | | | | | |
| System components, piping and valves | 46 | turbine building (T/B), auxiliary building (A/B), outside building (O/B) outdoors | DN/A | not applicable (N/A) | 46 | non seismic (NS) <u>Note 1</u> | |

RCOL2_10.0
4.08-1

RCOL2_10.0
4.08-1

Notes:

1. ~~Not used~~ Seismic category meeting RG 1.143 (Reference 3.2-10) is applied.
2. Not used.
3. Identification number for "Code and Standards"
 - (1) American Society of Mechanical Engineers (ASME) Code, Section III, Class 1 (Reference 3.2-14)
 - (2) ASME Code, Section III, Class 2 (Reference 3.2-14)
 - (3) ASME Code, Section III, Class 3 (Reference 3.2-14)
 - (4) RG 1.26 (Reference 3.2-13), Table 1, Quality Standards
 - (5) Codes and standards as defined in design bases
 - (6) RG 1.143 (Reference 3.2-10), Table 1, Code and Standards for Design of SSC in Radwaste Facilities

RCOL2_10.0
4.08-1

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

Comanche Peak, Units 3 and 4

Luminant Generation Company LLC

Docket Nos. 52-034 and 52-035

RAI NO.: 2708 (CP RAI #17)

SRP SECTION: 10.04.08 – Steam Generator Blowdown System

QUESTIONS for AP1000 Projects Branch 1 (NWE1)

DATE OF RAI ISSUE: 7/14/2009

QUESTION NO.: 10.04.08-2

Please revise Section 10.4.8 of the COL FSAR, as modified by Comanche Peak COL 10.4(2), to clarify the "General Description" of the Steam Generator Blowdown System. There are two paragraphs in Section 10.4.8.2.1 (page 10.4-6) of the COL FSAR that are partly repetitive and contradictory. The paragraphs replace and amend portions of the general description of the SGBDS in the DCD. The two paragraphs begin with, "The SGBDS includes" and, "The SGBDS also includes" These two paragraphs provide two different descriptions of what the system includes.

ANSWER:

Subsection 10.4.8.2.1 has been revised to eliminate the duplicative and contradictory information.

Impact on R-COLA

See attached marked-up FSAR Rev. 0 page 10.4-6.

Impact on S-COLA

None.

Impact on DCD

None.

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

- Discharge secondary side water (after cooling) to existing waste water management Pond C or LWMS during plant start up and abnormal chemistry conditions.
- Monitor the concentration of radioactive material in the cooled blowdown water with startup SG blowdown heat exchanger downstream radiation monitor downstream of startup blowdown heat exchanger.

10.4.8.2.1 General Description

- CP COL 10.4(2) Replace the first and second paragraph in DCD Subsection 10.4.8.2.1 with the following.

The steam generator blowdown system (SGBDS) flow diagrams are shown in Figures 10.4.8-1R, 10.4.8-2R, and 10.4.8-201. Classification of equipment and components in the SGBDS is provided in Subsection 3.2.

~~The SGBDS includes startup SG blowdown flash tank, startup blowdown heat exchanger, piping, valves and instrumentation for discharging blowdown water to existing waste water management Pond C located outdoors.~~

RCOL2_10.0
4.08-2

The SGBDS equipment and piping are located in the containment, the reactor building, the auxiliary building, the turbine building(T/B), and outdoors.

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- CP COL 10.4(2) Add the following text after the third paragraph in DCD Subsection 10.4.8.2.1.

The SGBDS also includes startup SG blowdown flash tank, startup blowdown heat exchanger, piping, valves and instrumentation used during plant startup and abnormal water chemistry conditions.

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- CP COL 10.4(2) Replace the thirteenth and fourteenth paragraph in DCD Subsection 10.4.8.2.1 with the following.

During plant startup, the blowdown rate is up to approximately 3 % of maximum steaming rate (MSR) at rated power. The blowdown from each SG flows to the startup SG blowdown flash tank. The blowdown lines from SGs A and B and the blowdown lines from SGs C and D are joined together before flowing to the startup SG blowdown flash tank.

The blowdown water from each SG is depressurized by a throttle valve located downstream of the isolation valves located in the startup blowdown line. The throttle valves can be manually adjusted to control the blowdown rate.

The depressurized blowdown water flows to the startup SG blowdown flash tank, where water and flashing vapor are separated. The vapor is diverted to the condenser and the water flows to the startup SG blowdown heat exchanger for