

Appendix 12A. Tables

Table 12-1. Parameters Used for Shielding Analyses

Core Thermal Power	2568 MWt
Effective Core Diameter	128.9 in.
Active Fuel Length	144 in
Thickness of Core Liner	0.75 in.
Thickness of Core Barrel	2 in.
Thickness of Thermal Shield	2 in.
Reactor Vessel I.D.	171 in.
Reactor Vessel O.D.	188 in.
Volume of Reactor Coolant	11,478 ft ³
Normal Letdown Flow	1 reactor coolant system volume per day
Time Between Shutdown and Fuel Handling	100 hrs.
Coolant Transit Times (Seconds):	
Core Inlet to Core Exit	0.8
Core Exit to S.G. Inlet	2.8
S.G. Inlet to S.G. Outlet	5.2
S.G. Outlet to Core Inlet	4.0
Total Loop Time	12.8

Table 12-2. Principal Shielding

Reactor Building	
Component	Concrete Thickness (ft)
Primary Shield (Below Flange)	5
(Above Flange)	4.5
Secondary Shield	4
Reactor Building Vertical Walls	3.75
Reactor Building Dome	3.25
Side Walls of Fuel Transfer Canal	4.5
End Walls of Fuel Transfer Canal	2.5,4
Floor of Fuel Transfer Canal	4
Nominal Water Over Active Fuel During Transfer	9
Auxiliary Building	
Component	Concrete Thickness (ft)
Spent Resin Tanks	4
Evaporator Equipment	3.0-4.0
Purification Demineralizers	4
Deborating Demineralizers	4
Component Drain Pump	1.5-4.0
Spent Resin Transfer Pump	2-4
Spent Resin Sluicing Pump	2-4
Waste Transfer Pump	1-4
Low Pressure Injection Pumps	2.5-3.5
High Pressure Injection Pumps	1.5-4.0
Coolant Bleed Holdup Tanks	1.5-4.0
Concentrated Boric Acid Storage Tank	1.5-2.0
Waste Drumming Area	1.5-2.0
Low Pressure Injection Coolers	3
Letdown Storage Tanks	4
Waste Holdup Tank	2.0
Waste Gas Tank	3.0-3.5
Waste Gas Compressors	3.0-3.5
Bleed Evaporator Feed Tank	2.0-3.0

Spent Fuel Coolant Pumps & Coolers	2.5-3.5
Side Walls of Storage Pool	3.5
End Walls of Storage Pool	5.5

Table 12-3. Area Radiation Monitors

RIA	Detector Type	Location	Range	Nominal Sensitivity
RIA-1	G-M	Control Room Unit 1&2, Unit 3	1E-1 to 1E4 mR/hr	100 cpm/mR/hr
RIA-3 High Range	G-M Ion Chamber	Reactor Building Refueling Deck Shield Wall Unit 1, 2, 3	1E-1 to 1E4 mR/hr 1E2 to 1E7 mR/hr	100 cpm/mR/hr 1.2E-10 A/R/hr
RIA-4 High Range	G-M Ion Chamber	Reactor Building Entrance Unit 1, 2, 3	1E-1 to 1E4 mR/hr 1E2 to 1E7 mR/hr	100 cpm/mR/hr 1.2E-10 A/R/hr
RIA-5	G-M	Incore Instrument Handling Area Unit 1, 2, 3	1E-1 to 1E4 mR/hr	100 cpm/mR/hr
RIA-6 High Range	G-M Ion Chamber	Spent Fuel Building Wall Unit 1&2, Unit 3	1E-1 to 1E4 mR/hr 1E2 to 1E7 mR/hr	100 cpm/mR/hr 1.2E-10 A/R/hr
RIA-7	G-M	Hot Machine Shop	1E-1 to 1E4 mR/hr	100 cpm/mR/hr
RIA-8	G-M	Hot Laboratory	1E-1 to 1E4 mR/hr	100 cpm/mR/hr
RIA-10	G-M	Sample Area Unit 1, 2, 3	1E-1 to 1E4 mR/hr	100 cpm/mR/hr

Security Related Information

Table withheld Under 10 CFR 2.390

