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ACCESSION NBR: 8712010157 DOC. DATE: 87/11/25 NOTARIZED: NO DOCKET #
 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
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SUBJECT: Application for amends to Licenses DPR-58 & DPR-74, modifying
 surveillance requirements of Tech Spec 3/4.8.1 re diesel
 generator fuel oil testing.

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AEP:NRC:0896H

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
REVISION OF T/S CHANGE REQUEST ON
DIESEL GENERATOR FUEL OIL

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Attn: T. E. Murley

November 25, 1987

Dear Dr. Murley:

Pursuant to discussions with your staff, we are submitting this letter as a change to our previous application for amendment to the Technical Specifications (T/Ss) for the Donald C. Cook Nuclear Plant Units 1 and 2 with regard to diesel generator fuel oil testing. Specifically, we are proposing to modify the surveillance requirements of T/S 3/4.8.1. In our letter AEP:NRC:0896B, dated January 16, 1987, we submitted proposed changes to our diesel generator T/Ss which were intended to maintain and improve diesel generator reliability. During a subsequent conversation, your staff requested that we submit additional changes to address diesel fuel oil surveillance requirements. We attempted to address NRC concerns with regard to diesel fuel oil surveillance requirements, without success, by submitting proposed T/Ss in AEP:NRC:0896F, dated June 25, 1987 and AEP:NRC:0896G, dated September 28, 1987. We are now proposing fuel oil surveillance requirements similar to those approved by the NRC for the McGuire Nuclear Station. Based on the results of a meeting between members of your staff and ours, on November 9, 1987, we understand that the contents of this submittal are consistent with proposed T/S changes that would be acceptable to the Commission.

The major differences between the proposed T/Ss being submitted in this letter and the approved McGuire T/Ss are the tank cleaning requirements. Since emptying the tanks to clean them would require that both units be shut down at the same time, an alternative method of cleaning has been proposed in which the fuel

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oil is agitated in the storage tank while it is being pumped from the bottom of the tank through a filter and back into the opposite end of the tank. This method allows the required amount of fuel oil to be maintained in the storage tank, thereby allowing the diesel generators to remain operable during the cleaning operation. We have not yet developed criteria for determining what constitutes a clean tank. These criteria will be developed after the design of the cleaning system is finalized. At that time, we will propose these criteria along with a schedule for cleaning the tanks. In addition, since the tanks will not be empty during the cleaning, and NFPA standards do not allow pressure testing a tank which contains flammable liquid, we are proposing a leak detection test as an alternative to the pressure test approved for McGuire.

Attachment 3 contains flow diagrams showing the diesel fuel oil tanks and a description of why emptying the tanks to clean them would require a dual unit shutdown.

Currently we are not in a position to perform all the tests proposed in this T/S submittal. We therefore request that the proposed changes not be required until March 1, 1988 or 90 days after the receipt of the T/S amendment, whichever is later.

A detailed description of the proposed changes and our analysis of significant hazards considerations is included in Attachment 1. The proposed revised T/S pages are included in Attachment 2 and are intended to supersede the corresponding T/S pages submitted with AEP:NRC:0896B, AEP:NRC:0896F, and AEP:NRC:0896G. Specifically, pages 3/4 8-3, 3/4 8-4, 3/4 8-5, 3/4 8-5a, B 3/4 8-1, and B 3/4 8-2 are intended to replace pages 3/4 8-3, 3/4 8-4, 3/4 8-5, B 3/4 8-1, and B 3/4 8-2 in the earlier submittals.

We believe that the proposed change will not result in (1) a significant change in the types of effluents or a significant increase in the amounts of any effluent that may be released offsite, or (2) a significant increase in individual or cumulative occupational radiation exposure.

These proposed changes have been reviewed by the Plant Nuclear Safety Review Committee (PNSRC) and the Nuclear Safety and Design Review Committee (NSDRC).

In compliance with the requirements of 10 CFR 50.91(b)(1), copies of this letter and its attachments have been transmitted to Mr. R. C. Callen of the Michigan Public Service Commission and Mr. G. Bruchmann of the Michigan Department of Public Health.

Dr. T. E. Murley

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This submittal supplements our earlier diesel generator T/S submittal; therefore, we have not enclosed an application fee.

This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to ensure its accuracy and completeness prior to signature by the undersigned.

