



Indiana Michigan Power
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106
AEP.com

July 30, 2007

AEP:NRC:7382
10 CFR 50.90

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

SUBJECT: Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Amendment Request to Add Surveillance Requirement When Offsite Power
is Provided via Backfeed Through Main Transformer when Unit is Shutdown or
During Fuel Movement.

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, proposes to amend Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to modify the Technical Specifications (TS) for CNP Units 1 and 2 by adding a Surveillance Requirement that is applicable when offsite electrical power is supplied to a unit via backfeed through the main transformer and the unit is in either Mode 5 or Mode 6, or during movement of irradiated fuel. The additional Surveillance Requirement will correct a non-conservatism in the TS and will assure the capability to transfer the required safety-related loads from the backfeed source to the required qualified offsite circuit. I&M has initiated temporary administrative controls in accordance with Nuclear Regulatory Commission (NRC) Administrative Letter 98-10 to provide this assurance while the proposed amendment is under review by the NRC.

Enclosure 1 provides an affirmation statement pertaining to this letter. Enclosure 2 provides I&M's evaluation of the proposed change. Attachments 1A and 1B provide TS pages marked to show changes for Unit 1 and Unit 2, respectively. Attachments 2A and 2B provide TS pages with the proposed changes incorporated. Attachment 3 provides an information copy of Unit 1 TS Bases marked to show changes that will be made in accordance with the CNP Bases Control Program to support the proposed license amendment.

I&M requests approval of the proposed changes on a routine basis. The proposed changes will be implemented within 45 days of NRC approval. Copies of this letter and its attachments are being transmitted to the Michigan Public Service Commission and Michigan Department of Environmental Quality, in accordance with the requirements of 10 CFR 50.91.

AOI
NRR

There are no new regulatory commitments made in this letter. Should you have any questions, please contact Ms. Susan D. Simpson, Regulatory Affairs Manager, at (269) 466-2428.

Sincerely,



Joseph N. Jensen
Site Vice President

JRW/rdw

Enclosures:

1. Affirmation
2. Proposed License Amendment to Add Surveillance Requirement While on Offsite Power via Backfeed

Attachments:

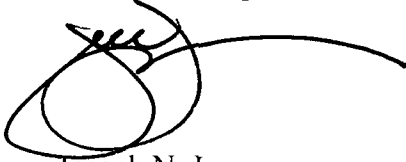
- 1A. Donald C. Cook Nuclear Plant Unit 1 Technical Specification Pages Marked To Show Changes
 - 1B. Donald C. Cook Nuclear Plant Unit 2 Technical Specification Pages Marked To Show Changes
 - 2A. Donald C. Cook Nuclear Plant Unit 1 Technical Specification Pages With the Proposed Changes Incorporated
 - 2B. Donald C. Cook Nuclear Plant Unit 2 Technical Specification Pages With the Proposed Changes Incorporated
 3. Information Copy of the Changes to the Unit 1 Technical Specification Bases in Support of the Proposed TS Changes
- c: J. L. Caldwell, NRC Region III
K. D. Curry, Ft. Wayne AEP, w/o enclosures/attachments
J. T. King, MPSC
MDEQ – WHMD/RPMWS
NRC Resident Inspector
P. S. Tam, NRC Washington, DC

Enclosure 1 to AEP:NRC: 7382

AFFIRMATION

I, Joseph N. Jensen, being duly sworn, state that I am Site Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

Indiana Michigan Power Company



Joseph N. Jensen
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 30th DAY OF July, 2007

Regan D. Wendzel
Notary Public

My Commission Expires

REGAN D. WENZEL
Notary Public, Berrien County, MI
My Commission Expires Jan. 21, 2009

Enclosure 2 to AEP:NRC: 7382

Proposed License Amendment to Add Surveillance Requirement While on Offsite Power via Backfeed

Documents referenced in this enclosure are identified in Section 7.0.

1.0 DESCRIPTION

Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, proposes to amend Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to modify the Technical Specifications (TS) for CNP Units 1 and 2 by adding a Surveillance Requirement (SR) that is applicable when offsite electrical power is supplied to a unit via backfeed through the main transformer and the unit is in either Mode 5 or Mode 6, or during movement of irradiated fuel. The additional SR will correct a non-conservatism in the TS and will assure the capability to transfer the required safety-related loads from the backfeed source to the required qualified offsite circuit. I&M has initiated temporary administrative controls in accordance with Nuclear Regulatory Commission (NRC) Administrative Letter 98-10 to provide this assurance while the proposed amendment is under review by the NRC.

