

August 22, 1995

Mr. E. E. Fitzpatrick, Vice President  
Indiana Michigan Power Company  
c/o American Electric Power Service Corporation  
1 Riverside Plaza  
Columbus, OH 43215

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF  
AMENDMENTS RE: BATTERY LOAD PROFILES (TAC NOS. M88508 AND M88509)

Dear Mr. Fitzpatrick:

The Commission has issued the enclosed Amendment No. 198 to Facility Operating License No. DPR-58 and Amendment No. 183 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated December 20, 1993, as supplemented July 19, 1994, and February 28, 1995.

The amendments revise the surveillance requirements and load profiles for A, B, and N Train batteries.

A copy of our related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by

John B. Hickman, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

- Enclosures: 1. Amendment No. 198 to DPR-58
- 2. Amendment No. 183 to DPR-74
- 3. Safety Evaluation

cc w/encl: See next page

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Indiana Michigan Power Company

Donald C. Cook Nuclear Plant

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DATED: August 22, 1995

AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-58-D. C. COOK-UNIT 1  
AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE NO. DPR-74-D. C. COOK-UNIT 2

Docket File

PUBLIC

PDIII-1 Reading

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 198  
License No. DPR-58

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated December 20, 1993, as supplemented July 19, 1994, and February 28, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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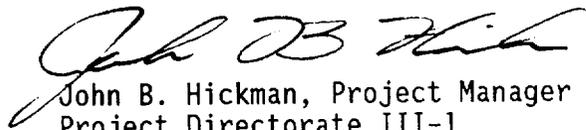
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.198 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John B. Hickman, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: August 22, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 198  
TO FACILITY OPERATING LICENSE NO. DPR-58  
DOCKET NO. 50-315

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE

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**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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D.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.3 The following D.C. bus trains shall be energized and OPERABLE with tie breakers between bus trains open:

TRAIN AB consisting of 250-volt D.C. bus AB, 250-volt D.C. battery bank No. 1AB, and a full capacity charger, and

TRAIN CD consisting of 250-volt D.C. bus CD, 250-volt D.C. battery bank No. 1CD, and a full capacity charger.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION

- a. With one 250-volt D.C. bus inoperable, restore the inoperable bus to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one 250-volt D.C. battery and/or its charger inoperable, restore the inoperable battery and/or charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized with tie breakers open at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.3.2 Each 250-volt battery bank and charger shall be demonstrated OPERABLE

- a. At least once per 7 days by verifying that:
  1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks,
  2. The pilot cell specific gravity, corrected to 77°F, and full electrolyte level (fluid at the bottom of the maximum level indication mark), is greater than or equal to 1.200,
  3. The pilot cell voltage is greater than or equal to 2.13 volts, and
  4. The overall battery voltage is greater than or equal to 250 volts.

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**SURVEILLANCE REQUIREMENTS (Continued)**

- b. At least once per 92 days by verifying that:
  - 1. The voltage of each connected cell is greater than or equal to 2.13 volts under float charge.
  - 2. The specific gravity, corrected to 77°F, and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and
  - 3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.
  
- c. At least once per 18 months by verifying that:
  - 1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,
  - 2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material,
  - 3. The battery charger will supply at least 140 amperes at greater than or equal to 250 volts for at least 4 hours.
  
- d. At least once per 18 months, perform a battery service test during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the design duty cycle which is based on the composite load profile. The composite load profile envelopes both the LOCA/LOOP and Station Blackout profiles and provides the basis for the times listed in Table 4.8-2. The battery charger will be disconnected throughout the test. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout this test.
  
- e. At least once per 60 months, conduct a performance test of battery capacity during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. When this test is performed in place of a battery service test, a modified performance test shall be conducted.

Annual performance tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% from its capacity on the previous performance test, or is below 90% of the manufacturer's rating. If the battery has reached 85% of service life, delivers a capacity of 100% or greater of the manufacturer's rated capacity, and has shown no signs of degradation, performance testing at two year intervals is acceptable until the battery shows signs of degradation.

