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50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
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SUBJECT: Application for amends to Licenses DPR-58 & DPR-74,changing min volume for diesel generator fuel storage sys.

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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 MINIMUM REQUIRED VOLUME FOR DIESEL GENERATOR
FUEL STORAGE SYSTEM

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

Attn: T. E. Murley

November 28, 1989

Dear Dr. Murley:

This letter constitutes an application for amendment to the Technical Specifications for the Donald C. Cook Nuclear Plant Units 1 and 2. Specifically, we are proposing to change the required minimum volume of the diesel generator fuel storage tanks from 42,000 gallons of fuel to 46,000 gallons of fuel. We are also clarifying the T/S such that the 46,000 gallons is specified as an indicated volume. The reasons for the changes and our analysis concerning significant hazards are included in Attachment 1 of this letter. Attachment 2 contains the proposed revised Technical Specification pages.

We believe the proposed changes 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 and by the Nuclear Safety and Design Review Committee.

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 to the Michigan Department of Public Health.

A001
1/1

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

ldp

Attachments

cc: D. H. Williams, Jr.
A. A. Blind - Bridgman
R. C. Callen
G. Charnoff
A. B. Davis - Region III
NRC Resident Inspector - Bridgman
NFEM Section Chief

ATTACHMENT 1 TO AEP:NRC:0896K

REASONS AND 10 CFR 50.92

SIGNIFICANT HAZARDS EVALUATION

FOR CHANGES TO TECHNICAL SPECIFICATIONS

FOR THE DONALD C. COOK NUCLEAR PLANT UNITS 1 AND 2

Introduction

In this Technical Specification (T/S) application, we propose to change the required minimum volume of the diesel generator fuel storage tanks. Specifically, we are proposing changes to Specifications 3.8.1.1.b.2 and 3.8.1.2.b.2 that would increase the required minimum volume of the storage tanks from 42,000 gallons of fuel oil to 46,000 gallons of fuel oil. We are also clarifying the T/S such that the 46,000 gallon minimum is specified as an indicated volume.

Background

Information Notice 89-50 alerted licensees to the possibility that the T/S requirements for minimum volume of diesel generator fuel oil may not be sufficient. The information notice referenced Regulatory Guide 1.137 (Fuel Oil Systems for Standby Diesel Generators) for guidance in calculating the minimum required volume.

ANSI N195-1976, which is referenced by Regulatory Guide 1.137, requires that sufficient on-site oil storage be provided to operate the required number of diesel generators for either seven days or for the time required to replenish the oil from sources outside the plant site following a design basis event or accident without interrupting the operation of the diesels, whichever is longer. Regulatory Guide 1.137 and ANSI N195-1976 provide two methods for calculating fuel oil storage requirements. The first alternative accounts for the variation of loads placed on the diesel generator during the seven-day period (i.e., the load history). If this alternative is chosen, a margin of 10% must be added to the calculated storage requirement. In the second alternative, which is the recommended one, it is conservatively assumed that the diesel operates continuously for seven days at its rated capacity. At the Cook Nuclear Plant, we have employed the second alternative in determining our required minimum volume for the fuel storage tanks. The calculations are based on seven days of operation, since we believe this to be the more limiting of the requirements for the Cook Nuclear Plant.

Reasons For Change

As per Information Notice 89-50, we have recently updated our calculation for determining fuel oil storage requirements. In our calculations we used the second (recommended) alternative of Regulatory Guide 1.137, i.e., we assumed the diesel is operated at rated capacity for seven days. Our calculations showed that the

seven-day consumption rate was 43,240 gallons. This value is slightly above the current T/S-required minimum volume which was based on our earlier calculations. We are proposing to increase the required minimum volume to 46,000 gallons and to clarify that this is an "indicated" volume. The physical characteristics of the tank are such that not all of the volume of the tank is accessible. The bottom of the outlet pipe is located approximately six inches from the bottom of the tank. Additionally, the tanks are installed with a slight downward slope. One method of determining tank volume is with a depth stick, which is inserted towards the deep end of the tank. The difference between the minimum calculated fuel that is necessary for seven days operation and our proposed T/S minimum indicated quantity of 46,000 gallons provides ample margin to account for these tank characteristics.

It is noted that even though the T/S requirement was slightly non-conservative with respect to the calculated seven-day requirements, we procedurally require that at least 46,000 gallons of fuel oil be maintained in the tanks. Historically, we have maintained the tank volume above 50,000 gallons. Our practice has been to "top off" the tanks whenever they reach approximately 50,000 gallons.

Justification For Change

The proposed minimum indicated tank volume of 46,000 gallons is conservative with respect to our current calculations and is more restrictive than our current T/S requirement of 42,000 gallons.

Analysis of Significant Hazards

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if 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 analyzed or evaluated, or

3) Involve a significant reduction in a margin of safety.

Criterion 1

The basis for determining fuel oil storage requirements is defined in ANSI N195-1976 and Regulatory Guide 1.137. Since our proposed T/S value is conservative with respect to our calculations performed in accordance with these documents and is more restrictive than our current T/S value, this proposed change will not significantly increase the probability or consequences of a previously analyzed accident, nor will it involve a reduction in a margin of safety.

Criterion 2

This proposed change will require the plant to be operated under more restrictive conditions than currently required. Therefore, the change should not create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated.

Criterion 3

See Criterion 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 considered not likely to involve significant hazards consideration. The second of these examples refers to changes which constitute additional limitations, restrictions, or controls not presently included in the T/Ss. As described above, this change is more restrictive in nature than the present T/S. Therefore, we believe the example cited is applicable and that the change should not involve significant hazards consideration.