2.0 PROPOSED CHANGE

I&M proposes to add a new SR to TS 3.8.2, "AC Sources – Shutdown," for both Unit 1 and Unit 2. The new SR (SR 3.8.2.2) will require that, when the unit is provided power from an offsite source by backfeeding through the main transformer to the unit auxiliary transformers, one of the following SRs from TS 3.8.1, "AC Sources Operating," is applicable:

- a. SR 3.8.1.9.a when the preferred offsite circuit is required to be operable by TS Limiting Condition for Operation (LCO) 3.8.2.a. (SR 3.8.1.9.a requires verification of automatic transfer from the auxiliary source (the unit auxiliary transformer) to the preferred offsite circuit.)

OR

- b. SR 3.8.1.9.b when the alternate offsite circuit is required to be operable by TS LCO 3.8.2.a. (SR 3.8.1.9.b requires verification of manual alignment to the alternate offsite circuit.)

The new SR 3.8.2.2 will require SR 3.8.1.9.a or SR 3.8.1.9.b to have been performed within its currently specified 24-month Frequency.

The new SR 3.8.2.2 will include a note indicating that the SR is not required to be performed, i.e., that it only must be met.

TS Bases changes in support of the proposed new SR will be implemented in accordance with the CNP Bases control program. A copy of the Bases changes for Unit 1 are provided for information in Attachment 3 to this letter. The Bases changes planned for Unit 2 will be similar to those planned for Unit 1. Portions of the Bases changes have been implemented to support the administrative controls noted in Section 3.3 of this enclosure.

3.0 BACKGROUND

3.1 System Design and Operation

As shown on the sketch provided at the end of this enclosure, the onsite alternating current (AC) power distribution system contains four, 4160V (4 kV) non-safety-related electrical buses designated 1A, 1B, 1C, and 1D. Each of the non-safety-related buses feed a downstream safety-related 4 kV bus. These safety-related buses are designated T11A, T11B, T11C, and T11D, and are referred to as the "T" buses. With the main generator on-line, buses 1A, 1B, 1C, and 1D are normally fed from the Unit Auxiliary Transformers (UATs), which receive power from the main generator. Upon a turbine/reactor trip, buses 1A, 1B, 1C, and 1D are automatically fast transferred from the UATs to the Reserve Auxiliary Transformers (RATs). Buses 1A, 1B, 1C, and 1D can also be fed from the preferred offsite circuit via the RATs when the main generator is not on-line during start-up, shutdown, and refueling operations, and occasionally, for on-line maintenance activities. The T buses can also be fed from 69 kV/4 kV transformer TR12EP-1, which is fed from a 69 kV transmission line. Connection of the T buses to TR12EP-1 requires manual switch operations in the control room.

As recognized in Section 8.3.1 of the CNP Updated Final Safety Analysis Report (UFSAR), a configuration termed "backfeed" may be established during periods when the unit is in Mode 5 or 6. In this configuration, disconnect links are removed from the main generator and power to 4 kV loads is provided by backfeeding power from the transmission network through the main transformer to one or both UATs, which are aligned to supply their associated non-safety-related 4 kV buses and safety-related T buses. This configuration has been recognized in the CNP UFSAR since 2001 for Unit 1 and 1999 for Unit 2. This configuration may be used to support various outage related activities, including the following:

- Providing power to unit loads if it is necessary to make the preferred offsite power circuit inoperable. In this condition, the alternate offsite circuit is maintained operable for connection to the onsite electrical distribution system if the backfeed source were to become unavailable. Backfeed is desirable in this condition because it can power both the non-safety-related buses 1A, 1B, 1C, and 1D, and the safety-related T buses, whereas the alternate offsite circuit can only power the T buses.
- Providing power to the UATs during surveillance testing to demonstrate operability of the automatic transfer of loads from the UATs to the RATs in accordance with SR 3.8.1.9.a.

- Maintaining defense-in-depth for offsite power supplies while performing certain maintenance activities.

3.2 Current TS Requirements

As defined in the TS 3.8.1 LCO Bases, the RATs are part of the preferred offsite circuit, and transformer TR12EP-1 is part of the alternate offsite circuit. The preferred offsite circuit and the alternate offsite circuit are designated as the two qualified circuits for which operability requirements are established in TS Section 3.8, "Electrical Power Systems."