TABLE 4.8-2

BATTERY EMERGENCY LOADS

<u>AB Battery Loads</u>	<u>Minimum Time</u>
1. Channel III static inverter	4 hrs
2. Channel IV static inverter	4 hrs
3. East feed pump turbine emergency oil pump	1 hr
4. Control room emergency lighting	4 hrs
5. Main turbine backup oil pump	1 hr
6. Isolation valve control	4 hrs
7. All control circuits	4 hrs

<u>CD Battery Loads</u>	
1. Channel I static inverter	4 hrs
2. Channel II static inverter	4 hrs
3. BOP static inverter*	4 hrs
4. West feed pump turbine emergency oil pump	1 hr
5. Generator hydrogen emergency seal oil pump	4 hrs
6. Main turbine emergency oil pump	1 hr
7. Isolation valves	4 hrs
8. Annunciators	4 hrs
9. All control circuits	4 hrs

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\*AC power sources to the inverters shall be turned off at the start of the test and may be turned on at the end of the specified time interval. Inverters may be left in this operating mode for the duration of the discharge test.

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.4 As a minimum, the following D.C. electrical equipment and bus shall be energized and OPERABLE:

1 - 250-volt D.C. bus, and

1 - 250-volt battery bank and charger associated with the above D.C. bus.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of D.C. equipment and bus OPERABLE, establish CONTAINMENT INTEGRITY within 8 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.4.1 The above required 250-volt D.C. bus shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 The above required 250-volt battery bank and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**D.C. DISTRIBUTION - OPERATING - TRAIN N BATTERY SYSTEM**

**LIMITING CONDITION FOR OPERATION**

3.8.2.5 The following D.C. bus train shall be energized and OPERABLE:

TRAIN N consisting of 250-volt D.C. bus N, 250-volt D.C. battery bank N, and a full capacity charger.

**APPLICABILITY:** MODES 1, 2 and 3.

**ACTION**

With the Train N battery system inoperable, declare the turbine driven Auxiliary Feedwater Pump inoperable and follow the ACTION statement of Specification 3.7.1.2.

**SURVEILLANCE REQUIREMENTS**

- 4.8.2.5.1 The D.C. bus train N shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.
- 4.8.2.5.2 The 250-volt battery bank and charger shall be demonstrated OPERABLE:
- a. At least once per 7 days by verifying that:
    - 1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks,
    - 2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level (fluid at the bottom of the maximum level indication mark), is greater than or equal to 1.200,
    - 3. The pilot cell voltage is greater than or equal to 2.13 volts, and
    - 4. The overall battery voltage is greater than or equal to 250 volts.
  - b. At least once per 92 days by verifying that:
    - 1. The voltage of each connected cell is greater than or equal to 2.13 volts under float charge.
    - 2. The specific gravity, corrected to 77°F and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and
    - 3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**SURVEILLANCE REQUIREMENTS (Continued)**

- c. At least once per 18 months by verifying that:
  - 1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration.
  - 2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.
  - 3. The battery charger will supply at least 10 amperes at greater than or equal to 250 volts for at least 4 hours.
- d. At least once per 18 months perform a battery service test, during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the times specified of Table 4.8-3 with the battery charger disconnected. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout the battery service test.
- e. At least once per 60 months, conduct a performance test of battery capacity during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. When this test is performed in place of a battery service test, a modified performance test shall be conducted.

Annual performance tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% from its capacity on the previous performance test, or is below 90% of the manufacturer's rating. If the battery has reached 85% of service life, delivers a capacity of 100% or greater of the manufacturer's rated capacity, and has shown no signs of degradation, performance testing at two year intervals is acceptable until the battery shows signs of degradation.

TABLE 4.8-3

BATTERY EMERGENCY LOADS

<u>"N" Battery Loads</u>	<u>Minimum Time</u>
Auxiliary feedwater turbine control bus	4 hours
FMO-211 valve	4 hours
FMO-221 valve	4 hours
FMO-231 valve	4 hours
FMO-241 valve	4 hours
TDTV valve	4 hours

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**3/4.8.3 Alternative A.C. Power Sources**

**LIMITING CONDITION FOR OPERATION**

3.8.3.1 The steady state bus voltage for the manual alternate reserve source\* shall be greater than or equal to 90% of the nominal bus voltage.

**APPLICABILITY:** Whenever the manual alternate reserve source (69 kV) is connected to more than two buses.

**ACTION:** With bus voltage less than 90% nominal, adjust load on the remaining buses to maintain steady state bus voltage greater than or equal to 90% limit.

**SURVEILLANCE REQUIREMENTS**

4.8.3.1 No additional surveillance requirements other than those required by Specifications 4.8.1.1.1 and 4.8.1.2.

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\*Shared with D.C. Cook Unit 2.

