ATTACHMENT

PROPOSED ZION APPENDIX A

TECHNICAL SPECIFICATION CHANGES TO

SECTION 5.0

DESIGN FEATURES

Pages Modified: 298
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(Replace corresponding pages in Attachment 1 of Reference (a))

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The reactor containment structure for Zion Unit 2 essentially identical in design and construction to that of Unit 1 except that it is reoriented. Numerous mechanical and electrical systems penetrate the containment wall through welded steel penetrations.[2]

5.4.3 Containment Penetrations Sideways

All containment penetrations (both electrical and piping) are double barrier assemblies consisting of a closed sleeve, in most cases, or a double gasketed closure for special penetrations such as the fuel transfer tube. The space between the double barriers will be continuously pressurized, by the Penetration Pressurization System, to a pressure in excess of the containment design pressure.[3]

References

(1) FSAR Section 5.1.1
(2) FSAR Section 5.1.2
(3) FSAR Section 5.1.4

5.5 Fuel Storage

5.5.1 New Fuel Storage

New fuel assemblies are stored in a separate storage vault which is designed to hold 132 new assemblies. The new fuel storage racks accommodate 2/3 of a core. There are three sections of racks with each section made up of two rows. The two parallel rows in each section have a nominal center to center spacing of 21 inches and each section is separated by a distance of 44" to assure a K effective of less than 0.95 even for a condition of optimum moderation if unborated water was to fill the vault, for fuel having a maximum loading of 46.4 gms. U-235 per axial centimeter of fuel assembly length (about 3.7 weight percent U-235). The new fuel storage vault is protected from flooding by its free flood drain.

New fuel may also be temporarily stored in the spent fuel pool in preparation for refueling. The fuel assemblies are stored in racks in parallel rows, having a nominal center to center distance of 10.35 inches in both directions. This spacing is sufficient to maintain a K effective of less than .95 when flooded with unborated water, for fuel having a maximum loading of 46.4 gms. U-235 per axial centimeter of fuel assembly length (about 3.7 weight percent U-235).

5.5.2 Spent Fuel Storage

Irradiated fuel assemblies will be stored prior to offsite shipment in the stainless steel lined fuel pool which is located in the fuel handling building. Borated water is used to fill the spent fuel storage pit at a concentration to match that used in the reactor cavity and refueling canal during refueling operations. The fuel is stored in a vertical array with a nominal center to center spacing of 10.35" between assemblies to assure a K effective of less than 0.95 even if unborated water is used to fill the pit, for fuel having a maximum loading of 46.4 gms. U-235 per axial

5.5.2 Spent Fuel Storage (Continued)

centimeter of fuel assembly length (about 3.7 weight percent U-235).

Reference

Criticality Analysis of Zion Units 1 and 2, Fresh and Spent Fuel Racks, dated October 25, 1984.

5.6 Seismic Design

The structures, mechanical components and Engineered Safeguards Systems vital to safe shutdown and containment isolation, or whose failure might cause or increase the severity of a loss of coolant accident, are designed per the seismic criteria of Design Basis Earthquake (DBE). Design Basis Earthquake is based on ordinary allowable stresses as set forth in applicable codes, plus the additional requirement that a safe shutdown be made during a horizontal ground acceleration of 0.17g and a vertical acceleration of 0.11g occurring simultaneously. These systems and equipment are defined as Seismic Class 1.

Other systems and mechanical components in a support or auxiliary function are designed per the seismic criteria of Operational Basis Earthquake (OBE), or per applicable codes. These systems and equipment are defined as either Classes 2 or 3 depending on their function.