

4.0 DESIGN FEATURES

4.1 Site Location

The site area is approximately 7,700 acres located in Somervell County in North Central Texas. Squaw Creek Reservoir (SCR), established for station cooling, extends into Hood County. The site is situated along Squaw Creek, a tributary of the Paluxy River, which is a tributary of the Brazos River. The site is over 30 miles southwest of the nearest portion of Fort Worth and approximately 4.5 miles north-northwest of Glen Rose, the nearest community.

4.2 Reactor Core

4.2.1 Fuel Assemblies

The reactor shall contain 193 fuel assemblies. Each assembly shall consist of a matrix of Zircaloy clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing or that contain Westinghouse ZIRLO™ fuel rod cladding may be placed in non-limiting core regions.

4.2.2 Control Rod Assemblies

The reactor core shall contain 53 control rod assemblies. The control material shall be silver-indium-cadmium as approved by the NRC.

(continued)