**3/4 BASES**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

The AB and CD station battery systems provide a reliable source of continuous power for supply and control of plant loads such as switchgear and annunciator control circuits, static inverters, valve control centers, emergency lighting and motor control centers. The design duty cycles of these batteries are composite load profiles resulting from the combination of the three hour Loss Of Coolant Accident/Loss Of Offsite Power battery load profiles and the four hour Station Blackout battery load profiles.

The train N station battery system provides an independent 250 volt DC power supply for power and control of the turbine driven auxiliary feedwater pump train. The limiting conditions of operation for the train N battery are consistent with the requirements of the auxiliary feedwater system. The surveillance requirements for the train N battery system are consistent with the requirements of the AB and CD station batteries. The train N battery loads are derived from equipment in the turbine driven auxiliary feedwater pump train and battery sizing is consistent with the functional requirements of these components. Simulated loads for battery tests are loads equivalent to measured actual loads.

**3/4 BASES**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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Removal of accumulated water as required by 4.8.1.1.2.b.2 is performed by drawing the contents off the bottom of the tank until acceptable results are obtained for either a tape test or a water and sediment test. An acceptable result for the water and sediment content is a measured value less than 0.05 percent volume.

The sample specified in 4.8.1.1.2.c.4 is sent offsite for testing. A serious attempt will be made to meet the 31-day limit on the offsite tests; however, if for some reason this limit is not met (e.g., if the sample is lost or broken or if the results are not received in 31 days), the diesel generators should not be considered inoperable. If the sample is lost, broken, or fails the offsite tests and the new oil has already been put into the storage tank, the offsite tests will be performed on a sample taken from the storage tank. If the results on the subsequent storage tank sample are not within specified limits, the diesel generators should be considered OPERABLE and the out-of-spec properties should be returned to within specification as soon as possible.

If the monthly storage tank sample taken in accordance with Specification 4.8.1.1.2.d fails the particulate contamination test, the diesel generators should be considered OPERABLE and the contamination level should be restored to below 10 mg/liter as soon as possible.

The precision leak-detection test described in Surveillance Requirement 4.8.1.1.2.f.2 should be performed as described in NFPA (National Fire Protection Association) -329. As NFPA-329 is revised, the precision leak-detection test may be modified to incorporate changes to the test as described in the revisions to NFPA-329.

The minimum required diesel fuel oil volume is 43,240 gallons. This volume is consistent with operation of one diesel generator continuously for 7 days at rated load, as recommended in Regulatory Guide 1.137, entitled "Fuel Oil System for Standby Diesel Generators." The Technical Specifications require a minimum of 46,000 gallons of fuel. The 46,000 gallons is an indicated volume. This amount includes margin for characteristics such as location of the tank discharge pipes and slope of the tanks.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 183  
License No. DPR-74

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated December 20, 1993, as supplemented July 19, 1994, and February 28, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 183, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John B. Hickman, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: August 22, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 183

FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE

IX  
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**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**D.C. DISTRIBUTION - OPERATING**

**LIMITING CONDITION FOR OPERATION**

3.8.2.3 The following D.C. bus trains shall be energized and OPERABLE with tie breakers between bus trains open:

TRAIN AB consisting of 250-volt D.C. bus AB, 250-volt D.C. battery bank No. 2AB, and a full capacity charger, and

TRAIN CD consisting of 250-volt D.C. bus CD, 250-volt D.C. battery bank No. 2CD, and a full capacity charger.

**APPLICABILITY:** MODES 1, 2, 3 and 4.

**ACTION**

a. With one 250-volt D.C. bus inoperable, restore the inoperable bus to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one 250-volt D.C. battery and/or its charger inoperable, restore the inoperable battery and/or charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

**SURVEILLANCE REQUIREMENTS**

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized with tie breakers open at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.3.2 Each 250-volt battery bank and charger shall be demonstrated OPERABLE

a. At least once per 7 days by verifying that:

1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks,
2. The pilot cell specific gravity, corrected to 77°F, and full electrolyte level (fluid at the bottom of the maximum level indication mark), is greater than or equal to 1.200,
3. The pilot cell voltage is greater than or equal to 2.13 volts, and
4. The overall battery voltage is greater than or equal to 250 volts.

