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APRIL 28 1980

Docket No. 50-293

Mr. G. Carl Andognini
Boston Edison Company
M/C NUCLEAR
800 Boylston Street
Boston, Massachusetts 02199

Dear Mr. Andognini:

By letter dated February 22, 1980, we transmitted Amendment No. 41 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station relating to Multiple Control Rod Removal during Refueling Operations. Certain Technical Specification pages necessary for implementation of Amendment No. 41 were inadvertently omitted.

Please add the enclosed 204A and substitute the enclosed page 205 for the one issued with Amendment No. 41.

Sincerely,

Original signed by

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosure:
T. S. pages
204A and 205

cc w/encl:
See next page

OFFICE	DOR:ORB#3	DOR:ORB#3	DOR:ORB #3			
SURNAME	JHannon:ms	TAIppolito	SNorris			
DATE	4/24/80	4/24/80	4/28/80			

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cc:

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3.10 BASES

B. Core Monitoring

The SRM's are provided to monitor the core during periods of station shutdown and to guide the operator during refueling operations and station 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 requirement of 3 counts per second provides assurance that neutron flux is being monitored and insures that startup is conducted only if the source range flux level is above the minimum assumed in the control rod drop accident.

The limiting conditions for operation of the SRM subsystem of the Neutron Monitoring System are derived from the Station Nuclear Safety Operational Analysis (Appendix G) and a functional analysis of the neutron monitoring system. The specification is based on the Operational Nuclear Safety Requirements in subsection 7.5.10 of the Safety Analysis Report.

A spiral unloading pattern is one by which the fuel in the outermost cells (four fuel bundles surrounding a control blade) is removed first. Unloading continues by removing the remaining outermost fuel cell by cell. The center cell will be the last removed. Spiral loading is the reverse of unloading. Spiral unloading and reloading will preclude the creatic : of flux traps (moderator filled cavities surrounded on all sides by fuel).

During spiral unloading, the SRM's shall have an initial count rate of ≥ 3 cps with all rods fully inserted. The count rate will diminish during fuel removal. Under the special condition of complete spiral core unloading, it is expected that the count rate of the SRM's will drop below 3 cps before all of the fuel is unloaded.

Since there will be no reactivity additions, a lower number of counts will not present a hazard. When all of the fuel has been removed to the spent fuel storage pool, the SRM's will no longer be required. Requiring the SRM's to be operational prior to fuel removal assures that the SRM's are operable and can be relied on even when the count rate may go below 3 cps.

During spiral reload, SRM operability will be verified by using a portable external source every 12 hours until the required amount of fuel is loaded to maintain 3 cps. As an alternative to the above, up to two fuel assemblies will be loaded in different cells containing control blades around each SRM to obtain the required 3 cps. Until these assemblies have been loaded, the 3 cps requirement is not necessary.

C. Spent Fuel Pool Water Level

To assure that there is adequate water to shield and cool the irradiated fuel assemblies stored in the pool, a minimum pool water level is established. The minimum water level of 33 feet is established because it would be a significant change from the normal level (-1 foot) and is well above the level to assure adequate cooling.

D. Multiple Control Rod Removal

These specifications ensure that maintenance or repair of control rods or rod drives will be persormed under conditions that limit the probability of inadvertent criticality. The requirement that the fuel assemblies in the cell controlled by the control rod be removed from the reactor core before the interlock can be bypassed insures that withdrawal of another control rod does not result in inadvertent criticality. Each control rod essentially provides reactivity control for the fuel assemblies in the cell associated with the control rod. Thus, removel of an entire cell (fuel assemblies plus control rod) results in a lower reactivity potential of the core.

4.10 BASES

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.

B. Core Monitoring

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.