a. In accordance with the code requirements specified in Section 4.1 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,

b. For a pressure of 2485 psig, and

c. For a temperature of 650°F, except for the pressurizer which is 680°F.

VOLUME

5.4.2 The total water and steam volume of the reactor coolant system is 12,446 ± 426 cubic feet at a nominal Tavg of 573°F.

5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-1.

5.6 FUEL STORAGE

CRITICALITY

5.6.1.1 The new fuel storage racks are designed and shall be maintained with:

a. A maximum K_{eff} equivalent of 0.95 with the storage racks flooded with unborated water.

b. A nominal 21.0 inch center-to-center distance between fuel assemblies.

INSERT 1 →

~~c. A maximum unirradiated fuel assembly enrichment of 4.5 w/o U-235.~~

INSERT 2 →

5.6.1.2 The spent fuel storage racks are designed and shall be maintained with:

a. A maximum K_{eff} equivalent of 0.95 with the storage racks filled with unborated water.

b. A nominal 10.5 inch center-to-center distance between fuel assemblies stored in Region 1 (flux trap type) racks.

c. A nominal 9.05 inch center-to-center distance between fuel assemblies stored in Region 2 (non-flux trap) racks.

d. Fuel assemblies stored in Region 1 racks shall meet one of the following storage constraints.

1. Unirradiated fuel assemblies with a maximum enrichment of 4.25 w/o U-235 have unrestricted storage.

2. Unirradiated fuel assemblies with enrichments greater than 4.25 w/o U-235 and less than or equal to 5.0 w/o U-235, that do not contain Integral Fuel Burnable Absorber (IFBA) pins, may only be stored in the peripheral cells facing the concrete wall.

3. Unirradiated fuel assemblies with enrichments (E) greater than 4.25 w/o U-235 and less than or equal to 5.0 w/o U-235, ~~that contain IFBA rods with a nominal 2.35 mg B-10/linear inch loading, and a number of IFBA rods equal to or greater than the number determined by the equation below, have unrestricted storage.~~

INSERT 3

~~N = 42.67 (E-4.25)~~

4. Irradiated fuel assemblies with enrichments (E) greater than 4.25 w/o U-235 and less than or equal to 5.0 w/o, that have attained the minimum burnup (BU) as determined by the equation below, have unrestricted storage.

BU (MWD/kg U) = -26.212 + 6.1677E

a. Fuel assemblies stored in Region 2 racks shall meet one of the following storage constraints.

1. Unirradiated fuel assemblies with a maximum enrichment of 5.0 w/o U-235 may be stored in a checkerboard pattern with intermediate cells containing only water or non-fissile bearing material.

2. Unirradiated fuel assemblies with a maximum enrichment (E) of 5.0 w/o U-235 may be stored in the central cell of any 3x3 array of cells provided the surrounding eight cells are empty or contain fuel assemblies that have attained the minimum burnup (BU) as determined by the equation below.

BU (MWD/kg U) = $-15.48 + 17.80E - 0.7038E^2$

In this configuration, none of the nine cells in any 3x3 array shall be common to cells in any other similar 3x3 array. Along the rack periphery, the concrete wall is equivalent to 3 outer cells in a 3x3 array.

3. Irradiated fuel assemblies with a maximum enrichment (E) of 5.0 w/o U-235 that have attained the minimum burnup (BU) as determined by the equation below, have unrestricted storage.

BU (MWD/kg U) = $-32.06 + 25.21E - 3.723E^2 + 0.3535E^3$

4. Irradiated fuel assemblies with a maximum enrichment (E) of 5.0 w/o U-235 that have attained the minimum burnup (BU) as determined by the equation below, may be stored in a peripheral cell facing the concrete wall.

BU (MWD/kg U) = $-25.06 + 15.14E - 0.602E^2$

5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-1.

5.6 FUEL STORAGE

CRITICALITY

5.6.1.1 The new fuel storage racks are designed and shall be maintained with:

a. A maximum K_{eff} equivalent of equal to 0.95 with the storage racks flooded with unborated water.

b. A nominal 21.0 inch center-to-center distance between fuel assemblies.

INSERT 1 → ~~c. A maximum unirradiated fuel assembly enrichment of 4.5 w/o U-235.~~

INSERT 2 →

5.6.1.2 The spent fuel storage racks are designed and shall be maintained with:

a. A maximum Keff equivalent of 0.95 with the storage racks filled with unborated water.

b. A nominal 10.5 inch center-to-center distance between fuel assemblies stored in Region 1 (flux trap type) racks.

c. A nominal 9.05 inch center-to-center distance between fuel assemblies stored in Region 2 (non-flux trap) racks.

d. Fuel assemblies stored in Region 1 racks shall meet one of the following storage constraints.

1. Unirradiated fuel assemblies with a maximum enrichment of 4.25 w/o U-235 have unrestricted storage.

2. Unirradiated fuel assemblies with enrichments greater than 4.25 w/o U-235 and less than or equal to 5.0 w/o U-235, that do not contain Integral Fuel Burnable Absorber (IFBA) pins, may only be stored in the peripheral cells facing the concrete wall.

3. Unirradiated fuel assemblies with enrichments (E) greater than 4.25 w/o U-235 and less than or equal to 5.0 w/o U-235, ~~that contain IFBA rods with a nominal 2.35 mg B-10/linear inch loading, and a number of IFBA rods equal to or greater than the number determined by the equation below, have unrestricted storage.~~

INSERT 3 →

~~N = 42.67 (E-4.25)~~

Document Control Desk
Attachment 4

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LCR S98-017

TECHNICAL SPECIFICATION CHANGE REQUEST
PERMISSIBLE ENRICHMENT VALUES FOR NEW FUEL STORAGE
SALEM GENERATING STATION
FACILITY OPERATING LICENSES DPR-70 AND DRP-75
DOCKET NOS. 50-272 AND 50-311

CRITICALITY ANALYSIS OF SALEM UNITS 1 AND 2 FRESH FUEL RACKS