NRC DOCKET 50-321
OPERATING LICENSE DPR-57
EDWIN I. HATCH NUCLEAR PLANT UNIT 1
PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

The proposed changes to the Technical Specifications (Appendix A to Operating License DPR-57) would be incorporated as follows:

Remove Page	Insert Page
3.10-5	3.10-5
3.10-7	3.10-7
3.10-9	3.10-9
3.10-10	3.10-10
5.0-1	5.0-1

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4.10.F.3 Monorail Hoist (Continued)

a. The trolley and hoist shall be demonstrated to be operable by a trial lift of the spent fuel pool gate or an equivalent weight.

b. A visual inspection shall be made to insure the structural integrity of the 5-ton monorail hoist.

3.10.G Spent Fuel Cask Lifting Trunnions and Yoke

See note for Specification 3.10.F.1 above.

4.10.G Spent Fuel Cask Lifting Trunnions and Yoke

See note for Specification 4.10.F.1 above.

3.10.H Time Limitation

Irradiated fuel shall not be handled in or above the reactor prior to 24 hours after reactor shutdown.

3.10.I Crane Travel-Spent Fuel Storage Pool

Loads in excess of 1600 pounds shall be prohibited from travel over fuel assemblies in the spent fuel storage racks.

4.10.I Crane Travel-Spent Fuel Storage Pool

Loads, other than fuel assemblies or control rods, shall be verified to be $\leq$ 1600 pounds prior to movement over fuel assemblies in the fuel storage pool racks.

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3.10.A.2. Fuel Grapple Hoist Load Setting Interlocks

Fuel handling is normally conducted with the fuel grapple hoist. The total load on this hoist when the interlock is required consists of the weight of the fuel grapple and the fuel assembly. This total is approximately 1500 lbs. in comparison to the load setting of 485 ± 30 lbs.

3. Auxiliary Hoists Load Setting Interlock

Provisions have also been made to allow fuel handling with either of the three auxiliary hoists and still maintain the refueling interlocks. The 485 ± 30 lb. load setting of these hoists is adequate to trip the interlock when a fuel bundle is being handled.

B. Fuel Loading

To minimize the possibility of loading fuel into a cell containing no control rod, it is required that all control rods are fully inserted when fuel is being loaded into the reactor core. This requirement assures that during refueling the refueling interlocks, as designed, will prevent inadvertent criticality.

C. Core Monitoring During Core Alterations

The SRM's are provided to monitor the core during periods of Unit shutdown and to guide the operator during refueling operations and Unit startup. Requiring two operable SRM's in or adjacent to any core quadrant where fuel or control rods are being moved assures adequate monitoring of that quadrant during such alterations. The requirements of 3 counts per second provides assurance that neutron flux is being monitored.

During sprial unloading, it is not necessary to maintain 3 cps because core alterations will involve only reactivity removal and will not result in criticality.

The loading of diagonally adjacent bundles around the SRM's before attaining the 3 cps is permissible because these bundles were in a subcritical configuration when they were removed and therefore they will remain subcritical when placed back in their previous positions.

D. Spent Fuel Pool Water Level

The design of the spent fuel storage pool provides a storage location for 3181 fuel assemblies in the reactor building which ensures adequate shielding, cooling, and reactivity control of irradiated fuel. An analysis has been performed which shows that a water level at or in excess of eight and one-half feet over the top of the active fuel will provide shielding such that the maximum calculated radiological doses do not exceed the limits of 10CFR20. The normal water level provides 14-1/2 feet of additional water shielding. All penetrations of the fuel pool have been installed at such a height that their presence does not provide a possible drainage route that could lower the water level to less than 10 feet above the top of the active fuel. Lines extending below this level are equipped with two check valves in series to prevent inadvertent pool drainage.

E. Control Rod Drive Maintenance

During certain periods, it is desirable to perform maintenance on two control rod drives at the same time.

3.10.H Time Limitation

The radiological consequences of a fuel handling accident are based upon the accident occurring at least 24 hours after reactor shutdown.

3.10.I Crane Travel-Spent Fuel Storage Pool

A maximum weight of 1600 pounds shall be permitted to be transported over stored spent fuel in order to minimize the consequences of a load handling accident.

