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SUBJECT: Application for Proposed Amend 74 to License DPR-43, changing Tech Spec re frequency of loading of diesel generators to short-term rating from once each month to once each refueling cycle. Justification encl. Fee paid.

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April 15, 1986

Dr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Proposed Amendment No. 74 to the KNPP Technical Specifications
Diesel Generator Surveillance Testing

This Technical Specification amendment is being submitted to change the frequency of loading the Kewaunee Nuclear Power Plant (KNPP) diesel generators to their short-term rating from once each month to once each refueling cycle. It has come to the attention of Wisconsin Public Service Corporation (WPSC) that the KNPP Technical Specifications reference the incorrect section of IEEE 387-1977 in regards to monthly diesel generator surveillance testing. This incorrect reference has lead to unnecessarily loading the diesel generators to their short-term rating each month, rather than annually as suggested in IEEE 387-1977. Proposed Amendment Number 74 will correct this situation.

WPSC is concerned that frequently loading the diesels in excess of their continuous rating may consume useful service life, without a commensurate increase in the assurance of emergency AC power availability. Your expedient processing of this amendment would be appreciated as the issue at hand has been previously reviewed by the NRC, and their policy is stated in Regulatory Guide 1.108 and IEEE 387-1977; i.e., testing diesel generators at their short-term load rating should be performed annually rather than monthly.

In accordance with the requirements of 10 CFR 50.30, you will find enclosed three (3) signed and notarized originals of this letter and forty (40) copies of the revisions to the page affected by Proposed Amendment 74. A complete copy of this submittal has been transmitted to the State of Wisconsin as required by 10 CFR 50.91(b)(1). In accordance with the provisions of 10 CFR 170, a check for $150 is enclosed.

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The discussion of the proposed revisions, safety analyses, and significant hazards determination are included in attachment 1 along with the affected Technical Specification pages.

Sincerely,

E. R. Mathews for
Carl W. Giesler
Vice President - Power Production

GWH/jms

Enc.

cc - Mr. G. E. Lear, US NRC
Mr. Robert Nelson, US NRC
Mr. R. S. Cullen, PSCW

Subscribed and Sworn to
Before Me This 15th Day
of April 1986

Jeanne M. Stein
Notary Public, State of Wisconsin

My Commission Expires:
June 28, 1987

ENCLOSURE 1

Description of Proposed Change, Safety Evaluation,
and Significant Hazards Determination for
Proposed Amendment No. 74

Surveillance of Diesel Generators
C. W. Giesler to H. R. Denton
April 15, 1986

Description of Proposed Change, Technical Specification 4.6.a.1

Technical Specification 4.6.a.1, monthly diesel generator surveillance, has been revised to indicate the load (at least 2600 KW) and duration (at least 1 hour) for the monthly surveillance. Also, the reference to IEEE 387-1977 paragraphs 6.4.1 and 6.4.3 has been removed. Technical Specification 4.6.a.1 was revised to develop consistency with IEEE 387-1977 paragraph 6.6.1, this is noted in the revised basis for Technical Specification 4.6.a.1.

Safety Evaluation, Technical Specification 4.6.a.1

This Technical Specification revision will increase reliability of the Kewaunee Nuclear Plant diesel generators by requiring the 2-hour run at the short-term rating (approximately 112% continuous load at Kewaunee) every operating cycle, not to exceed 18 months, rather than the present frequency of each month.

The current reference in Technical Specification 4.6.a.1 to IEEE 387-1977, paragraphs 6.4.1 and 6.4.3 is evidently in error, as these two paragraphs are definitions of tests, not an explanation of a monthly surveillance program, as is paragraph 6.6.1.

Paragraph 6.4.1, IEEE 387-1977 describes the 'Starting Test' which is part of the test described in paragraph 6.6.1 to demonstrate operability of a diesel generator on a monthly basis. Paragraph 6.4.3 is a description of the 'Rated Load Test' which IEEE 387-1977 suggests performing as a 'Site Acceptance Test' (paragraph 6.5) and as an '(annual) Operational Test'

(paragraph 6.6.2). Site acceptance tests and annual surveillances are generally more rigorous than monthly surveillances and could consume useful service life of diesel generator components if performed on a frequent basis.

Changing to an operating cycle frequency for the short-term rating load test will reduce unnecessary engine and generator wear, increasing longevity; hence, reliability of the diesel generators. Revised Technical Specification 4.6.a.1 will also assure, monthly, that the diesel generators are operable through the requirements to start the diesel generators and load them to their continuous rating for a period of time sufficient to establish equilibrium operating conditions.