TS LCO 3.8.1.a is applicable in Modes 1, 2, 3, and 4. LCO 3.8.1.a requires that two qualified circuits, i.e., the preferred offsite circuit and the alternate offsite circuit, be operable in those modes. SR 3.8.1.9 requires periodic verification of the capability to transfer the T buses to each of the two qualified circuits because buses 1A, 1B, 1C, and 1D and the downstream safety-related T buses are powered from a non-qualified source (i.e., the main generator and UATs) during normal plant operation in Mode 1.

TS LCO 3.8.2.a is applicable in Modes 5 and 6, and during movement of irradiated fuel assemblies in the containment, the auxiliary building, and the opposite unit containment. LCO 3.8.2.a requires that one qualified circuit be operable in those Modes and conditions. SR 3.8.2.1, which is the single existing SR supporting LCO 3.8.2.a, states that certain SRs from TS 3.8.1 are applicable. SR 3.8.1.9 is excepted from the TS 3.8.1 SRs identified as applicable. The Bases for SR 3.8.2.1 states that SR 3.8.1.9 is not required to be met since the auxiliary source cannot power the Class 1E electrical power distribution subsystems in the applicable Modes and conditions, and since only one offsite circuit is required to be operable. This statement is accurate based on the definition of auxiliary source in the existing TS 3.8.1 Bases Background, which states that the auxiliary source consists of the unit main generator. However, the TS do not recognize the capability of providing a shut down unit with an additional source of power from the transmission network by using the backfeed configuration.

3.3 Reason for Requesting Amendment

I&M is requesting the proposed amendment to assure that a unit has the capability to transfer the required safety-related loads to the required qualified circuit during periods that the backfeed configuration is used in Modes 5 and 6, and during movement of irradiated fuel in any of the three possible locations. It is appropriate that this assurance be provided by an SR because it is needed to assure that LCO 3.8.2.a is met during periods that the backfeed configuration is used. The proposed SR will provide assurance similar to that provided by SR 3.8.1.9 in Modes 1, 2, 3, and 4. I&M has initiated temporary administrative controls in accordance with NRC Administrative Letter 98-10 to provide this assurance while the proposed amendment is under review by the NRC.

The proposed amendment may be considered to be a restoration of requirements that were erroneously removed during the conversion of the previous CNP TS to the NUREG-1431 improved TS format per Reference 1. Prior to the conversion to the NUREG-1431 format, the CNP TS contained an SR similar to that proposed by this amendment request. The previous CNP TS for AC power sources in Modes 5 and 6 included an SR (SR 4.8.1.2) that specified performance of certain SRs from the TS for AC power sources in Modes 1 through 4, including SR 4.8.1.1.1.b. SR 4.8.1.1.1.b required verification of the ability to automatically transfer loads from the auxiliary source to the preferred offsite circuit and the ability to manually transfer loads from the auxiliary source to the alternate offsite circuit. Therefore, SRs similar to those proposed by this amendment request existed in the previous CNP TS. However, as indicated in the Discussion of Changes (Reference 2) submitted for conversion of the previous CNP TS to the NUREG-1431 format, these previous SRs were not considered necessary because the capability to provide power via the backfeed configuration was not recognized. Upon discovery of this condition, an administrative hold was placed on use of the backfeed configuration in accordance with NRC Administrative Letter 98-10, pending administrative implementation of the proposed additional SRs as noted in the preceding paragraph.

4.0 TECHNICAL ANALYSIS

4.1 Specific TS Changes

The reasons for each specific change to the TS are provided below.

New TS SR 3.8.2.2

The new SR 3.8.2.2 will accomplish the overall objective of the proposed amendment. That objective is to assure the capability to transfer safety-related loads from the UAT to whichever of the two qualified circuits is credited for satisfying LCO 3.8.2.a when the unit is in a backfeed configuration in Mode 5 or Mode 6, or during the movement of irradiated fuel in either unit's containment or in the auxiliary building. The new SR was formatted as an additional SR in existing TS 3.8.2. This is appropriate because the new SR supports the existing LCO 3.8.2, under certain specific conditions, i.e., when the unit is in a backfeed configuration. The new SR is structured to invoke one of two existing SRs from TS 3.8.1. The invoking of an existing SR from TS 3.8.1 is consistent with existing SR 3.8.2.1. The invoking of only one of these existing TS 3.8.1 SRs is appropriate because only one qualified circuit is required by LCO 3.8.2.a.