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**SURVEILLANCE REQUIREMENTS (Continued)**

- b. At least once per 92 days by verifying that:
1. The voltage of each connected cell is greater than or equal to 2.13 volts under float charge.
  2. The specific gravity, corrected to 77°F, and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and
  3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.
- c. At least once per 18 months by verifying that:
1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,
  2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material,
  3. The battery charger will supply at least 140 amperes at greater than or equal to 250 volts for at least 4 hours.\*
- d. At least once per 18 months, perform a battery service test during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the design duty cycle which is based on the composite load profile. The composite load profile envelopes both the LOCA/LOOP and Station Blackout profiles and provides the basis for the times listed in Table 4.8-2. The battery charger will be disconnected throughout the test. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout this test.\*
- e. At least once per 60 months, conduct a performance test of battery capacity during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. When this test is performed in place of a battery service test, a modified performance test shall be conducted.

Annual performance tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% from its capacity on the previous performance test, or is below 90% of the manufacturer's rating. If the battery has reached 85% of service life, delivers a capacity of 100% or greater of the manufacturer's rated capacity, and has shown no signs of degradation, performance testing at two year intervals is acceptable until the battery shows signs of degradation.

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\*The provisions of Specification 4.0.9 are applicable to the 2-CD battery and charger.

TABLE 4.8-2

BATTERY EMERGENCY LOADS

<u>AB Battery Loads</u>	<u>Minimum Time</u>
1. Channel III static inverter	4 hrs
2. Channel IV static inverter	4 hrs
3. BOP static inverter*	4 hrs
4. East feed pump turbine emergency oil pump	1 hr
5. Control room emergency lighting	4 hrs
6. Main turbine east emergency oil pump	1 hr
7. Isolation valve control	4 hrs
8. All control circuits	4 hrs

<u>CD Battery Loads</u>	<u>Minimum Time</u>
1. Channel I static inverter	4 hrs
2. Channel II static inverter	4 hrs
3. West feed pump turbine emergency oil pump	1 hr
4. Generator hydrogen emergency seal air-oil pump	4 hrs
5. Main turbine west emergency oil pump	1 hr
6. Isolation valves	4 hrs
7. Annunciators	4 hrs
8. All control circuits	4 hrs

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\*AC power sources to the inverters shall be turned off at the start of the test and may be turned on at the end of the specified time interval. Inverters may be left in this operating mode for the duration of the discharge test.

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**D.C. DISTRIBUTION - SHUTDOWN**

**LIMITING CONDITION FOR OPERATION**

3.8.2.4 As a minimum, the following D.C. electrical equipment and bus shall be energized and OPERABLE:

1 - 250-volt D.C. bus, and

1 - 250-volt battery bank and charger associated with the above D.C. bus.

**APPLICABILITY:** MODES 5 and 6.

**ACTION:**

With less than the above complement of D.C. equipment and bus OPERABLE, establish CONTAINMENT INTEGRITY within 8 hours.

**SURVEILLANCE REQUIREMENTS**

4.8.2.4.1 The above required 250-volt D.C. bus shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.4.2 The above required 250-volt battery bank and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.\*

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\*The provisions of Specification 4.0.9 are applicable to the Surveillance Requirements 4.8.2.3.2.c.3 and 4.8.2.3.2.d for the 2-CD battery and charger.

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**D.C. DISTRIBUTION - OPERATING - TRAIN N BATTERY SYSTEM**

**LIMITING CONDITION FOR OPERATION**

3.8.2.5 The following D.C. bus train shall be energized and OPERABLE:

TRAIN N consisting of 250-volt D.C. bus N, 250-volt D.C. battery bank N, and a full capacity charger.

**APPLICABILITY:** MODES 1, 2 and 3.

**ACTION**

With the Train N battery system inoperable, declare the turbine driven Auxiliary Feedwater Pump inoperable and follow the ACTION statement of Specification 3.7.1.2.

**SURVEILLANCE REQUIREMENTS**

4.8.2.5.1 The D.C. bus train N shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability.

4.8.2.5.2 The 250-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1. The electrolyte level of each pilot cell is between the minimum and maximum level indication marks,
2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level (fluid at the bottom of the maximum level indication mark), is greater than or equal to 1.200,
3. The pilot cell voltage is greater than or equal to 2.13 volts, and
4. The overall battery voltage is greater than or equal to 250 volts.

b. At least once per 92 days by verifying that:

1. The voltage of each connected cell is greater than or equal to 2.13 volts under float charge.
2. The specific gravity, corrected to 77°F and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and
3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months by verifying that:
  - 1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration.
  - 2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.
  - 3. The battery charger will supply at least 10 amperes at greater than or equal to 250 volts for at least 4 hours.
  
- d. At least once per 18 months perform a battery service test, during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the times specified of Table 4.8-3 with the battery charger disconnected. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout the battery service test.
  