Sincerely,



M. P. Alexich
Vice President

cm

Attachments

cc: John E. Dolan
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - Bridgman
A. B. Davis - Region III

ATTACHMENT 1 TO AEP:NRG:0896H
REASONS AND 10 CFR 50.92 ANALYSIS FOR
CHANGE TO THE
DONALD C. COOK NUCLEAR PLANT UNITS 1 AND 2
TECHNICAL SPECIFICATIONS

1. Revisions to Address NRC Concerns on Fuel Oil Surveillance Requirements

As described in the cover letter, the proposed changes of this letter are similar to those proposed by McGuire. The changes we have made to our proposed T/Ss as submitted in AEP:NRC:0896F are as follows:

1. We have included requirements to perform a flash point test and a clear-and-bright test prior to unloading new fuel oil. The clear-and-bright test replaces the water and sediment test which has been deleted.
2. We have included a requirement to analyze the storage tank sample taken once every 31 days to verify that the total particulate contamination is less than 10 mg/liter when tested in accordance with ASTM D2276-83, Method A.
3. We have included a requirement to either drain and clean the storage tanks or use an agitation-filtering method of cleaning at least once every 10 years.
4. We have included a requirement to perform a precision leak-detection test every 10 years to verify that the leakage rate from the fuel oil system is less than or equal to 0.05 gallons per hour in accordance with the requirements of NFPA (National Fire Protection Association)-329. As described in Section 4-3.11 of NFPA-329, the precision test takes into consideration the temperature coefficient of expansion of the product being tested as related to any temperature change during the test and is capable of detecting a loss of 0.05 gallons per hour. The test procedure should be based upon fundamentally sound principles, and the test should account for all variables that will affect the determination of leak rate.
5. We have deleted the requirements that the API gravity and the viscosity tests be performed on the storage tank oil every 31 days.
6. We have included an option to measure Saybolt viscosity as an alternative to the kinematic viscosity if the gravity was not determined by comparison with the supplier's certification.
7. We have included an option to measure absolute specific gravity as an alternative to the API gravity. We have also included the option of comparing either the API gravity or absolute specific gravity to the supplier's certificate.

8. We have included the option of analyzing for sulfur content in accordance with ASTM D2622-82.
9. We have revised the Bases to reflect changes made to the surveillance requirements.

The following is a comparison between the requirements proposed in this submittal with the requirements in our currently approved T/Ss, the T/Ss submitted in AEP:NRC:0896F, and the NRC-approved McGuire T/Ss.

Our current T/Ss include only requirements to perform viscosity and water and sediment tests on a storage tank sample once every 31 days for Unit 1 and once every 92 days for Unit 2. The proposed T/Ss in this submittal contain many requirements not included in the current T/Ss; however, none of these current requirements are included in the proposed T/Ss of this submittal.

The differences between the proposed T/Ss of this submittal and those in AEP:NRC:0896F are described above in Items 1-9.

The differences between the proposed T/Ss of this submittal and the McGuire T/Ss are as follows:

1. API Gravity Test

Our proposed T/Ss give a tolerance for the API gravity of between 30 and 40 degrees, while the McGuire T/Ss give a tolerance of between 27 and 39 degrees. The diesel engines at McGuire and D. C. Cook were made by different manufacturers. The 30 to 40 degree range proposed in our T/S is consistent with the range suggested by the manufacturer (Worthington) of our diesel engines. This difference is also reflected in the absolute specific gravity numbers.

2. Tank Cleaning

The tank cleaning process has been modified from that proposed by McGuire because emptying the storage tanks would require shutting down both units. We have proposed an agitation-filtering method of cleaning which in principal appears to be acceptable to NRC staff. Design of the cleaning system has yet to be finalized. We will submit the details of our final design along with acceptance criteria and a schedule for cleaning the tanks once the final design has been developed. At that time, we will seek final NRC approval of our cleaning method. We have also proposed an

alternative to the pressure test done by McGuire. NFPA-329 does not allow pressure testing a tank containing flammable liquid. We have therefore proposed a precision leak detection test to serve as an alternative.

3. Bases Differences

We have included a Bases section which specifies the actions to be taken if any of the fuel oil properties are found to be outside allowable limits.

Analysis of Significant Hazards

Per 10 CFR 50.92, a proposed amendment will involve no significant hazards considerations if the amendment does not:

- (1) involve a significant increase in the probability or consequences of an accident previously analyzed,
- (2) create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated, or
- (3) involve a significant reduction in a margin of safety.

Our evaluation of the proposed change with respect to these criteria is provided below.

Criterion 1

The NRC staff has indicated that it would be acceptable if we proposed surveillance requirements for the diesel fuel oil surveillances which were consistent with the approved McGuire T/Ss. We are proposing requirements which are similar to the McGuire T/Ss except for the API gravity requirement and the tank cleaning requirement. We have modified the API gravity requirement to incorporate our diesel engine manufacturer's recommendation. We have proposed an alternative to the tank cleaning which, in principle, appears to be acceptable to your staff. Our proposed action, to bring the out-of-spec fuel oil property back to within specification as soon as possible rather than declare the diesel generators inoperable, should not significantly impact the ability of the diesel generators to operate properly during the short term. We therefore believe that this change will not involve a significant increase in the probability or consequences of an accident previously analyzed.

