PMComanchePeakPEm Resource

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Sent: Friday, August 14, 2009 2:01 PM
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Cc: ComanchePeakCOL Resource; Otto, Ngola
Subject: Comanche Peak RCOL Chapter 11 - RAI 29
Attachments: RAI 2747(RAI 29).doc

The NRC staff has identified that additional information is needed to continue its review of the combined license application. The staff's request for additional information (RAI) is contained in the attachment.

The response to this RAI is due within 42 calendar days of August 14, 2009.

Note: If changes are needed to the safety analysis report, the NRC staff requests that the RAI response include the proposed wording changes.

thank you,

Stephen Monarque
U. S. Nuclear Regulatory Commission
NRO/DNRL/NMIP
301-415-1544

Hearing Identifier: ComanchePeak_COL_Public
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Request for Additional Information (RAI) No. 2747

RAI No. 29

8/14/2009

Comanche Peak Units 3 and 4
Luminant Generation Company, LLC.
Docket No. 52-034 and 52-035
SRP Section: 11.02 - Liquid Waste Management System
Application Section: 11.2 - Liquid Waste Management System

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

11.02-1

Technical Rationale Section 6 of Standard Review Plan (SRP) Section 11.2, "Liquid Waste Management System," (LWMS) states, "Compliance with GDC 61 requires that the LWMS and other systems (as permanently installed systems or in combination with mobile systems) that may contain radioactivity shall be designed to ensure adequate safety under normal and postulated accident conditions. This criterion specifies that such facilities shall be designed with a capability to permit inspection and testing of components important to safety and with suitable shielding for radiation protection."

Similarly, Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," Section C.I.11.2 states, "Discuss any mobile or temporary equipment used for storing or processing liquid radwaste in accordance with RG 1.143. For example, this includes discussion of equipment containing radioactive liquid radwaste in the nonseismic radwaste building. If this guidance is not followed, describe the specific alternative methods used. Describe system design features and operational procedures used to ensure that interconnections between plant systems and mobile processing equipment avoids the contamination of nonradioactive systems and uncontrolled releases of radioactivity in the environment (see IE BL-80-10, 'Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity in the Environment,' dated May 6, 1980, and RG 1.11 for details). Discuss system capability of and requirements for utilizing mobile processing equipment for refueling outages."

(1) With respect to mobile or temporary equipment, include in the FSAR a discussion of how contracted mobile systems and temporary equipment would meet Regulatory Guide (RG) 1.143, "Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants."

(2) Additionally, include in the FSAR discussions of capability to permit inspection, testing of components, shielding, and operational procedures for contracted mobile systems and/or temporary equipment.

11.02-2

Regulatory Guide 1.206 Section C.III.4.3 states, “The COL applicant should identify, in Chapter 1 of the FSAR portion of the COL application, the COL information items that cannot be resolved completely before the COL is issued. The COL applicant should provide sufficient information on these items to support the NRC licensing decision and also propose a method for ensuring the final closure of the item following issuance of the COL.”

- FSAR Section 11.2.2, “System Description,” states, “The shape of the flow orifices and other technical details will be developed in the detail design phase. Subsection 11.2.3.1 discusses the design of the evaporation pond and return line connections.”

  (1) Elaborate on what other technical details need to be developed.

  (2) Justify why this information is not included in the FSAR.

  (3) Justify why the resolution of these technical details does not require an ITAAC.

  (4) If Luminant proposes resolving these issues through a regulatory commitment, provide a time frame and document it in the FSAR.

- FSAR Section 11.2.3.1, “Radioactive Effluent Releases and Dose Calculation in Normal Operation,” states, “The exact locations of the connections into the circulating water discharge header is determined in the detail design phase with consideration of the impact of sharing structure, system, and components (SSCs) among the nuclear units.”

  (1) Justify why this information is not included in the FSAR.

  (2) Justify why the resolution of these issues does not require an ITAAC.

  (3) If Luminant proposes resolving these issues through the use of a regulatory commitment, provide a time frame and document it in the FSAR.

  (4) Finally, discuss how the requirements of 10 CFR Part 50, Appendix General Design Criterion 5, “Sharing of structures, systems, and components,” are met.

11.02-3

Acceptance Criteria 5 of NUREG-0800, Standard Review Plan Section 11.2 states, “System designs should describe features that will minimize, to the extent practicable, contamination of the facility and environment; facilitate eventual decommissioning; and minimize, to the extent practicable, the generation of radioactive waste, in accordance with the guidelines of Regulatory Guide 1.143, for liquids and liquid wastes produced during normal operation and anticipated operational occurrences, and the requirements of 10 CFR 20.1406, or the DC application, update in the SAR, or the COL application, to the extent not addressed in a referenced certified design.”

FSAR Section 11.2.3.1, “Radioactive Effluent Releases and Dose Calculation in Normal Operation,” states, “A portion of the liquid effluent from [Comanche Peak Nuclear Power Plant] CPNPP Units 3 and 4 discharge header can be diverted to an evaporation pond located within the site boundary…The evaporation pond can also receive 100 percent of the liquid effluent on a temporary basis.”

(1) Describe in the FSAR how the effluent holdup (evaporation) pond will meet the guidance of SRP Section 11.2, “Liquid Waste Management System,” and RG 1.143, “Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants,” Revision 2, November 2001, or justify an alternative.

(2) Justify why radiation monitors downstream of the effluent holdup pond are not included, and further describe how releases from the effluent holdup pond are suitably controlled.

(3) Discuss provisions for sampling of the effluent holdup pond or justify why these provisions are not discussed.

(4) Clarify how the requirements of 10 CFR 20.1406, “Minimization of Contamination,” are met.

(5) Discuss in the FSAR the seismic and quality group classification of the effluent holdup pond and explain how it meets the other recommendations of RG 1.143, or justify an alternative.

11.02-4

10 CFR Part 50, Appendix A, General Design Criterion 60 states, “The nuclear power unit design shall include means to control suitably the release of radioactive materials in gaseous and liquid effluents and to handle radioactive solid wastes produced during normal reactor operation, including anticipated operational occurrences.”

(1) Provide additional information in the FSAR relating to the bypass around the discharge radiation monitor, which includes VLV-531, on Figure 11.2-201 (Sheet 6 of 9).

(2) Explain in the FSAR when this pathway will be used and the precautions in place to prevent an unmonitored release.

(3) Provide a discussion that includes, but is not limited to, valve leakage, valve failure, and operator error.

(4) Finally, explain in the FSAR how a single failure will not result in an unmonitored release.