PMComanchePeakPEm Resource

From: Otto, Ngola
Sent: Friday, September 09, 2011 1:36 PM
To: 'Woodlan, Don'
Cc: Monarque, Stephen; ComanchePeakCOL Resource
Subject: Comanche Peak Chapter 11 and 12 Open Items

Don,

Please see explanations of the chapter 11 and 12 open items based on the current version of the SE.

Open Item 11.02-1

In response to **RAI 3398, Question 11.02-10**, dated October 19, 2009 the applicant addressed the details on the existing and proposed piping in its response to **RAI 2747, Question 11.02-2**. The transfer pump is shown in the revised Figure 11.2-201 (Sheets 9 and 10) and evaporation pond discharge radiation monitor (RMS-RE-111) is shown close to the pump discharge in the revised Figure 11.2-201 (Sheets 9 and 10). The applicant states that specific sample points will be located during the "detailed design" and will ensure that representative samples of the evaporation pond are taken before its contents are transferred to the SCR via the CPNPP Units 1 and 2 circulating water return line. The staff previously evaluated the applicant's response to **RAI 2747, Question 11.02-2** and found it acceptable. Therefore, **RAI 3398, Question 11.02-10** is closed. However, the staff found that the "detailed design" information on the site-specific sampling locations for the evaporation pond was not provided to address CP COL 11.2(2) for compliance with 10 CFR 50.34a. Therefore, the staff in follow-up **RAI 5854, Question 11.02-18** requested that the applicant provide this detailed design information. **RAI 5854, Question 11.02-18** is being tracked as **Open Item 11.02-1**.

Open Item 11.04-1

The staff reviewed the additional information included in FSAR, Revision 0, Section 11.4.2.3 and found that the design information on the radwaste interim storage facility was not described. As a result, the staff requested in **RAI 3401, Question 11.04-4** that the applicant in FSAR Section 11.4 identify and describe the applicable NRC regulations and guidance; design information such as ventilation exhaust system, structural requirements, shielding considerations, capacity, sizing, airborne radioactivity and area radiation monitoring, etc; provisions for leakage prevention and/or detection that will be used to minimize contamination of the facility and environment; associated programs and procedures that will be used to comply with Federal regulations and conform to NRC regulatory guidance, communications, and industry guidance; and ITAAC that will be used to ensure acceptable construction and operation of the radwaste interim storage facility, or justify its exclusion.

In response to **RAI 3401, Question 11.04-4** dated October 19, 2009, the applicant revised FSAR Section 11.4.2.3, adding some design information for the radwaste interim storage facility such as above grade specialized shielded cell vaults for storing Class B and C waste; separate control and equipment room ventilation; radiation monitoring; fire protection systems; remotely operated bridge crane with CCTV; and crane mounted storage bay lighting sources. The applicant states the radioactive mixed waste storage area is designed and constructed in accordance with the permit application for its operation received from the TCEQ. In FSAR, Revision 1, Section 11.4.2.3, the applicant added the NRC regulations and guidance for the design and operation of the radwaste interim storage facility as 10 CFR Part 20, 10 CFR Part 61, 10 CFR Part 71, 40 CFR Part 190, 49 CFR Part 173, Appendix 11.4-A to SRP Section 11.4, GL 81-38, IN 89-27, and SECY-94-0198. Although the applicant commits to following these regulatory requirements and industry guidance, the applicant states the requested detailed design information is unavailable because "the building design is not detailed at this point in time so that the design can be flexible and adjusted to accommodate the amounts and types of radioactive waste to be stored which are not fully known yet and which are expected to change over time."

From review of FSAR, Revision 1, Section 11.4.2.3, the staff notes that the requested detailed design information for the staff to reach a reasonable assurance of safety conclusion and verify how the interim radwaste facility storage facility meets compliance with NRC regulatory requirements and the guidance and acceptance criteria in SRP Section 11.4 to adequately address CP COL 11.4(1) was not provided. Therefore, **RAI 3401, Question 11.04-4** is being tracked as **Open Item 11.04-1**.

Open Item Open Item 12.03-12.04-1

Title 10 of the Code of Federal Regulations (10 CFR), Part 20, "Standards for Protection Against Radiation," Section 1101(b) "Radiation protection programs" requires that Occupational Radiation Exposures (ORE) be maintained as low as is reasonably achievable (ALARA). 10 CFR 20.1406(b) "Minimization of contamination" requires licensees to describe design feature to reduce contamination of the facility, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste. US-APWR DCD Tier 2 Subsection 12.1.2.1 "General Design Considerations for Keeping Exposures ALARA" states that the US-APWR design supports the use of zinc injection (into the reactor coolant system) as one of the possible methods to reduce ORE. Mitsubishi Heavy Industries (MHI), the applicant for the US-APWR DCD has stated that while the standard design does ensure that zinc injection can be employed and the standard certified design includes provisions for future implementation by applicants, the zinc injection system is not directly a part of the standard certified design, and no specific equipment is included for zinc injection in the standard certified design. Industry literature documents the impact the use of zinc injection has on reducing ORE and reducing facility contamination. The CPNPP3&4 FSAR Chapter 12 "Radiation Protection" did not state whether the applicant intends to use zinc injection; CPNPP3&4 FSAR Chapter 9 "Auxiliary Systems" does not describe the locations of components, piping and interfaces to plant systems, of the zinc injection system and CPNPP3&4 FSAR Section 12.3 "Radiation Protection Design Features" did not describe the use of the zinc injection components for ORE reduction. As such, in **RAI 5981 Question 12.03-12.04-12**, the staff asked the applicant to describe in CPNPP3&4 FSAR Chapter 12, the use of zinc injection at CPNPP3&4, and to describe the locations of components, piping and interfaces of the zinc injection system to plant systems in the appropriate sections of CPNPP3&4 FSAR Chapter 9. **RAI 5981 Question 12.03-12.04-12** is identified as **Open Item 12.03-12.04-1**.

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