

TABLE 4.1.2

FREQUENCIES FOR SAMPLING TESTS

	<u>Check</u>	<u>Frequency</u>	<u>Maximum Time Between Tests</u>
1. Reactor Coolant Samples	- Gross Activity (1) - Radiochemical (2) - Radiochemical for E Determination - Isotopic Analysis for Dose Equivalent I-131 Concentration - Isotopic Analysis for Iodine Includ- ing I-131, I-133 and I-135 - Tritium Activity - Cl & O ₂	Minimum 1 Per 72 hrs. Monthly 1 per 6 mos. (6)(7) 1 per 14 days (7) a) Once per 4 hours (8) b) One sample (9) Weekly 5 day/week	3 days 45 days 6 months 14 days 10 days 3 days
2. Reactor Coolant Boron	Boron concentration	Twice/week	5 days
3. Refueling Water Storage Tank Water Sample	Boron concentration	Weekly	10 days
4. Boric Acid Tank	Boron concentration	Twice/week	5 days
5. Spray Additive Tank	NaOH concentration	Monthly	45 days
6. Accumulator	Boron concentration	Monthly	45 days
7. Spent Fuel Pit	Boron concentration	Prior to Refueling or New Fuel Movement in the Spent Fuel Pit	NA*
8. Secondary Coolant	Gross activity Isotopic Analysis for Dose Equivalent I-131 Concentration	Minimum 1 Per 72 hrs. a) 1 per 31 days (10) b) 1 per 6 months (11)	3 days
9. Stack Gas Iodine & Particulate Samples	I-131 and particulate radioactivity releases	Weekly (3)	10 days
10. Steam Generator Samples	Primary to secondary tube leakage	5 days/week	3 days

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5.3 REACTOR

5.3.1 REACTOR CORE

5.3.1.1 The reactor core contains approximately 68 metric tons of uranium in the form of natural or slightly enriched uranium dioxide pellets. The pellets are encapsulated in Zircaloy-4 tubing to form fuel rods which are all pre-pressurized. The reactor core is made up of 157 fuel assemblies. Each fuel assembly contains 204 fuel rod locations occupied by rods consisting of natural or slightly enriched uranium pellets, solid inert materials, or a combination of the aforementioned.⁽¹⁾

5.3.1.2 Deleted

5.3.1.3 Reload fuel will be similar in physical design to the initial core. The enrichment of reload fuel will be no more than 3.9 weight percent of U-235.

5.3.1.4 Deleted

5.3.1.5 There are 45 full-length RCC assemblies in the reactor core. The full-length RCC assemblies contain 144-inch segments of silver-indium-cadmium alloy clad with stainless steel.⁽²⁾

5.3.1.6 Up to 10 grams of enriched fissionable material may be used either in the core, or available on the plant site, in the form of fabricated neutron flux detectors for the purposes of monitoring core neutron flux.

5.3.2 REACTOR COOLANT SYSTEM

5.3.2.1 The design of the Reactor Coolant System complies with the code requirements.⁽³⁾

5.4 FUEL STORAGE

5.4.1 SPENT FUEL PIT

The new and spent fuel pit structures are designed to withstand the anticipated earthquake loadings as Class I structures. The spent fuel pit has a stainless steel liner to ensure against loss of water. (1)

5.4.2 CRITICALITY

5.4.2.1 NEW FUEL STORAGE RACKS

Due to the new fuel storage rack design, a nominal 21-inch center-to-center distance is maintained between fuel assemblies. To permit storage of fuel with a maximum assembly axial plane enrichment of 3.9 weight percent U-235, additional separation is maintained by controlling new fuel storage rack locations in order to establish a geometry which assures that k_{eff} is less than 0.95 assuming the new fuel storage racks are flooded with unborated water and which assures that k_{eff} is less than 0.98 in an optimum moderation event.

5.4.2.2 SPENT FUEL STORAGE PIT

A combination of nominal assembly spacing and neutron absorbent material between stored assemblies is maintained to ensure that k_{eff} is less than 0.95 when flooded with unborated water based on a maximum assembly axial plane enrichment of 3.9 weight percent U-235.

5.4.3 BORON CONCENTRATION - SPENT FUEL STORAGE PIT

The spent fuel storage pit is filled with borated water at a concentration of greater than or equal to 1500 ppm during refueling operations or new fuel movement in the spent fuel storage pit. This minimum boron concentration ensures subcriticality under worst case design events.

5.4.4 STORAGE CAPACITY - SPENT FUEL STORAGE PIT

The spent fuel storage pit provides a storage location for 544 fuel assemblies.

Reference

- (1) FSAR Section 9.1