This Technical Specification revision will increase safety by reducing diesel engine and generator wear, while maintaining monthly assurance of diesel generator operability.

Significant Hazards Determination, Technical Specification 4.6.a.1

Eliminating the monthly short-term rating load tests will decrease the possibility that a diesel generator will be out of service, during power operation, for engine or generator wear related problems. Operability of the diesel generators will still be demonstrated monthly with the tests indicated in Section 6.6.1 of IEEE 387-1977. The ability of the diesel generators to provide continuous emergency AC power during excess load perturbations; i.e., their short-term rating load test, will be verified annually. Therefore, the overall reliability of the diesel generators will be increased, which decreases the probability of a total loss of AC power

event. The consequences of an event with loss of offsite power, or the consequences of a total loss of AC power remain unchanged.

This Technical Specification amendment increases diesel generator reliability by reducing the rate of wear on the engine and generator. There is no possibility of a new or different kind of accident from any accident previously evaluated occurring as a result of this revision.

In this Technical Specification revision, margins of safety apply to the design safety margins of the diesel generator components such as crankshafts, connecting rods, bearings, bushings, etc. Reducing the frequency of diesel generator operation at loads in excess of continuous rating reduces the amount of time the diesels are operated at less than continuous rating safety margins. A "load-weighted" safety margin could be considered where the safety margin decreases with increasing diesel generator load; this revision increases this "load-weighted" safety margin for each monthly surveillance.

This amendment proposed to the Kewaunee Nuclear Plant Technical Specifications will not:

(1) Involve any increase in the probability or consequences of an accident previously evaluated; or

(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.

Therefore, there are no significant hazards associated with this proposed amendment.

Description of Proposed Change, Technical Specification 4.6.a.5

This specification was added to assure the diesel generator will be loaded for 2 hours at its short-term rating (2950 KW) every operating cycle not to exceed 18 months. Also, to accommodate the new Technical Specification 4.6.a.5, existing Technical Specifications 4.6.a.5 and 4.6.a.6 were renumbered 4.6.a.6 and 4.6.a.7, respectively.

Safety Evaluation, Technical Specification 4.6.a.5

This added surveillance requirement will verify the ability of the diesel generators to assume load in excess of their continuous rating. This will verify that short-term excess load perturbations will not affect the long-term, continuous availability of emergency AC power.

There are no adverse safety implications associated with this revision.

Significant Hazards Determination

This revision assures the short-term rating load test will be performed every refueling interval not to exceed 18 months. The safety evaluation of Technical Specification 4.6.a.1 discussed the appropriateness of annual testing. Separating the short-term rating load test from the monthly surveillance requirements (Technical Specification 4.6.a.1) and including it separately as Technical Specification 4.6.a.5 is administrative as it implements the technical revision made in 4.6.a.1 for which a determination of no significant hazards was previously made.

This revision is administrative and does not involve a significant increase in the probability or consequences of an accident previously evaluated; or create the possibility of a new or different kind of accident from any accident previously evaluated; or involve a significant reduction in a margin of safety.

There are no significant hazards associated with this change as it is administrative in nature. The significant hazards analysis for Technical Specification 4.6.a.1 discusses the substantive revision, changing the diesel generator short-term rating load surveillance test frequency from each month to annually.

Description of Proposed Change Bases for Technical Specification 4.6.a Diesel Generator Surveillance

The bases for Technical Specification 4.6.a were revised to more clearly indicate the basis for each sub-specification under Section 4.6.a. Also, the references to IEEE 387-1977 were put in the bases rather than the Technical Specification. This is appropriate since the Technical Specifications are worded consistently with IEEE 387-1977 including the appropriate values for loading and test duration.

Safety Evaluation Bases Technical Specification 4.6.a

The revised bases aid in interpretation of their respective Technical Specifications and reference applicable background documents.

The Technical Specifications provide for the health and safety of the public, the bases are present to aid in their interpretation and application. Revising the bases to develop consistency with the Technical Specifications does not adversely affect safety.

Significant Hazards Determination Bases Technical Specification 4.6.a

The bases were revised for ease in identifying a basis with an individual specification, and to reference background documents. The bases aid only in interpreting the Technical Specifications and do not change the specification requirements. The revised bases do not involve a significant hazard as they are consistent with the revised Technical Specifications which were shown not to involve any significant hazards.