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 RECIP. NAME: MURLEY, T.E. RECIPIENT AFFILIATION: Document Control Branch (Document Control Desk)

SUBJECT: Application for amends to licenses DPR-58 & DPR-74, revising
 TS Table 4.8-2 from eight h to composite four h battery
 emergency loads for AB (Train-B) & CD (Train-A) batteries &
 deleting load on Train B batteries load list.

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AEP:NRC:0896R

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
TECHNICAL SPECIFICATION CHANGE REQUEST:
REVISE THE TRAIN A/B BATTERIES' PROFILES
AND MODIFY TRAIN N BATTERIES' PROFILES

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

Attn: T. E. Murley

December 20, 1993

Dear Dr. Murley:

This letter and its attachments constitute an application for amendment to the Technical Specifications (T/S) for the Donald C. Cook Nuclear Plant Units 1 and 2 in accordance with 10 CFR 50.90. The proposed change revises T/S Table 4.8-2 from eight hour to composite four hour Battery Emergency Loads for AB (TRAIN-B) and CD (TRAIN-A) batteries. In addition, we are proposing to delete a load on the Train B batteries load list. Also, this proposed change modifies T/S Table 4.8-3 for the N Train batteries to accurately reflect the operation loads of these batteries as recorded in their composite profiles. This change is consistent with LOCA/LOOP and Station Blackout for Donald C. Cook Nuclear Plant and the new Standard Technical Specifications for Westinghouse plants, published by the NRC as NUREG 1431, dated September 28, 1992.

Attachment 1 provides a detailed description of the proposed change, the justification for the change, and our proposed determination of no significant hazards consideration performed pursuant to 10 CFR 50.92. Attachment 2 contains the existing T/S pages marked to reflect the proposed change. Attachment 3 contains the proposed, revised T/S pages.

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Dr. T. E. Murley

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AEP:NRC:0896R

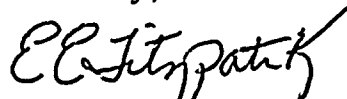
We believe that the proposed change will not result in (1) a significant change in the types of effluents or a significant increase in the amount of any effluents that may be released offsite, and (2) a significant increase in individual or cumulative occupational radiation exposure.

The proposed change has 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. J. R. Padgett of the Michigan Public Service Commission and to the Michigan Department of Public Health.

This letter is submitted pursuant to 10 CFR 50.30(b) and, as such, an oath statement is attached.

Sincerely,


E. E. Fitzpatrick
Vice President

eh

Attachments

cc: A. A. Blind - Bridgman
G. Charnoff
J. B. Martin - Region III
NFEM Section Chief
NRC Resident Inspector - Bridgman
J. R. Padgett

STATE OF OHIO)
COUNTY OF FRANKLIN)

E. E. Fitzpatrick, being duly sworn, deposes and says that he is the Vice President of licensee Indiana Michigan Power Company, that he has read the forgoing Technical Specification Change Request: Revise the Train A/B Batteries' Profiles and Modify Train N Batteries' Profiles and knows the contents thereof; and that said contents are true to the best of his knowledge and belief.

E. E. Fitzpatrick

Subscribed and sworn to before me this 20th
day of December, 1992.

Rita D. Hill
NOTARY PUBLIC

RITA D. HILL
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES 6-28-94

Attachment 1 to AEP:NRC:0896R

10CFR50.92 Determination for Proposed Changes to the
Donald C. Cook Nuclear Plant Units 1 and 2
Technical Specifications

1.0 SECTIONS TO BE CHANGED

Unit 1: Table 4.8-2
 Table 4.8-3

Unit 2: Table 4.8-2
 Table 4.8-3

2.0 EXTENT OF CHANGES

We are proposing to revise the CD batteries' (Train A) and the AB batteries' (Train B) eight hour profiles to four hour profiles and we are proposing to modify the Train N batteries' existing four hour profiles. Additionally, we are proposing to delete a load on the Train B batteries' load list.

3.0 CHANGES REQUESTED

Identical changes are being sought for both the Unit 1 and Unit 2 Technical Specifications.

Revise the Battery Emergency Loads tables.

