



**INDIANA  
MICHIGAN  
POWER**

**Indiana Michigan  
Power Company**  
Nuclear Generation Group  
One Cook Place  
Bridgman, MI 49106  
aep.com

January 14, 2009

AEP-NRC-2008-1  
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 Revise Operating Licenses DPR-58 and DPR-74,  
Appendix B, Environmental Technical Specifications, Part II, Non-Radiological  
Environmental Protection Plan

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 (OL) DPR-58 and DPR-74. I&M proposes to modify the OL, Appendix B, Environmental Technical Specifications (TS), Part II, "Non-Radiological Environmental Protection Plan," for CNP Units 1 and 2. The amendment request is administrative in nature and is intended to delete obsolete program information and relieve CNP of the burden of preparing and submitting unnecessary environmental reports.

Attachment 1 provides an affirmation statement pertaining to this letter. Attachment 2 provides I&M's evaluation of the proposed change. Enclosure 1 to this letter provides a mark-up of the affected OL reflecting the proposed changes. Enclosure 2 to this letter provides a mark-up of the affected OL, Appendix B, Environmental TS, Part II, Non-Radiological Environmental Protection Plan pages reflecting the proposed changes.

I&M requests approval of the proposed amendment by January 31, 2010. The proposed amendment will be implemented within 60 days of Nuclear Regulatory Commission approval. Copies of this letter and its attachments and enclosures 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.

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JE25  
NRR

There are no new or revised regulatory commitments in this letter.

Should you have any questions, please contact Mr. John A. Zwolinski, Regulatory Affairs Manager, at (269) 466-2478.

Sincerely,



Lawrence J. Weber  
Site Vice President

SLA/rdw

Attachments:

- 1 Affirmation
- 2 Indiana Michigan Power Company's Evaluation

Enclosures:

- 1 Donald C. Cook Nuclear Plant Operating Licenses DPR-58 and DPR-74 Marked to Show Changes
- 2 Donald C. Cook Nuclear Plant Operating Licenses DPR-58 and DPR-74, Appendix B, Environmental Technical Specifications, Part II, Non-Radiological Environmental Protection Plan Marked to Show Changes

c: T. A. Beltz, NRC Washington, DC  
J. L. Caldwell, NRC Region III  
K. D. Curry, Ft. Wayne AEP, w/o enclosures/attachments  
J. T. King, MPSC  
MDEQ – WHMD/RPS  
NRC Resident Inspector

Attachment 1 to AEP-NRC-2008-1

AFFIRMATION

I, Lawrence J. Weber, 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



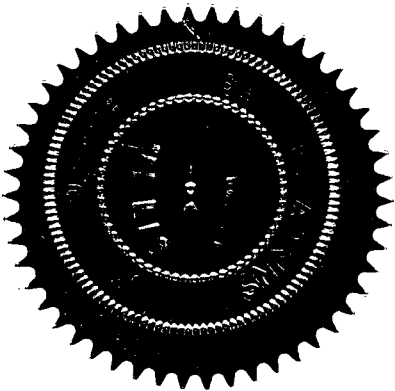
Lawrence J. Weber  
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 14<sup>th</sup> DAY OF January, 2009

Sarah L. Adkins  
Notary Public

My Commission Expires 9/9/2011



**INDIANA MICHIGAN POWER COMPANY'S EVALUATION**

**Subject:** License Amendment Request to Revise Operating Licenses DPR-58 and DPR-74, Appendix B, Environmental Technical Specifications, Part II, Non-Radiological Environmental Protection Plan.

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## 1.0 DESCRIPTION

This letter is a request by Indiana Michigan Power Company (I&M) to amend Facility Operating Licenses (OL) DPR-58 and DPR-74 for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2. The proposed change modifies the OL Condition 2.C.(2), and Appendix B, Environmental Technical (TS), Part II, "Non-Radiological Environmental Protection Plan," (EPP). The amendment request is administrative in nature and is intended to delete obsolete program information and relieve CNP of the burden of preparing and submitting unnecessary environmental reports.

## 2.0 PROPOSED CHANGE

The proposed activity is a revision to the licensing basis as described in the OL, Appendix B, Environmental TS, Part II, Non-Radiological EPP. The specific proposed changes are described below and are shown in the enclosure to this letter. The enclosure provides Unit 1 and Unit 2 OL's and single set of Environmental TS applicable to both the Unit 1 and Unit 2 OL's.

The change to the title of Appendix B deletes the phrase "Environmental Technical Specifications."

The entire Appendix B is retyped with a new font.

The changes in Section 1.0 replace "Environmental Protection Plan" with "Non-Radiological Environmental Protection Plan." The words "construction and" are deleted. The Final Environmental Statement (FES) is defined within the section instead of in the footer. The words "Operating License Stage" are added after FES.