3.10.J References

1. FSAR Section 7.6, Refueling Interlocks

2. FSAR Section 7.5, Neutron Monitoring System

3. Morgan, W. R., "In-Core Neutron Monitoring System for General Electric Boiling Water Reactors," General Electric Company, Atomic Power Equipment Department, November 1968, revised April 1969 (APED-5706)

4. FSAR Section 10.3, Spent Fuel Storage

5. FSAR Section 3.6.5.2, Reactivity Control

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4.10. REFUELING

A. Refueling Interlocks

Complete functional testing of all refueling interlocks before any refueling outage will provide positive indication that the interlocks operate in the situations for which they were designed. By loading each hoist with a weight equal to the fuel assembly, positioning the refueling platform, and withdrawing control rods, the interlocks can be subjected to valid operational tests. Where redundancy is provided in the logic circuitry, tests can be performed to assure that each redundant logic element can independently perform its functions.

C. Core Monitoring During Core Alterations

Requiring the SRM's to be functionally tested prior to any core alteration assures that the SRM's will be operable at the start of that alteration. The daily response check of the SRM's ensures their continued operability.

D. Spent Fuel Pool Water Level

A daily record of the Spent Fuel Pool Water Level to determine that the minimum of 8.5 feet is not exceeded is considered sufficient to ensure that radiological shielding is maintained.

E. Control Rod Drive Maintenance

Refueling interlocks and core monitoring surveillance are discussed in 4.10.A and 4.10.C above. The choice of the strongest (highest reactivity worth) rod which will be used for a determination of the relevant shutdown margins is based on prior core calculations supplemented by empirical data obtained from similar cores. From similar data and calculations the reactivity worth of rods adjacent to a withdrawn rod will also be known. Thus the surveillance shutdown margins can be evaluated in terms of rod position.

F. Reactor Building Cranes

Modifications to the main reactor building crane are being studied in order to increase its ability to withstand a single failure. A spent fuel cask will not be lifted until these modifications have been accepted by the AEC and the AEC has approved the lifting of casks by the crane and the appropriate Technical Specifications.

G. Spent Fuel Cask Lifting Trunnions and Yoke

See note for Bases 4.10.F above.

I. Crane Travel-Spent Fuel Storage Pool

Refer to Bases 3.10.I.

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5.0 MAJOR DESIGN FEATURES

A. Site

Edwin I. Hatch Nuclear Plant Unit No. 1 is located on a site of about 2244 acres, which is owned by Georgia Power Company, on the south side of the Altamaha River in Appling County near Baxley, Georgia. The Universal Transverse Mercator Coordinates of the center of the reactor building are: Zone 17R LF 372,935.2m E and 3,533,765.2m N.

B. Reactor Core

1. Fuel Assemblies

The core shall consist of not more than 560 fuel assemblies of the licensed combination of 7x7 bundles which contain 49 fuel rods and 8x8 fuel bundles which contain 62 or 63 fuel rods each.

2. Control Rods

The reactor shall contain 137 cruciform-shaped control rods. The control material shall be boron carbide powder (B_4C) compacted to approximately 70% of its theoretical density.

C. Reactor Vessel

The reactor vessel is described in Table 4.2-2 of the FSAR. The applicable design specifications shall be as listed in Table 4.2-1 of the FSAR.

D. Containment

1. Primary Containment

The principal design parameters and characteristics of the primary containment shall be as given in Table 5.2-1 of the FSAR.

2. Secondary Containment

The secondary containment shall be as described in Section 5.3.3.1 of the FSAR and the applicable codes shall be as given in Section 12.4.4 of the FSAR.

3. Primary Containment Penetrations

Penetrations to the primary containment and piping passing through such penetrations shall be designed in accordance with standards set forth in Section 5.2.3.4 of the FSAR.

E. Fuel Storage

1. Spent Fuel

All arrangements of fuel in the spent fuel storage racks shall be maintained in a subcritical configuration having a k_{eff} not greater than 0.95.

2. New Fuel

The new fuel storage vault shall be such that the k_{eff} dry shall not be greater than 0.90 and the k_{eff} flooded shall not be greater than 0.95.

NRC DOCKET 50-366
OPERATING LICENSE NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNIT 2
PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

The proposed changes to the Technical Specifications (Appendix A to Operating License NPF-5) would be incorporated as follows:

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5-4	5-4

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DRAINAGE

5.6.2 The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 185 feet.

CAPACITY

5.6.3 The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 2845 fuel assemblies.

5.7 COMPONENT CYCLIC OR TRANSIENT LIMIT

5.7.1 The components identified in Table 5.7.1-1 are designed and shall be maintained within the cyclic or transient limits of Table 5.7.1-1.

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