Table 4.8-2 on page 3/4 8-15 lists the eight hour Battery Emergency Loads for the AB and CD batteries and Table 4.8-3 on page 3/4 8-19 lists the four hour Battery Emergency Loads for the N battery. We are proposing to revise these tables (as illustrated in Attachments 2 and 3) since, as addressed in Paragraph 2.0, we have proposed revision of the Train A/B batteries' eight hour profiles and modification of the Train N battery's four hour profile. Additionally, we are proposing to delete the FMO and TDTV valve "Operating Sequence" list from Table 4.8-3 since it is no longer used to place actual loads on the Train N battery during surveillance testing. Instead, simulated loads are placed on the battery as allowed by a previous T/S change (AEP:NRC:0896J).

Delete a load from the AB Battery Loads list

Table 4.8-2 on page 3/4 8-15 lists as a load the "Computer Static Inverter". We are proposing to delete this load from the table since this load was physically removed from the Train B battery as a function of a design change.

4.0 DISCUSSION

System Description

The 250 VDC System provides a reliable source of continuous power for supply and control of plant safety systems. Included in the

safety systems are the reactor trip system, engineered safety features, and auxiliary support features.

A number of different DC plant loads are served from each of the main and transfer distribution cabinets. The plant loads include control circuits (switchgear & annunciators), static inverters, valve control centers, emergency lighting, and motor control centers, in general, plus vital bus inverters, fire protection control, and main turbine lube oil pumps, in particular. The N Train loads include the turbine driven aux feedwater (TDAFW) control bus, the AMSAC inverter, and a valve control center.

This submittal addresses the test durations for the emergency loads on the Class 1E batteries and the deletion of a load on the Train B batteries.

Reason for Proposed Technical Specification Change Request

There are two reasons we are proposing a change to the Technical Specifications. The first deals with changing the design duty cycles of the Train A/B batteries from eight hour profiles to four hour profiles and modifying the existing four hour profiles of the N Train batteries. The second deals with removing the "Computer Static Inverter" load from the AB Battery Loads portion of Table 4.8-2. The following discussion provides more details regarding the proposed changes.

The existing Battery Emergency Loads tables in the Technical Specifications represent eight hour duty cycles for the A/B Train batteries and four hour duty cycles for the N Train batteries. As discussed below, however, the nuclear related DC loads are only tested to three hours even though the overall profile is eight hours. Whereas this proposal intends only to modify the four hour duty cycle for the N Train batteries, it intends to change the duty cycles for the A/B Train batteries from their current eight hour duty cycles to "composite" four hour duty cycles. The details of this change follow.

A. The existing Train A/B eight hour duty cycles contain two distinct requirements:

- 1) The nuclear related DC loads are required to be supplied by the batteries for three hours. This is based on a LOCA/LOOP event, a failure of the associated battery charger and a reasonable time to restore the battery charger or spare charger to service. This three hour requirement is included in Chapter 8 of the UFSAR.

- 2) The turbine shutdown loads are required for eight hours to properly cool down the main and feed pump turbines' oil lubricated components. This is based on operational experience and is not discussed in the UFSAR.
- B. Since the three hour duty cycles have their basis in the UFSAR and Donald C. Cook Nuclear Plant has committed to four hour station blackout (SBO) duty cycles, these two duty cycles form the basis for the proposed four hour composite load profiles. The eight hour loads listed in the existing T/S Battery Emergency Loads tables are no longer valid since a four hour coping duration has been established for Cook Nuclear Plant upon a Loss of All AC (SBO) event. This means, at worst, that DC loads are required only to cope for four hours on the batteries with no AC powered battery charger. As a function of the Station Blackout Rule, four hour load profiles were developed for the A/B Train batteries. These profiles include load shedding of certain loads one hour into the event as allowed by NUMARC 87-00 and the NRC.
- C. Since SBO has become a condition for operating the Cook Nuclear Plant and since the UFSAR continues to be a condition for operating the plant, the proposed profiles of record for the Class 1E batteries are composites of both the three hour UFSAR load profiles and the four hour SBO profiles. The composite profiles envelope both of their constituent profiles and as such represent conservative sizing/application of the Class 1E batteries.