The changes in Section 2.1 replace the entire section with the following statements: "Effluent limitations and monitoring requirements are contained in the effective NPDES or Groundwater permits issued by the federal or state permitting authority. The NRC will rely on these agencies for regulation of these matters as they involve water quality and aquatic biota."

The change in Section 2.2 deletes the word "remaining" in the first sentence.

The changes in Section 3.1 insert the word "significantly" with regards to affecting the environment. The sentence "Activities are excluded from this requirement if all measurable non-radiological effects are confined to the on-site areas previously disturbed during site preparation and plant construction" is added. The reference to the Annual Environmental Operating Report is deleted.

The change in Section 3.2 replaces the entire section with the following statements: "The NRC shall be provided with a copy of the current NPDES permit or state certification within 30 days of approval. Changes to the NPDES permit or state certification shall be reported to the NRC within 30 days of the date the change is approved."

The changes in Section 3.3 replace the phrase "...which are required to achieve compliance with..." with the phrase "...that are either regulated or mandated by..." An additional sentence has been added to state, "However, if any environmental impacts of a change are not evaluated under other federal, state, or local environmental regulations, then those impacts are subject to the requirements of Section 3.1."

The change in Section 4.1 adds the words "Operations Center," deletes the phrase "...by telephone, telegraph, or facsimile transmissions..." and adds the statements "If an event is reportable under 10 CFR 50.72, then a duplicate immediate report under this Subsection is not required. However, a written report is required in accordance with Section 5.4.2."

The changes in Section 5.2 replace the phrase "...and logs relative to the environmental aspects of plant operation..." with the phrase "...associated with this EPP..." and deletes the phrase "...and logs..." The changes also replace the phrase "...for the life of the plant..." with the phrase "...until the date of the termination of the Operating License." The last change replaces the phrase "...,data and logs..." with the phrase "...and procedures..."

The change in Section 5.4.1 deletes the entire section relating to Routine Reports.

### **3.0 BACKGROUND**

The EPP was established during initial plant licensing. The regulatory basis for the establishment of the EPP was 10 CFR 50.36(b), "Environmental conditions." This regulation requires that any obligations in the environmental area identified by the NRC during their operating license review be included in an attachment to the license. In many cases, the required monitoring programs have been completed and the results have demonstrated that the environmental impacts are negligible.

Operation of the facility is governed by the environmental requirements of other Federal (i.e., the Environmental Protection Agency (EPA)), state, and local agencies and must comply with the applicable protection regulations. The Nuclear Regulatory Commission (NRC) relies on these agencies to regulate the nuclear generating stations in environmental matters. No environmental protection requirements established by other agencies are being reduced by the proposed modification of Appendix B of CNP's OLs.

### **4.0 TECHNICAL ANALYSIS**

#### **4.1 Specific Analysis and Justification**

The changes explained below are consistent with NRC-approved industry practices as indicated by References 1 and 2.

The change to the title of Appendix B deletes the phrase "Environmental Technical Specifications." This change clarifies the entire content of Appendix B is the Environmental Protection Plan.

The entire Appendix B is retyped using a more legible font for clarity.

#### **Section 1.0 Objectives of the Environmental Protection Plan**

The proposed change is to clarify the types of documents discussed. This is an administrative change to improve clarity and understanding and does not change the objective of the original statement. Construction is complete at CNP; therefore, the reference to construction is deleted.

## Section 2.1 Aquatic Issues

This section of the EPP currently references the State of Michigan, Department of Natural Resources as the issuer of the National Pollutant Discharge Elimination System (NPDES) Permit. The proposed change will standardize the issuer of the NPDES Permit to be the federal or state permitting authority. The use of a more generic reference to the permitting authority will prevent future changes to the structure of the state governments from creating new inconsistencies. As described below, the issues currently identified in Section 2.1.1 through 2.1.8 are addressed by federal or state permits or authorizations and need not be restated.

The NPDES Permit (MI0005827, dated December 13, 2007), Parts I.A.1, I.A.1.h, and I.A.7, maintain Section 2.1.1 requirements to limit heat addition to protect the aquatic environment. Part I.A.1 provides effluent limitations and monitoring requirements for CNP's circulating water discharge to Lake Michigan, outfall sources 001 and 002. Part I.A.1.h requires CNP to report the total of heat loads discharged through outfalls 001 and 002 under outfall 001, in addition to reporting the heat loads discharged individually for the outfalls 001 and 002. Part I.A.7 provides the Michigan Department of Environmental Quality (MDEQ) the ability to modify the permit in accordance with applicable laws and rules to add appropriate temperature limitations or requirements.

The NPDES Permit, Part I.A.9, maintains Section 2.1.2 requirements to limit deicing discharge to avoid possible adverse effects on lake biota. Part I.A.9 authorized CNP to discharge a portion of the flow from outfall 001 and 002 through an intake structure to prevent ice buildup. CNP is not required to provide any additional monitoring of this discharge because the effluent limitations and monitoring requirements specified for the outfall sources in Parts I.A.1, I.A.1.h, and I.A.7 will determine compliance with applicable water quality standards and any other requirements.