The Frequency statement for new SR 3.8.2.2 invokes the Frequency specified for the applicable SR in TS 3.8.1. This is appropriate because it provides consistency with the Frequency statement in existing SR 3.8.2.1. For both SR 3.8.1.9.a and SR 3.8.1.9.b, this frequency is 24 months. The existing Bases for SR 3.8.1.9.a and SR 3.8.1.9.b states: "Operating experience has shown that these components usually pass the SR when performed at the 24-month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint." This basis will remain valid when the SRs are invoked by new SR 3.8.2.2.

The new SR 3.8.2.2 includes a note stating that the SR is not required to be performed. The intent of this note is that the applicable SR must be current. Actual performance is not required unless the previous performance of the applicable SR has exceeded specified Frequency requirements or the previous performance of the applicable SR has been invalidated. This is appropriate because, as stated above, the 24-month frequency is acceptable from a reliability standpoint. The note will therefore preclude unnecessary perturbations of the electrical distribution system during a period when redundant systems and components may be unavailable. The note also provides consistency with a similar note in existing SR 3.8.2.1.

4.2 Backfeed Configuration

I&M is not requesting NRC approval of the backfeed configuration. The backfeed configuration is not being credited as a qualified circuit that would satisfy LCO 3.8.2.a. Recognition of the backfeed capability was incorporated into Section 8.3.1 of the CNP UFSAR via the 10 CFR 50.59 process in 2001 for Unit 1 and in 1999 for Unit 2. This process determined that the backfeed configuration does not involve an unreviewed safety question. Therefore, a technical analysis of the backfeed configuration is not needed to support this proposed amendment.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

Indiana Michigan Power Company (I&M) has evaluated whether a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated?

Response: No

The proposed change will add a new Technical Specification Surveillance Requirement applicable during shutdown conditions when a backfeed configuration is used to provide power from the offsite transmission network to required safety equipment via the main transformer. The new Surveillance Requirement will require that portions of an existing Surveillance Requirement be met. If not met, the existing Surveillance Requirement must be performed before establishing a backfeed configuration. It is highly unlikely that the proposed change will necessitate performance of the existing Surveillance Requirement more frequently than is currently required. Even if more frequent performance of the existing Surveillance Requirement were required, its performance would not significantly increase the probability of a loss of offsite power. Consequently, there is no significant change in the likelihood of any accident associated with verifying the existing Surveillance Requirement

has been met. Therefore, the probability of occurrence of a previously evaluated accident will not be significantly increased.

The verifications required by the new Surveillance Requirement will assure that a unit's required safety-related equipment can be transferred to a qualified offsite circuit while the equipment is being provided power from the offsite transmission network using a backfeed configuration while the unit is shutdown or while irradiated fuel is moved. This will provide assurance that the systems needed to mitigate the consequences of the accidents in these conditions will be provided with electrical power if the systems are needed to perform their specified safety function. Therefore, the consequences of a previously evaluated accident will not be significantly increased.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The addition of a new Technical Specification Surveillance Requirement to verify that an existing Surveillance Requirement has been met, or to perform that Surveillance Requirement if not met, would not create the possibility of a new or different kind of accident because the Surveillance Requirement has previously existed and previously been performed. Therefore, the proposed change does not involve any new systems, structures, or components, or any different mode of operation of any existing systems, structures, or components.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The margin of safety associated with the proposed change involves the availability of offsite electrical power to support required safety equipment when a unit is shut down or during the movement of irradiated fuel. The proposed change provides assurance that the single required qualified offsite circuit from the transmission network remains available while the required safety equipment is powered by a different circuit from that network. Consequently, the proposed change does not reduce the margin of safety provided by the required qualified offsite circuit, and enhances the margin of safety by acknowledging use of an additional offsite circuit.

Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Based on the above, I&M concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

10 CFR 50.36(c)(3) requires that Technical Specifications include Surveillance Requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the Limiting Condition for Operations will be met.

Donald C. Cook Nuclear Plant Technical Specification Limiting Condition for Operation 3.8.2.a requires that one qualified circuit be operable in Modes 5 and 6, and during movement of irradiated fuel assemblies in the containment, the auxiliary building, and the opposite unit containment.