For the A/B Train batteries, it is desired to revise the "Minimum Time" column of the Battery Emergency Loads tables (as illustrated in Attachments 2 and 3) to reflect the time durations included in the composite profiles. The composite profiles of the batteries (as discussed previously) envelope the worst case conditions for the station batteries and are maintained as formal calculations in the Power Systems and Human Factors (NEEP) section of the Nuclear Engineering Department (NE).

For the N Train batteries, it is desired to revise the "Minimum Time" column and to remove the valve operating sequence list of Table 4.8-3 as shown in Attachments 2 and 3. It should be noted that these modifications do not change the T/S four hour duty cycle of the N Train batteries. Rather, the modifications are intended to more accurately reflect the operation of the N Train battery loads as recorded in the composite profiles for these batteries. Removal of the valve operating sequence portion of

the table will have no impact on the testing of the valves to the composite profiles. This list is being removed because it is no longer used. It had been used to place actual loads on the N Train batteries but since the approval of T/S change AEP:NRC:0896J, only simulated loads have been placed on the batteries during surveillance testing. These batteries will continue to be tested to their design basis duty cycles (composite profiles) using simulated loading. Like the Train A/B composite profiles, the Train N composite profiles envelope the worst case conditions for these batteries and are maintained as formal calculations in the NEEP section of NE.

It is desired to remove the "Computer Static Inverter" load from Table 4.8-2 (as shown in Attachments 2 and 3) since this load was physically removed from the AB Batteries as a function of design change RFC-12-2996, "Upgrade Plant Process Computer System". The power supply for this system is now the Technical Support Center Uninterruptible Power Supply system.

Justification for Proposed Technical Specification Changes

The composite load profiles for the Train A/B batteries are a result of the combination of the three hour LOCA/LOOP and four hour SBO battery load profiles. The three hour LOCA/LOOP load profiles are a function of the UFSAR for the Cook Nuclear Plant whereas the four hour SBO load profiles were performed for the NUMARC 87-00 Station Blackout Rule. These load profiles were compared to determine the most demanding loading of the station batteries. Since the LOCA/LOOP set of load profiles generally detailed a higher first-minute load and the SBO set yielded a longer loading period, the composite load profiles were developed to envelope the worst case profiles for each battery. These composite load profiles are intended for use as the models for performance of the 18-month surveillance testing of the batteries. Additionally, since Cook Nuclear Plant has been designated as a four hour plant for an SBO event, retaining the eight hour battery duty cycles is no longer justifiable.

The composite load profiles for the N Train batteries, which remain unchanged at four hours in duration, are more conservative and more accurately reflect the postulated loads on these batteries than what is listed in the Technical Specifications. The composite load profiles are intended for use as the models for performance of the 18-month surveillance testing of the batteries. The valve operating sequence list of Table 4.8-3 is being removed because it is no longer used to place actual loads on the N Train batteries during surveillance testing. Instead,

the N Train batteries will continue to be tested (using the composites profiles as the basis) using simulated loads.

The justification for removing the Computer Static Inverter Load from the AB Battery Loads list is self-explanatory.

5.0 10 CFR 50.92 CRITERIA

Per 10 CFR 50.92, a proposed amendment does not involve a significant hazards consideration if the change 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 previously analyzed.
- (3) involve a significant reduction in a margin of safety.

Criterion 1

The change is proposed to comply with the LOCA/LOOP and SBO requirement for Cook Nuclear Plant for battery testing. The composite test as addressed above meets these requirements for four hour test profiles. This change is consistent with the UFSAR three hour LOCA/LOOP and NUMARC 87-00 Station Blackout Rule four hour. Based on these considerations, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Criterion 2

The change only addresses the battery profile test which meets both LOCA/LOOP and SBO for Cook Nuclear Plant. No specific physical or operational changes to the plant will occur due to this change. Thus, the change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Criterion 3

The proposed change revises the battery profile test table from an eight hour to a four hour composite test which complies with both LOCA/LOOP and SBO as defined for Cook Nuclear Plant. Therefore, the proposed change does not involve a significant reduction in a margin of safety.