

- (4) EOI, pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) EOI, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) EOI, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed license shall be deemed to contain and is subject to conditions specified in the following Commission regulations in 10 CFR Chapter 1; Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

EOI is authorized to operate the facility at steady state reactor core power levels not in excess of 3026 megawatts thermal. Prior to attaining this power level EOI shall comply with the conditions in Paragraph 2.C.(3).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 273 are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications.

Exemptive 2nd paragraph of 2.C.2 deleted per Amendment 20, 3/3/81.

(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following issuance of the renewed license or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the renewed license supported by a favorable evaluation by the Commission.

2.C.(3)(a) Deleted per Amendment 24, 6/19/81.

REFUELING OPERATIONS

FUEL STORAGE

LIMITING CONDITION FOR OPERATION

- 3.9.12.a Storage in the spent fuel pool shall be restricted to fuel assemblies having initial enrichment less than or equal to 4.95 w/o U-235. The provisions of Specification 3.0.3 are not applicable.
- 3.9.12.b Storage in the spent fuel pool shall be further restricted by the limits specified in Table 3.9-1. The provisions of Specification 3.0.3 are not applicable.
- 3.9.12.c The boron concentration in the spent fuel pool shall be maintained (at all times) at greater than 2000 parts per million.

APPLICABILITY: During storage of fuel in the spent fuel pool

ACTION:

Suspend all actions involving the movement of fuel in the spent fuel pool if it is determined a fuel assembly has been placed in an incorrect location until such time as the correct storage location is determined. Move the assembly to its correct location before resumption of any other fuel movement.

Suspend all actions involving the movement of fuel in the spent fuel pool if it is determined the pool boron concentration is less than 2001 ppm, until such time as the boron concentration is increased to 2001 ppm or greater.

SURVEILLANCE REQUIREMENTS

- 4.9.12.a Verify all fuel assemblies to be placed in the spent fuel pool have an initial enrichment of less than or equal to 4.95 w/o U-235 by checking the assemblies' design documentation.
- 4.9.12.b Verify all fuel assemblies to be placed in the spent fuel pool are within the limits of Table 3.9-1 by checking the assemblies' design and burnup documentation.
- 4.9.12.c Verify at least once per 31 days the spent fuel pool boron concentration is greater than 2000 ppm.
- 4.9.12.d Verify Metamic properties are in accordance with, and are maintained within the limits of, the Metamic Coupon Sampling Program.

**Table 3.9-1
SFP Loading Restrictions**

Region 1

No loading restrictions other than U-235 enrichment.

Region 2

Minimum Burnup at Varying Initial U-235 Enrichment and Cooling Time (Notes 1 and 2)

Enrichment (Wt% U-235)	2.0	2.5	3.0	3.5	4.0	4.5	4.95
Cooling Time (Years)	Minimum Burnup (GWD/MTU)						
0	6.4	13.7	21.2	27.9	33.8	40.7	46.8
1	NC	NC	NC	27.1	33.0	39.5	45.8
2	NC	NC	NC	26.7	32.5	38.9	44.8
3	NC	NC	NC	26.5	32.1	38.4	44.3
4	NC	NC	NC	26.2	31.6	38.0	43.7
5	5.9	12.6	19.3	26.1	31.2	37.4	43.1
10	5.7	12.0	18.4	25.3	29.7	35.6	41.1
15	5.6	11.6	18.1	25.0	29.1	34.4	39.7
20	5.4	11.4	17.5	24.3	28.6	34.0	38.9

Region 2

Minimum Burnup versus U-235 Enrichment for Peripheral Cells with Spent Fuel at 0 Years Cooling Time (Note 3)

Enrichment (Wt% U-235)	2.0	2.5	3.0	3.5	4.0	4.5	4.95
Minimum Burnup (GWD/MTU)	0	4.7	9.7	15.0	21.8	27.6	33.3

Rack Interface Allowances

1. Region 1 to Region 2, fresh fuel checkerboard in Region 2 is allowed. Spent fuel in Region 2 is allowed.
2. Region 2 Racks – a fresh fuel checkerboard and uniform spent fuel loading may be placed adjacent to each other in the same rack. If both patterns are placed in a single rack, no fresh fuel assembly may be placed with more than one face adjacent to a spent fuel assembly.
3. Region 2 Racks – if adjacent racks contain a checkerboard of fresh fuel assemblies, the checkerboard must be maintained across the gap, i.e., fresh fuel assemblies may not face each other across a gap.
4. Region 2 Racks – one rack may contain a checkerboard of fresh fuel and empty storage locations and the adjacent rack may contain spent fuel with no loading restrictions.

-
- Notes: 1. Linear interpolation between burnups for a given cooling time is allowed. However, linear interpolation between cooling times is not allowed, therefore the cooling time of a given assembly must be rounded down to the nearest cooling time.
2. NC = Not Calculated, if any fuel assembly is within these limits, use 0 cooling time and interpolate for enrichments to determine loading restrictions per note 1.
3. Linear interpolation between burnups is allowed.

DESIGN FEATURES

5.3 Fuel Storage

5.3.1 Spent Fuel Storage Rack Criticality

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

- a. Fuel assemblies stored in the spent fuel pool in accordance with Specification 3.9.12;
- b. $k_{\text{eff}} \leq 0.95$ if fully flooded with 452 ppm borated water, which includes an allowance for uncertainties as described in Section 9.1 of the SAR; and
- c. $k_{\text{eff}} < 1.0$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the SAR; and
- d. A nominal 9.8 inch center to center distance between fuel assemblies placed in the storage racks.

5.3.2 New Fuel Storage Rack Criticality

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

- a. Fuel assemblies having a maximum U-235 enrichment of 4.95 weight percent;
- b. $k_{\text{eff}} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the SAR;
- c. $k_{\text{eff}} \leq 0.98$ if moderated by aqueous foam, which includes an allowance for uncertainties as described in Section 9.1 of the SAR; and
- d. A nominal 26 inch center to center distance between fuel assemblies placed in the storage racks.

5.3.3 Drainage

The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 399' 10½".

5.3.4 Capacity

The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 988 fuel assemblies.

ADMINISTRATIVE CONTROLS

6.5.17 Metamic Coupon Sampling Program

A coupon surveillance program will be implemented to maintain surveillance of the Metamic absorber material under the radiation, chemical, and thermal environment of the SFP. The purpose of the program is to establish the following:

- Coupons will be examined on a two year basis for the first three intervals with the first coupon retrieved for inspection being on or before October 31, 2009 and thereafter at increasing intervals over the service life of the inserts.
- Measurements to be performed at each inspection will be as follows:
 - a. Physical observations of the surface appearance to detect pitting, swelling or other degradation,
 - b. Length, width, and thickness measurements to monitor for bulging and swelling
 - c. Weight and density to monitor for material loss, and
 - d. Neutron attenuation to confirm the B-10 concentration or destructive chemical testing to determine the boron content.
- The provisions of SR 3.0.2 are applicable to the Metamic Coupon Sampling Program.
- The provisions of SR 3.0.3 are not applicable to the Metamic Coupon Sampling Program.