The proposed addition of new Surveillance Requirement 3.8.2.2 will establish compliance with 10 CFR 50.36(c)(3) in that it will provide assurance that Limiting Condition for Operation 3.8.2.a is met when a unit's required safety equipment is powered from an offsite source via backfeed through the main transformer.

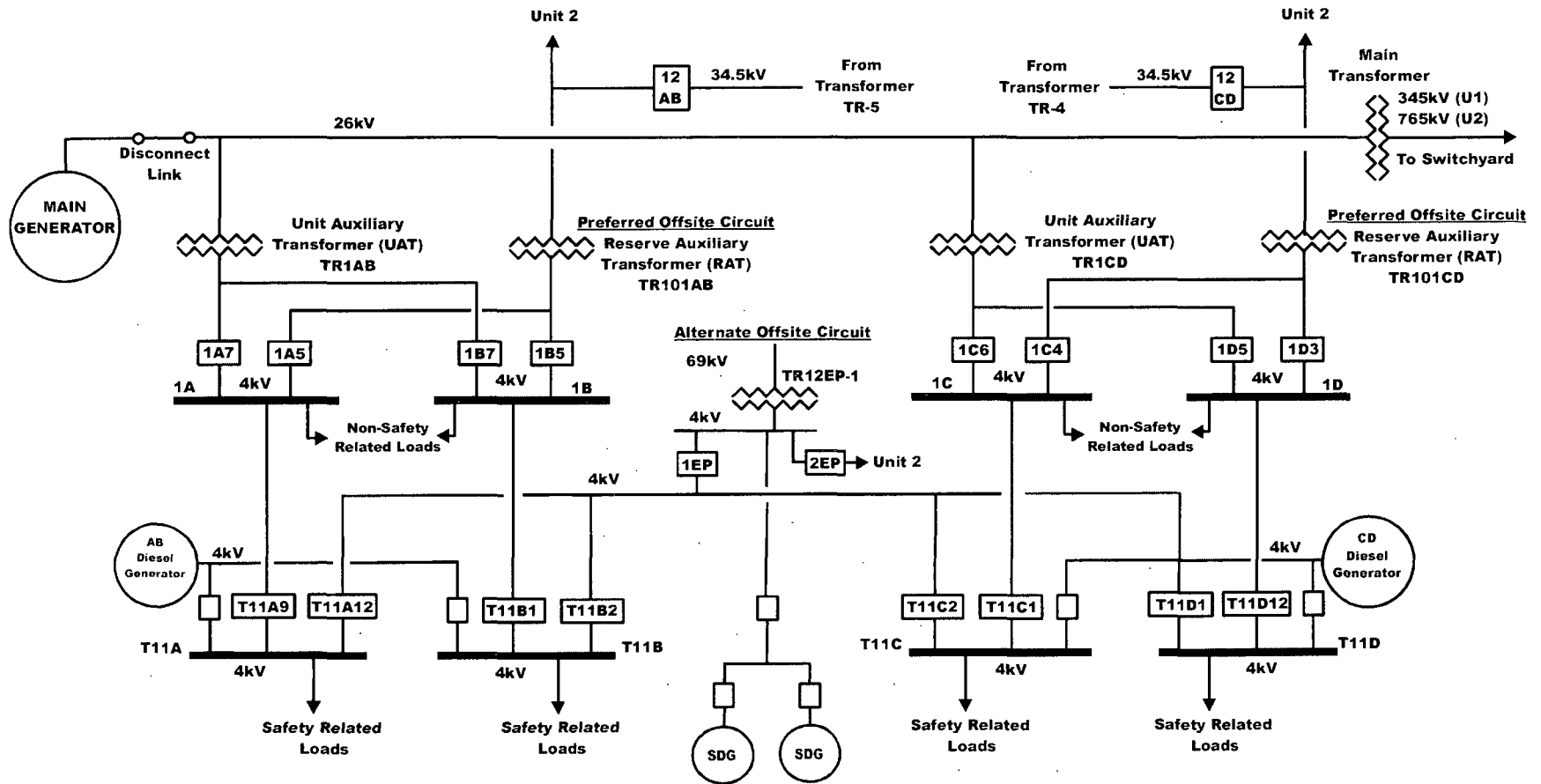
In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Nuclear Regulatory Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health or safety of the public.