- e. At least once per 60 months, conduct a performance test of battery capacity during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. When this test is performed in place of a battery service test, a modified performance test shall be conducted.

Annual performance tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% from its capacity on the previous performance test, or is below 90% of the manufacturer's rating. If the battery has reached 85% of service life, delivers a capacity of 100% or greater of the manufacturer's rated capacity, and has shown no signs of degradation, performance testing at two year intervals is acceptable until the battery shows signs of degradation.

TABLE 4.8-3

BATTERY EMERGENCY LOADS

<u>"N" Battery Loads</u>	<u>Minimum Time</u>
Auxiliary feedwater turbine control bus	4 hours
FMO-211 valve	4 hours
FMO-221 valve	4 hours
FMO-231 valve	4 hours
FMO-241 valve	4 hours
TDTV valve	4 hours

**3/4.0 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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**3/4.8.3 Alternative A.C. Power Sources**

**LIMITING CONDITION FOR OPERATION**

**3.8.3.1** The steady state bus voltage for the manual alternate reserve source\* shall be greater than or equal to 90% of the nominal bus voltage.

**APPLICABILITY:** Whenever the manual alternate reserve source (69 kV) is connected to more than two buses.

**ACTION:** With bus voltage less than 90% nominal, adjust load on the remaining buses to maintain steady state bus voltage greater than or equal to 90% limit.

**SURVEILLANCE REQUIREMENTS**

**4.8.3.1** No additional surveillance requirements other than those required by Specifications 4.8.1.1.1 and 4.8.1.2.

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\*Shared with Cook Nuclear Plant Unit 1.

**3/4 BASES**  
**3/4.8 ELECTRICAL POWER SYSTEMS**

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The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

The AB and CD station battery systems provide a reliable source of continuous power for supply and control of plant loads such as switchgear and annunciator control circuits, static inverters, valve control centers, emergency lighting and motor control centers. The design duty cycles of these batteries are composite load profiles resulting from the combination of the three hour Loss Of Coolant Accident/Loss Of Offsite Power battery load profiles and the four hour Station Blackout battery load profiles.

The train N station battery system provides an independent 250 volt DC power supply for power and control of the turbine driven auxiliary feedwater pump train. The limiting conditions of operation for the train N battery are consistent with the requirements of the auxiliary feedwater system. The surveillance requirements for the train N battery system are consistent with the requirements of the AB and CD station batteries. The train N battery loads are derived from equipment in the turbine driven auxiliary feedwater pump train and battery sizing is consistent with the functional requirements of these components. Simulated loads for battery tests are loads equivalent to measured actual loads.

3/4 BASES

3/4.8 ELECTRICAL POWER SYSTEMS

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Removal of accumulated water as required by 4.8.1.1.2.b.2 is performed by drawing the contents off the bottom of the tank until acceptable results are obtained for either a tape test or a water and sediment test. An acceptable result for the water and sediment content is a measured value less than 0.05 percent volume.

The sample specified in 4.8.1.1.2.c.4 is sent offsite for testing. A serious attempt will be made to meet the 31-day limit on the offsite tests; however, if for some reason this limit is not met (e.g., if the sample is lost or broken or if the results are not received in 31 days), the diesel generators should not be considered inoperable. If the sample is lost, broken, or fails the offsite tests and the new oil has already been put into the storage tank, the offsite tests will be performed on a sample taken from the storage tank. If the results on the subsequent storage tank sample are not within specified limits, the diesel generators should be considered OPERABLE and the out-of-spec properties should be returned to within specification as soon as possible.

If the monthly storage tank sample taken in accordance with Specification 4.8.1.1.2.d fails the particulate contamination test, the diesel generators should be considered OPERABLE and the contamination level should be restored to below 10 mg/liter as soon as possible.

The precision leak-detection test described in Surveillance Requirement 4.8.1.1.2.f.2 should be performed as described in NFPA (National Fire Protection Association) -329. As NFPA-329 is revised, the precision leak-detection test may be modified to incorporate changes to the test as described in the revisions to NFPA-329.

