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U.S. NUCLEAR REGULATORY COMMISSION
Mail Stop P1-137
Washington, D.C. 20555

10 CFR 50.59

10 CFR 50.90

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
TECHNICAL SPECIFICATION CHANGE REQUEST NO. 141
SECONDARY SOURCE ASSEMBLIES
MINIMUM CONDITIONS FOR CRITICALITY
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

In accordance with the requirements of 10 CFR 50.59(c) and 10 CFR 50.90, Wisconsin Electric Power Company (Licensee) requests an amendment to Facility Operating License DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2 respectively. This amendment request includes proposed changes to the Point Beach Technical Specifications which will clarify the minimum conditions for criticality, Specification 15.3.1.F, and the Reactor Core description, Specification 15.5.3.A. Marked-up copies of the applicable Technical Specification pages containing the changes proposed in this application are attached.

The objective of Technical Specification 15.5.3 is to describe those design features of the reactor core which are essential in providing for safe system operations. Item 15.5.3.A.5 states that neutron source assemblies will be used to provide a required minimum count rate during start-up operations. It further states such assemblies include four source rodlets per assembly containing a mixture of antimony and beryllium. This description was first included in the Technical Specifications with License Amendments 120 and 123, dated May 8, 1989, for Units 1 and 2 respectively.

We believe that the specification of the exact type and number of source assemblies is unnecessary in describing core features. We believe the intent of this specification was to ensure that a minimum count rate is observable on nuclear instrumentation during a reactor start-up. Sufficient nuclear instrumentation counts are normally available from the neutrons emitted by fission product decay in irradiated fuel. Although the magnitude of this source of neutrons decreases with time after irradiation, sufficient neutrons

are emitted to provide an adequate source range count rate such that separate secondary neutron source assemblies are not normally required. This proposed technical specification change would therefore permit, but not require, the use of secondary neutron source assemblies.

In order to meet the intent of the source specifications, a new Limiting Condition for Operations (LCO), 15.3.1.F.3, is being proposed in this amendment request. This LCO states that, "During an approach to criticality, at least one (1) count per second, attributable to neutrons, shall register on a narrow range source range nuclear instrument." This LCO exceeds the guidance of Regulatory Guide (RG) 1.68 "Initial Test Program for Water-Cooled Nuclear Power Plants" which recommends in Appendix A a neutron count rate of at least 1/2 count per second before a start-up commences. The purpose of this LCO is to ensure that the source range instrumentation is functioning so that the plant operators have the means to monitor the subcritical neutron multiplication during the reactor start-up and approach to criticality. An explanation of these reasons for a minimum neutron count rate is also provided as a change to the basis of this specification.

We have evaluated the changes proposed in this amendment application in accordance with the requirements of 10 CFR 50.91(a) using the standards in 10 CFR 50.92 and have determined that the changes do not result in a significant hazards consideration. A proposed amendment does not result in a significant hazards consideration if operation of the facility in accordance with the proposed amendment does not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety.

The addition to the minimum conditions for criticality as present in Specification 15.3.1.F imposes an additional limitation or restriction not presently included in the Technical Specifications. This new LCO requires that a specified minimum neutron count rate register on the nuclear instrumentation so that the plant operators have positive indication of subcritical neutron multiplication during the approach to core criticality. The requirement for this information does not affect the margin of safety, but does decrease the probability that an inadvertent criticality could occur during a reactor start-up, which involves the addition of positive reactivity. With the information provided by the minimum count on the nuclear instrumentation, an accident involving an inadvertent criticality is less likely because of the neutron count information

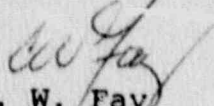
Document Control Desk
October 30, 1990
Page 3

available to the operator. The availability of this information does not create a new or different kind of accident since an inadvertent criticality accident has previously been analyzed as part of the uncontrolled RCCA withdrawal in FSAR Section 14.1.1

The changes to Specification 15.5.3.A.5 revises the description of a reactor core design feature. The specification, as proposed, is revised from requiring at least two neutron source assemblies to a permissive condition of allowing neutron source assemblies to be used in the core. The specification also describes the purpose of the neutron source assemblies. This change, taken by itself, could represent a potential reduction in the margin of safety in that the absence of neutron count rate during a start-up would make it more difficult for an operator to follow subcritical neutron multiplication and predict core criticality. The addition of a new LCO, as discussed above, eliminates the cause for this concern and as discussed in the previous paragraph, probably decreases the probability of an accident previously evaluated. Therefore, one may conclude that these proposed technical specification changes do not constitute a substantial hazards consideration.

If you have any questions regarding this proposed change, please contact us.

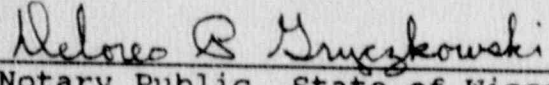
Very truly yours,


C. W. Fay
Vice President
Nuclear Power

Attachments

Copies to NRC Regional Administrator, Region III
NRC Resident Inspector

Subscribed and sworn to before me
this 31st day of October, 1990.


Notary Public, State of Wisconsin

My Commission expires 5-22-94