6.0 ENVIRONMENTAL CONSIDERATIONS

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

1. Letter From J. Donohew, NRC, to M. K. Nazar, I&M, "D.C. Cook Nuclear Plant, Units 1 And 2 - Issuance of Amendments for the Conversion to the Improved Technical Specifications with Beyond Scope Issues (TAC Nos. MC2629, MC2630, MC2653 through MC2687, MC2690 through MC2695, MC3152 through MC3157, MC3432 through MC3453)," dated June 1, 2005 (ML050620034).
2. Letter from M. K. Nazar, I&M, to NRC Document Control Desk, "Supplement to License Amendment Request – Conversion of Current Technical Specifications (CTS) to Improved Technical Specifications (ITS) (TAC Nos. MC2629 and MC2630)," AEP:NRC:5901, dated April 15, 2005 (ML051440506).



Sketch - Donald C. Cook Nuclear Plant Unit 1 AC Power Supplies
(Unit 2 power supplies are identical except for component designations.)

Attachment 1A to AEP:NRC: 7382

**DONALD C. COOK NUCLEAR PLANT UNIT 1 TECHNICAL SPECIFICATION PAGES
MARKED TO SHOW CHANGES**

3.8.2-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.2.1 -----NOTE-----</p> <p>The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10 through SR 3.8.1.12, SR 3.8.1.15 through SR 3.8.1.17, and SR 3.8.1.18.</p> <p>-----</p> <p>For AC sources required to be OPERABLE, the SRs of Specification 3.8.1, "AC Sources -- Operating," except SR 3.8.1.9, SR 3.8.1.13, SR 3.8.1.14 (ESF actuation signal portion only), SR 3.8.1.19, SR 3.8.1.20, SR 3.8.1.21, and SR 3.8.1.22, are applicable.</p>	<p>In accordance with applicable SRs</p>
<p>SR 3.8.2.2 -----NOTE-----</p> <p>Not required to be performed. -----</p> <p>-----</p> <p>One of the following SRs is applicable when the electrical distribution subsystem is being supplied by "backfeed" from an offsite source via the main transformer and a unit auxiliary transformer:</p> <p>a. SR 3.8.1.9.a when the preferred offsite circuit is required to be OPERABLE by LCO 3.8.2.a, or</p> <p>b. SR 3.8.1.9.b when the alternate offsite circuit is required to be OPERABLE by LCO 3.8.2.a.</p>	<p>In accordance with applicable SR</p>

Attachment 1B to AEP:NRC: 7382

**DONALD C. COOK NUCLEAR PLANT UNIT 2 TECHNICAL SPECIFICATION PAGES
MARKED TO SHOW CHANGES**

3.8.2-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.2.1</p> <p>-----NOTE-----</p> <p>The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10 through SR 3.8.1.12, SR 3.8.1.15 through SR 3.8.1.17, and SR 3.8.1.18.</p> <p>-----</p> <p>For AC sources required to be OPERABLE, the SRs of Specification 3.8.1, "AC Sources -- Operating," except SR 3.8.1.9, SR 3.8.1.13, SR 3.8.1.14 (ESF actuation signal portion only), SR 3.8.1.19, SR 3.8.1.20, SR 3.8.1.21, and SR 3.8.1.22, are applicable.</p>	<p>In accordance with applicable SRs</p>
<p>SR 3.8.2.2</p> <p>-----NOTE-----</p> <p>Not required to be performed.</p> <p>-----</p> <p>One of the following SRs is applicable when the electrical distribution subsystem is being supplied by "backfeed" from an offsite source via the main transformer and a unit auxiliary transformer:</p> <p>a. SR 3.8.1.9.a when the preferred offsite circuit is required to be OPERABLE by LCO 3.8.2.a, or</p> <p>b. SR 3.8.1.9.b when the alternate offsite circuit is required to be OPERABLE by LCO 3.8.2.a.</p>	<p>In accordance with applicable SR</p>