The minimum required diesel fuel oil volume is 43,240 gallons. This volume is consistent with operation of one diesel generator continuously for 7 days at rated load, as recommended in Regulatory Guide 1.137, entitled "Fuel Oil System for Standby Diesel Generators." The Technical Specifications require a minimum of 46,000 gallons of fuel. The 46,000 gallons is an indicated volume. This amount includes margin for characteristics such as location of the tank discharge pipes and slope of the tanks.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-58  
AND AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By letter dated December 20, 1993, as supplemented July 19, 1994, and February 28, 1995, the Indiana Michigan Power Company (the licensee) requested amendments to the Technical Specifications (TS) appended to Facility Operating License Nos. DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. The purpose of this change was to revise TS Table 4.8-2 from 8-hour to composite 4-hour battery emergency loads for AB (Train B) and CD (Train A) batteries. In addition, the licensee proposed to delete a load from the Train B batteries load list. Also, the proposed change would modify TS Table 4.8-3 for the Train N batteries to accurately reflect the operational loads of these batteries as recorded in their composite profiles.

The July 19, 1994, supplement requested revision of the TS requirements for the 60-month surveillance to include testing requirements for a battery when it shows signs of degradation.

The February 28, 1995, supplement requested correction of certain inconsistencies in the TS and requested the addition of a modified performance test when a performance test is conducted in place of a service test. The inconsistencies included the TS statements of "battery service test" instead of "performance test" for the 60-month surveillance and "Refueling outage discharge tests shall be given to any battery that shows sign of degradation..." instead of "Annual performance tests...shall be given to any battery that shows signs of degradation...." The licensee proposed a modified performance test consisting of a 1-minute discharge at the maximum rate specified for the battery, followed by the performance test, where currents during both segments of the modified performance test are greater than or equal to the design-basis duty cycle currents for the battery.

2.0 EVALUATION

The staff's evaluation of the licensee's proposed changes to the TS for both units follows.

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## 2.1 Proposed Change to TS Section 4.8.2.3.2.d for Units 1 and 2

In its July 19, 1994, and February 28, 1995, submittals, the licensee proposed to change the D.C. Cook Nuclear Plant, Units 1 and 2, TS Section 4.8.2.3.2.d. At present, TS Section 4.8.2.3.2.d reads as follows: "At least once per 18 months, perform a battery service test during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the times specified in Table 4.8-2 with the battery charger disconnected. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout this test."

The amended TS section would read: "At least once per 18 months, perform a battery service test during shutdown (Modes 5 or 6) by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the design duty cycle which is based on the composite load profile. The composite load profile envelopes both the loss-of-coolant-accident/loss-of-offsite-power (LOCA/LOOP) and Station Blackout profiles and provides the basis for the times listed in Table 4.8-2. The battery charger will be disconnected throughout the test. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout this test."

In its December 20, 1993, submittal, the licensee proposed to change the existing 8-hour battery duty cycles to 4-hour composite duty cycles. The licensee stated that the existing 8-hour duty cycles contain two distinct requirements:

- (1) The nuclear-related dc loads must be supplied by the batteries for 3 hours. This requirement is based on a LOCA/LOOP event, a failure of the associated battery charger, and a reasonable period in which to restore the battery charger or the spare charger to service. This 3-hour requirement is included in Chapter 8 of the updated final safety analysis (UFSAR).
- (2) Based on the operational experience, the turbine shutdown loads are required for 8 hours to properly cool down oil lubricated components of the main and feed pump turbines.

The licensee stated that D.C. Cook Nuclear Plant has committed to 4-hour station blackout (SBO) battery duty cycles with load shedding of certain loads 1 hour into the event. These two duty cycles form the basis for the proposed 4-hour composite load profiles. 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 envelop the worst-case profile for each battery and, as such, represent conservative sizing/application of the Class 1E batteries.

The staff finds that the proposed TS change complies with General Design Criterion 17 in Appendix A to 10 CFR Part 50 and Standard Review Plan Section 8.3.2 (NUREG-0800) and is therefore acceptable.

## 2.2 Proposed Change to TS Section 4.8.2.3.2.e for Units 1 and 2

In its July 19, 1994, and February 28, 1995, submittals, the licensee proposed to change the D.C. Cook Nuclear Plant, Units 1 and 2, TS Section 4.8.2.3.2.e. At present, the TS section reads as "At least once per 60 months, perform a battery discharge test during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. This performance discharge test shall be performed in place of the battery service test."

The amended TS section would read as follows:

"At least once per 60 months, conduct a performance test of battery capacity during shutdown (MODES 5 or 6) by verifying that the battery capacity is at least 80% of the manufacturer's rating. When this test is performed in place of a battery service test, a modified performance test shall be conducted.

"Annual performance tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% from its capacity on the previous performance test, or is below 90% of the manufacturer's rating. If the battery has reached 85% of service life, delivers a capacity of 100% or greater of the manufacturer's rated capacity, and has shown no signs of degradation, performance testing at two year intervals is acceptable until the battery shows signs of degradation."

