

CHAPTER 4 – REACTOR

4.0 Reactor

Chapter 4, “Reactor,” of the Comanche Peak Nuclear Power Plant (CPNPP), Units 3 and 4 Combined License (COL) Final Safety Analysis Report (FSAR), Part 2, Revision 3 incorporates by reference, with no departures or supplements, Sections 4.1 through 4.6 of the United States – Advanced Pressurized Water Reactor (US-APWR) Design Control Document (DCD), Revision 3. The Nuclear Regulatory Commission (NRC)’s staff is reviewing the information in US-APWR DCD under Docket Number 52-021. The results of the staff’s technical evaluation of the information related to the reactor design incorporated by reference in the CPNPP, Units 3 and 4, COL FSAR will be documented in the staff’s final safety evaluation report (FSER) of the design certification (DC) application for the US-APWR. The safety evaluation (SE) for the US-APWR is not yet complete, and this is being tracked as part of **Open Item 1-1**. The staff will update Chapter 4 of this SE to reflect the final disposition of the DC application application.

4.1 Summary Description

Section 4.1, “Summary Description,” of the CPNPP, Units 3 and 4, COL FSAR, Revision 3 incorporates by reference, with no departures or supplements, Section 4.1 US-APWR DCD, Revision 3. The NRC staff is reviewing the information in US-APWR DCD Section 4.1 under Docket Number 52-021. The results of the NRC staff’s technical evaluation of the information incorporated by reference in the CPNPP, Units 3 and 4 COL FSAR will be documented in the NRC staff’s FSER of the DC application for the US-APWR. The SE for the DC application is not yet complete and this is being tracked as part of **Open Item 1-1**. The NRC staff will update Section 4.1 of this SE to reflect the final disposition of the DC application.

4.2 Fuel System Design

Section 4.2, “Fuel System Design,” of the CPNPP, Units 3 and 4 COL FSAR, Revision 3 incorporates by reference, with no departures or supplements, Section 4.2 US-APWR DCD, Revision 3. The NRC staff is reviewing the information in US-APWR DCD Section 4.2 under Docket Number 52-021. The results of the NRC staff’s technical evaluation of the information incorporated by reference in the CPNPP, Units 3 and 4 COL FSAR will be documented in the NRC staff’s FSER of the DC application for the US-APWR. The SE for the DC application is not yet complete, and this is being tracked as part of **Open Item 1-1**. The staff will update Section 4.2 of this SE to reflect the final disposition of the DC application.

4.3 Nuclear Design

Section 4.3, “Nuclear Design,” of the CPNPP, Units 3 and 4 COL FSAR, Revision 3 incorporates by reference, with no departures or supplements, Section 4.3 US-APWR DCD, Revision 3. The NRC staff is reviewing the information in US-APWR DCD Section 4.3 under Docket Number 52-021. The results of the NRC staff’s technical evaluation of the information incorporated by reference in the CPNPP, Units 3 and 4 COL FSAR will be documented in the NRC staff’s FSER of the DC application for the US-APWR. The SE for the DC application is not yet complete, and this is being tracked as part of **Open Item 1-1**. The NRC staff will update Section 4.3 of this SE to reflect the final disposition of the DC application.

4.4 Thermal-Hydraulic Design

Section 4.4, "Thermal-Hydraulic Design," of the CPNPP, Units 3 and 4 COL FSAR, Revision 3 incorporates by reference, with no departures or supplements, Section 4.4 US-APWR DCD, Revision 3. The NRC staff is reviewing the information in US-APWR DCD Section 4.4 under Docket Number 52-021. The results of the NRC staff's technical evaluation of the information incorporated by reference in the CPNPP, Units 3 and 4 COL FSAR will be documented in the NRC staff's FSER of the DC application for the US-APWR. The SE for the DC application is not yet complete, and this is being tracked as part of **Open Item 1-1**. The NRC staff will update Section 4.4 of this SE to reflect the final disposition of the DC application.

4.5 Reactor Materials

Section 4.5, "Reactor Materials," of the CPNPP, Units 3 and 4 COL FSAR, Revision 3 incorporates by reference, with no departures or supplements, Section 4.5 US-APWR DCD, Revision 3. The NRC staff is reviewing the information in US-APWR DCD Section 4.5 under Docket Number 52-021. The results of the NRC staff's technical evaluation of the information incorporated by reference in the CPNPP, Units 3 and 4 COL FSAR will be documented in the NRC staff's FSER of the DC application for the US-APWR. The SE for the DC application is not yet complete, and this is being tracked as part of **Open Item 1-1**. The staff will update Section 4.5 of this SE to reflect the final disposition of the DC application.

4.6 Functional Design of Reactivity Control System

Section 4.6, "Functional Design of Reactivity Control System," of the CPNPP, Units 3 and 4 COL FSAR, Revision 3 incorporates by reference, with no departures or supplements, Section 4.6 US-APWR DCD, Revision 3. The NRC staff is reviewing the information in US-APWR DCD Section 4.6 under Docket Number 52-021. The results of the NRC staff's technical evaluation of the information incorporated by reference in the CPNPP, Units 3 and 4 COL FSAR will be documented in the NRC staff's FSER of the DC application for the US-APWR. The SE for the DC application is not yet complete, and this is being tracked as part of **Open Item 1-1**. The staff will update Section 4.6 of this SE to reflect the final disposition of the DC application.