Attachment 2A to AEP:NRC: 7382

**DONALD C. COOK NUCLEAR PLANT UNIT 1 TECHNICAL SPECIFICATION PAGES
WITH THE PROPOSED CHANGES INCORPORATED**

3.8.2-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.2.1</p> <p>-----NOTE----- The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10 through SR 3.8.1.12, SR 3.8.1.15 through SR 3.8.1.17, and SR 3.8.1.18. -----</p> <p>For AC sources required to be OPERABLE, the SRs of Specification 3.8.1, "AC Sources -- Operating," except SR 3.8.1.9, SR 3.8.1.13, SR 3.8.1.14 (ESF actuation signal portion only), SR 3.8.1.19, SR 3.8.1.20, SR 3.8.1.21, and SR 3.8.1.22, are applicable.</p>	<p>In accordance with applicable SRs</p>
<p>SR 3.8.2.2</p> <p>-----NOTE----- Not required to be performed. -----</p> <p>One of the following SRs is applicable when the electrical distribution subsystem is being supplied by "backfeed" from an offsite source via the main transformer and a unit auxiliary transformer:</p> <ul style="list-style-type: none"> a. SR 3.8.1.9.a when the preferred offsite circuit is required to be OPERABLE by LCO 3.8.2.a, or b. SR 3.8.1.9.b when the alternate offsite circuit is required to be OPERABLE by LCO 3.8.2.a. 	<p>In accordance with applicable SR</p>

Attachment 2B to AEP:NRC: 7382

**DONALD C. COOK NUCLEAR PLANT UNIT 2 TECHNICAL SPECIFICATION PAGES
WITH THE PROPOSED CHANGES INCORPORATED**

3.8.2-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.2.1</p> <p>-----NOTE----- The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.10 through SR 3.8.1.12, SR 3.8.1.15 through SR 3.8.1.17, and SR 3.8.1.18. -----</p> <p>For AC sources required to be OPERABLE, the SRs of Specification 3.8.1, "AC Sources -- Operating," except SR 3.8.1.9, SR 3.8.1.13, SR 3.8.1.14 (ESF actuation signal portion only), SR 3.8.1.19, SR 3.8.1.20, SR 3.8.1.21, and SR 3.8.1.22, are applicable.</p>	<p>In accordance with applicable SRs</p>
<p>SR 3.8.2.2</p> <p>-----NOTE----- Not required to be performed. -----</p> <p>One of the following SRs is applicable when the electrical distribution subsystem is being supplied by "backfeed" from an offsite source via the main transformer and a unit auxiliary transformer:</p> <ul style="list-style-type: none"> a. SR 3.8.1.9.a when the preferred offsite circuit is required to be OPERABLE by LCO 3.8.2.a, or b. SR 3.8.1.9.b when the alternate offsite circuit is required to be OPERABLE by LCO 3.8.2.a. 	<p>In accordance with applicable SR</p>

Attachment 3 to AEP:NRC: 7382

INFORMATION COPY OF THE CHANGES TO THE
UNIT 1 TECHNICAL SPECIFICATION BASES
IN SUPPORT OF THE PROPOSED TECHNICAL SPECIFICATION CHANGES

B 3.8.1-1

B 3.8.2-5

B 3.8.2-6

B 3.8 ELECTRICAL POWER SYSTEMS

B 3.8.1 AC Sources - Operating

BASES

BACKGROUND The unit Class 1E AC Electrical Power Distribution System AC sources consist of the offsite power sources (preferred and alternate), and the onsite standby power sources (Train A and Train B diesel generators (DGs)). As required by Atomic Energy Commission Proposed General Design Criterion 39 (Ref. 1), the design of the AC electrical power system provides independence and redundancy to ensure an available source of power to the Engineered Safety Feature (ESF) systems.

The onsite Class 1E AC Distribution System is divided into redundant load groups (trains) so that the loss of any one group does not prevent the minimum safety functions from being performed. Each train has connections to a preferred offsite power source, an alternate offsite power source, an auxiliary source (~~main generator~~ unit auxiliary transformer), and a single DG. Additionally, the AC electrical sources must include those electrical sources from Unit 2 that are required to support the Essential Service Water (ESW) System since the ESW headers are common to both units. The onsite Class 1E AC Distribution System associated with the other unit is also divided into redundant load groups and include the same connections to AC sources.