Criterion 2

The requested change will not result in a change in plant configuration or operation. Therefore, this change will not create the possibility of a new or different accident from any accident previously analyzed or evaluated.

Criterion 3

We believe that the requested change will not result in a significant reduction in the margin of safety for the reasons given in Criteria 1 above.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments not likely to involve significant hazards consideration. The sixth of these examples refers to changes which may result in some increase in the probability of occurrence or consequences of a previously analyzed accident, but the results of which are clearly within limits established as acceptable. We believe that this change is clearly within acceptable limits, since similar changes have been approved for McGuire and members of the NRC staff have informed us that the requirements approved for McGuire would be acceptable for the Donald C. Cook Nuclear Plant. Based on the above, we believe that this change does not involve a significant hazards consideration as defined in 10 CFR 50.92.

2. Editorial Change

In AEP:NRC:0896F, we inserted an additional surveillance section; therefore, what was originally Section 4.8.1.1.2.d became Section 4.8.1.1.2.e. This was not accounted for in Section 4.8.1.1.e.7. We are therefore proposing that the phrase in Section 4.8.1.1.e.7 be corrected to reflect the change from Section d to Section e.

Analysis of Significant Hazards for Editorial Change

Per 10 CFR 50.92, a proposed amendment will involve no significant hazards considerations if the amendment does not:

- (1) involve a significant increase in the probability or consequences of an accident previously analyzed,
- (2) create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated, or
- (3) involve a significant reduction in a margin of safety.

Our evaluation of the proposed change with respect to these criteria is provided below.

Criterion 1

These proposed change is purely administrative in nature and is intended to correct an error in our earlier T/S change request submittal. Therefore, we believe this change does not involve a significant

increase in the probability or consequences of a previously analyzed accident.

Criterion 2

Since the proposed change is administrative and introduce no new operating conditions or plant configurations, we believe that this change will not create the possibility of a new or different kind of accident from any previously analyzed or evaluated.

Criterion 3

For the reasons cited in Criterion 1 above, we believe that the proposed change will not result in a significant reduction in a margin of safety.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples of amendments not likely to involve significant hazards considerations. The first example is that of a purely administrative change to the T/Ss: for example, a change to achieve consistency throughout the T/Ss, correction of an error, or change in nomenclature. We believe that the change requested above is of the type specified in this example, since it is intended to correct an error in an earlier T/S change request submittal. Therefore, we believe this change will involve no significant hazards considerations are defined in 10 CFR 50.92.

3. Additional Change

The footnote on page 3/4 8-3 proposed in AEP:NRC:0896B differs between Units 1 and 2. We intended to propose the Unit 1 footnote for both Units 1 and 2; however, due to an error, a portion of the footnote was omitted on the proposed Unit 2 page. We are now proposing that the footnote in the Unit 2 T/Ss be changed to agree with the Unit 1 footnote. Our justification for the Unit 2 change is the same as that proposed for Unit 1 in AEP:NRC:0896B (i.e., we believe compensatory starts were intended to be included in the reduction of fast starts, and therefore this change is merely an editorial change for clarity.

Analysis of Significant Hazards for Additional Change

Per 10 CFR 50.92, a proposed amendment will involve no significant hazards considerations if the amendment does not:

- (1) involve a significant increase in the probability or consequences of an accident previously analyzed,
- (2) create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated, or

- (3) involve a significant reduction in a margin of safety.

Our evaluation of the proposed change with respect to these criteria is provided below.

Criterion 1

As stated above, we believe this change is an editorial change; therefore, we believe this change will not involve a significant increase in the probability or consequences of a previously analyzed accident.

Criterion 2

Since the proposed change is administrative and introduce no new operating conditions or plant configurations, we believe that this change will not create the possibility of a new or different kind of accident from any previously analyzed or evaluated.

Criterion 3

For the reasons cited in Criterion 1 above, we believe that the proposed change will not result in a significant reduction in a margin of safety.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples of amendments not likely to involve significant hazards considerations. The first example is that of a purely administrative change to the T/Ss: for example, a change to achieve consistency throughout the T/Ss, correction of an error, or change in nomenclature. We believe that the change requested above is of the type specified in this example, since it is an editorial change intended to achieve consistency between the Unit 1 and 2 T/Ss. Therefore, we believe that this change will involve no significant hazards considerations as defined in 10 CFR 50.92.