The licensee modified this section to make it consistent with the requirements of the Institute of Electrical and Electronics Engineers (IEEE) Standard 450 (1987) and Standard Technical Specifications. A modified performance test consists of a 1-minute discharge at the maximum rate specified for the battery, followed by the performance test. Currents during both segments of the modified performance test are greater than or equal to the design-basis duty cycle currents for the battery. A modified performance test is a test of the capability of the battery to provide a high-current, short-duration load at greater than the minimum design voltage, followed by a test of the capability of the battery to provide sufficient current at above the minimum design voltage for the duration of the design duty cycle.

The staff finds that the proposed TS change complies with General Design Criterion 17 in Appendix A to 10 CFR Part 50 and Standard Review Plan Section 8.3.2 (NUREG-0800) and is therefore acceptable.

## 2.3 Proposed Change to TS Table 4.8-2 for Units 1 and 2

The licensee proposed to change the D.C. Cook Nuclear Plant, Units 1 and 2, TS Table 4.8-2. At present, TS Table 4.8-2 is as shown on the following page:

TABLE 4.8-2

BATTERY EMERGENCY LOADS

<u>AB Battery Loads</u>	<u>Minimum Time</u>
1. Channel III static inverter	3 hrs
2. Channel IV static inverter	3 hrs
3. Computer static inverter*	3 hrs
4. Feed pump turbine [1E/2E] oil pump	1 hr
[4. BOP static inverter *	3 hrs (Unit 2)]
5. Control room emergency lighting	8 hrs
6. Main turbine emergency oil pump	3 hrs
7. Isolation valve control	8 hrs
8. All control circuits	8 hrs
 <u>CD Battery Loads</u>	
1. Channel I static inverter	3 hrs
2. Channel II static inverter	3 hrs
[3. BOP static inverter *	3 hrs (Unit 1)]
4. Feed pump turbine [1W/2W] oil pump	1 hr
5. Generator seal oil pump	5 hrs (8 hrs Unit 1)
6. Main turbine emergency oil pump	3 hrs
7. Isolation valves	8 hrs
8. Annunciators	8 hrs
9. All control circuits	8 hrs

\* AC power sources to the inverters shall be turned off at the start of the test and may be turned on at the end of the specified time interval. Inverters may be left in this operating mode for the duration of the discharge test.

The amended Table 4.8-2 is as shown below:

TABLE 4.8-2  
BATTERY EMERGENCY LOADS

<u>AB Battery Loads</u>	<u>Minimum Time</u>
1. Channel III static inverter	4 hrs
2. Channel IV static inverter	4 hrs
[3. BOP static inverter *	4 hrs (Unit 2)]
3. East feed pump turbine emergency oil pump	1 hr
4. Control room emergency lighting	4 hrs
5. Main turbine backup oil pump	1 hr
6. Isolation valve control	4 hrs
7. All control circuits	4 hrs
 <u>CD Battery Loads</u>	
1. Channel I static inverter	4 hrs
2. Channel II static inverter	4 hrs
[3. BOP static inverter *	4 hrs (Unit 1)]
4. West feed pump turbine emergency oil pump	1 hr
5. Generator hydrogen emergency seal oil pump	4 hrs
6. Main turbine emergency oil pump	1 hr
7. Isolation valves	4 hrs
8. Annunciators	4 hrs
9. All control circuits	4 hrs

\* AC power sources to the inverters shall be turned off at the start of the test and may be turned on at the end of the specified time interval. Inverters may be left in this operating mode for the duration of the discharge test.

The licensee revised the minimum time of the battery emergency loads to reflect the time duration included in the composite profiles. The composite profiles of the batteries envelop the worst-case conditions for the station batteries. Additionally, the computer static inverter load is removed from Table 4.8-2 since this load was physically removed from the AB batteries as a function of design change. The power for this load is now supplied from the Technical Support Center Uninterruptible Power Supply System.

The proposed TS change complies with General Design Criterion 17 in Appendix A to 10 CFR Part 50 and Standard Review Plan Section 8.3.2 (NUREG-0800). Therefore, the staff finds the proposed TS change acceptable.

#### 2.4 Proposed Change to TS Section 4.8.2.5.2.e for Units 1 and 2

In its July 19, 1994, and February 28, 1995, submittals, the licensee proposed to change the D.C. Cook Nuclear Plant, Units 1 and 2, TS Section 4.8.2.5.2.e. At present, TS Section 4.8.2.5.2.e reads as follows: "At least once per 60 months perform a battery discharge test during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. This performance discharge test shall be performed in place of the battery service test."