The onsite Class 1E AC Distribution System includes Train A and Train B. Train A and Train B are normally powered from the main generator. The main generator supplies Train A via unit auxiliary transformer TR1CD and supplies Train B via unit auxiliary transformer TR1AB. The unit auxiliary transformer TR1CD supplies bus 1C, which in turn supplies the onsite Class 1E 4.16 kV emergency bus T11C, a Train A bus. The unit auxiliary transformer TR1CD also supplies bus 1D, which in turn supplies the onsite Class 1E 4.16 kV emergency bus T11D, also a Train A bus. The unit auxiliary transformer TR1AB supplies bus 1A, which in turn supplies the onsite Class 1E 4.16 kV emergency bus T11A, a Train B bus. The unit auxiliary transformer TR1AB also supplies bus 1B, which in turn supplies the onsite Class 1E 4.16 kV emergency bus T11B, also a Train B bus. The preferred qualified offsite circuit is supplied via reserve auxiliary transformers (RAT) TR101CD and TR101AB. The Train A and Train B 4.16 kV emergency buses will automatically transfer to the preferred qualified offsite circuit as a result of a turbine generator trip. RATs from the same train of each unit share a 34.5 kV line from the onsite switchyards to the loop enclosure. The line continues

BASES

ACTIONS (continued)

electrical power sources should be completed as quickly as possible in order to minimize the time during which the unit safety systems may be without sufficient power.

Pursuant to LCO 3.0.6, the Distribution System ACTIONS would not be entered even if all AC sources to it are inoperable, resulting in de-energization. Therefore, the Required Actions of Condition A are modified by a Note to indicate that when Condition A is entered with no AC power to any required emergency bus, the ACTIONS for LCO 3.8.10 must be immediately entered. This Note allows Condition A to provide requirements for the loss of the offsite circuit, whether or not a train is de-energized. LCO 3.8.10 would provide the appropriate restrictions for the situation involving a de-energized train.

SURVEILLANCE REQUIREMENTS

SR 3.8.2.1

SR 3.8.2.1 requires the SRs from LCO 3.8.1 that are necessary for ensuring the OPERABILITY of the AC sources in other than MODES 1, 2, 3, and 4 to be applicable. SR 3.8.1.9 is not required to be met since the auxiliary source cannot power the Class 1E electrical power distribution subsystems ~~in these conditions~~ unless the subsystems are being powered via backfeed through the main transformer, and since only one offsite circuit is required to be OPERABLE. If the Class 1E electrical power distribution subsystems are being powered by backfeed, SR 3.8.1.9.a or SR 3.8.1.9.b is implemented by SR 3.8.2.2. SR 3.8.1.13, SR 3.8.1.14 (ESF actuation signal portion only), SR 3.8.1.19, SR 3.8.1.20, and SR 3.8.1.21 are not required to be met because the ESF actuation signal is not required to be OPERABLE. SR 3.8.1.22 is excepted because starting independence is not required with the DG(s) that is not required to be OPERABLE. Refer to the corresponding Bases for LCO 3.8.1 for a discussion of each SR.

This SR is modified by a Note. The reason for the Note is to preclude requiring the OPERABLE DG(s) from being paralleled with the offsite power network or otherwise rendered inoperable during performance of SRs, and to preclude de-energizing a required emergency 4.16 kV emergency bus or disconnecting a required offsite circuit during performance of SRs. With limited AC sources available, a single event could compromise both the required circuit and the DG. It is the intent that these SRs must still be capable of being met, but actual performance is not required during periods when the DG and offsite circuit is required to be OPERABLE.

REFERENCES

None.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.8.2.2

SR 3.8.2.2 requires that SR 3.8.1.9.a or SR 3.8.1.9.b be met when the electrical distribution subsystem is being supplied by backfeed from an offsite source via the main transformer and a unit auxiliary transformer, i.e., the normal auxiliary circuit. SR 3.8.1.9.a and SR 3.8.1.9.b require, respectively, verification of the automatic transfer of each 4.16 kV emergency bus power supply from the normal auxiliary circuit to the preferred offsite circuit and verification of the manual alignment to the alternate required offsite circuit. These verifications demonstrate the OPERABILITY of the required offsite circuit to power the shutdown loads when the backfeed alignment is being used to supply the required electrical distribution subsystem.

This SR is modified by a Note. The reason for the Note is to reduce unnecessary perturbations of the electrical distribution system during a period when redundant systems and components may be unavailable. It is the intent that the applicable SR must still be capable of being met, but actual performance is not required during periods when the offsite circuit is required to be OPERABLE. Operating experience has shown that the automatic transfer function and the manual alignment usually pass the respective SR when performed at the 24 month Frequency.

REFERENCES

None.
