

Chapter 4 contains the following sections:

- 4.1 Summary Description
- 4.2 Fuel System Design
- 4.3 Nuclear Design
- 4.4 Thermal and Hydraulic Design
- 4.5 Reactor Materials
- 4.6 Functional Design of Reactivity Control System

Appendix 4A Typical Control Rod Patterns and Associated Power Distribution for ESBWR
Appendix 4B Fuel Licensing Acceptance Criteria
Appendix 4C Control Rod Licensing Acceptance Criteria
Appendix 4D Stability Evaluation

The staff's review confirmed that the information contained in the application and incorporated by reference addresses the required information relating to this Chapter.

The staff reviewed the following information contained in the COL FSAR:

COL items

For COL items STD COL 4.3-1-A and STD COL 4A-1-A , the applicant states that there are no changes to the fuel, control rod or core design from the referenced certified design. The staff reviewed the information contained in the COL FSAR and concluded that the applicant provided adequate information to address the COL items, and is therefore, acceptable.

4.5 Post Combined License Activities

There are no post COL activities related to this chapter.

4.6 Conclusion

The NRC staff's finding related to information incorporated by reference is in NUREG-XXXX. NRC staff reviewed the application and checked the referenced DCD. The staff's review confirmed that the applicant has addressed the required information, and no outstanding information is expected to be addressed in the COL FSAR related to this section. Pursuant to 10 CFR 52.63(a)(5) and Part 52, Appendix [x], Section VI.B.1, all nuclear safety issues relating to this section that were incorporated by reference have been resolved. The staff's review confirmed that the applicant has adequately addressed COL Items STD COL 4.3-1-A and STD COL 4A-1-A.