The amended TS would read:

"At least once per 60 months, conduct a performance test of battery capacity during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. When this test is performed in place of a battery service test, a modified performance test shall be conducted.

"Annual performance tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% from its capacity on the previous performance test, or is below 90% of the manufacturer's rating. If the battery has reached 85% of service life, delivers a capacity of 100% or greater of the manufacturer's rated capacity, and has shown no signs of degradation, performance testing at two year intervals is acceptable until the battery shows signs of degradation."

The licensee modified this section of the TS to make it consistent with the requirements of IEEE Standard 450 (1987) and Standard Technical Specifications.

The staff finds that the proposed TS change complies with General Design Criterion 17 in Appendix A to 10 CFR Part 50 and Standard Review Plan Section 8.3.2 (NUREG-0800) and is therefore acceptable.

2.5 Proposed Change to TS Table 4.8-3 for Units 1 and 2

The licensee proposed to change the D.C. Cook Nuclear Plant, Units 1 and 2, TS Table 4.8-3. At present, TS Table 4.8-3 is as shown below:

TABLE 4.8-3

BATTERY EMERGENCY LOADS

<u>"N" Battery Loads</u>	<u>Minimum Time</u>
Auxiliary feedwater turbine control bus	4 hrs
FMO-211 valve	* hrs
FMO-221 valve	* hrs
FMO-231 valve	* hrs
FMO-241 valve	* hrs
TDTV valve	* hrs

\* Valves will be operated through the following sequence:

1. Beginning of test: open valves
2. Five minutes after the beginning of the test: close the valves.
3. Ten minutes after the beginning of the test: reopen the valves.
4. Four hours after the beginning of the test: close the valves.

End of the test.

The amended Table 4.8-3 is as shown below:

TABLE 4.8-3

BATTERY EMERGENCY LOADS

<u>"N" Battery Loads</u>	<u>Minimum Time</u>
Auxiliary feedwater turbine control bus	4 hours
FMO-211 valve	4 hours
FMO-221 valve	4 hours
FMO-231 valve	4 hours
FMO-241 valve	4 hours
TDTV valve	4 hours

The licensee revised the minimum time column and deleted the operating sequence list of Table 4.8-3. The licensee stated that these modifications do not change the TS 4-hour duty cycle of the Train N batteries in the TS. Rather, the modifications are intended to more accurately reflect the operation of the Train N battery loads as recorded in the composite profiles for these batteries. The licensee stated that removal of the valve operating sequence portion of the table will have no impact on the testing of the valves to the composite profiles. The licensee stated that these batteries will be tested to their design-basis duty cycles using simulated loading. Also, the Train N composite profiles envelop the worst-case conditions for these batteries. The composite load profiles for the Train N batteries, which remain unchanged at 4-hours duration, are more conservative and more accurately reflect the postulated loads on these batteries than those listed in the TS. The valve operating sequence list of Table 4.8-3 is deleted because it is no longer used to place actual loads on the Train N batteries during surveillance testing.

The proposed TS change complies with General Design Criterion 17 in Appendix A to 10 CFR Part 50 and Standard Review Plan Section 8.3.2 (NUREG-0800). Therefore, the staff finds the proposed TS change acceptable.

## 2.6 Summary

By letter dated December 20, 1993, the licensee requested an amendment to the TS for the Donald C. Cook Nuclear Plant, Units 1 and 2. The purpose of this change is to revise TS Table 4.8-2 from 8-hour to composite 4-hour battery emergency loads for AB (Train B) and CD (Train A) batteries. In addition, the licensee proposed to delete a load on the Train B batteries load list. Also, this proposed change modifies TS Table 4.8-3 for the Train N batteries to accurately reflect the operational loads of these batteries as recorded in their composite profiles. The licensee revised its submittal on July 19, 1994, and February 28, 1995, to include testing requirements, associated with the 60-month surveillance, for a battery when it shows sign of degradation and the addition of a modified performance test when a performance test is conducted in place of a battery service test.

The staff finds the proposed TS comply with General Design Criterion 17 in Appendix A to 10 CFR Part 50 and Standard Review Plan Section 8.3.2 (NUREG-0800). Therefore, the requested changes to the TS as discussed in this safety evaluation are approved.

## 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendments. The State official had no comments.

## 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released

offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding (59 FR 4939 and 60 FR 29879). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

#### 5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (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 Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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