The NPDES Permit, Parts I.A.1 and I.A.e, maintain Section 2.1.3 requirements to limit chlorine to protect aquatic life during plant operation. These parts require CNP to limit and monitor the discharge of chlorine. Total Residual Oxidant (chlorine and bromine) requirements include monitoring during periods of chlorine and bromine use and subsequent discharge.

The Groundwater Discharge Authorization (GW1810102, dated March 8, 2007), Parts A, B, and C, maintain Section 2.1.4 requirements to monitor the movement of chemicals introduced into the groundwater. These parts require CNP to monitor and limit wastewater discharge. CNP is required to submit self-monitoring reports for each calendar month of an authorized discharge. In the event of non-compliance with limitations, including any detected by additional sampling, CNP is required to provide written notification to the MDEQ within seven calendar days, resample and analyze the parameter(s) of concern within fourteen days, and submit a report providing the results of confirmation sampling, an evaluation of the reasons for the limit being exceeded and the steps taken or proposed to prevent recurrences.

The Wastewater Discharge Permit Application (dated April 1, 2003) and the NPDES Permit maintain Section 2.1.5 requirements to limit plant discharge of corrosion and deposit inhibitors. MDEQ authorization is required before the discharge of water additives. If CNP proposes to discharge water additives, including an increased discharge concentration of a previously approved water additive, CNP is required to request MDEQ approval.

The NPDES Permit, Part I.A.11, maintain Sections 2.1.6 – 2.1.8 requirements to establish an aquatic monitoring program, including a visual underwater observation program, and perform and submit the results of special studies. Part I.A.11 requires CNP to establish a program necessary to comply with section 316(b) of the Clean Water Act.

### Section 2.2 Terrestrial Issues

The change in Section 2.2 is grammatical in nature. Previous terrestrial issues included studies along transmission lines for flora and fauna as required by previous versions of Appendix B.

### Section 3.1 Plant Design and Operation

The first change in Section 3.1 inserts the word “significantly” in front of the words “...affecting the environment...” The word “significantly” differentiates between changes that have negligible impact on the environment and those that have more than a negligible impact that require NRC review.

The second change in Section 3.1 adds the sentence “Activities are excluded from this requirement if all measurable non-radiological effects are confined to the on-site areas previously disturbed during site preparation and plant construction.” This sentence was added to clarify evaluation requirements of activities on-site that do not extend beyond property lines, do not affect the public, and do not represent an environmental impact that significantly differs from previously evaluated conditions.

The third change to this section deletes the reference to the Annual Environmental Operating Report. With the deletion of the Annual Environmental Operating Report from Section 5.4.1, a reference within this section is not required.

### Section 3.2 Reporting Related to the NPDES Permits and State Certifications

Currently this section requires that violations, approved changes, proposed changes, and renewal applications involving the NPDES Permit or the state certification shall be reported to the NRC. 10 CFR 50.72(b)(2)(xi) states that the licensee shall notify the NRC as soon as practical and in all cases, within four hours of the occurrence of “...any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made.” The change proposed will relieve the administrative burden of making duplicative reports to the NRC for the same event as violations to the NPDES Permit or state certificates are reported in accordance with 10 CFR 50.72 and Section 5.4.2 of this EPP.

This section also currently requires that a proposed change be sent to the NRC at the same time as it is submitted to the permitting agency. To align CNP with NRC-approved industry practices, as documented in the precedents identified below, current copies of, and approved changes to, state and federal permits or certifications will continue to be reported to the NRC within 30 days following approval by the regulating agency. Information related to environmental permits will continue to be available on-site for NRC review.



### Section 3.3 Changes Required for Compliance with Other Environmental Regulations

The first change in Section 3.3 deletes the words "...which are required to achieve compliance with..." and adds the words "...that are either regulated or mandated by..." The addition of these words provides clarification to the rules and regulations to which this section applies. This section exempts those changes that are regulated or mandated by other federal, state, and local environmental regulations from the requirements of Section 3.1.

The second change in Section 3.3 adds a sentence stating, "However, if any environmental impacts of a change are not evaluated under other federal, state, or local environmental regulations, then those impacts are subject to the requirements of Section 3.1." This is an administrative change to improve clarity and understanding and does not change the objective of the original statement.

### Section 4.1 Unusual or Important Environmental Events

The change in Section 4.1 adds the words "...Operations Center..." in front of the words "...within 24 hours..." and deletes the words "...by telephone, telegraph, or facsimile transmissions..." This change reflects the current definition and provides a specific location to which notifications are communicated. Requirements are provided in the station's EPP to report unusual or important environmental events to the NRC within 24 hours. Unusual and important environmental events are defined as any occurrence of an event that indicates or could result in significant environmental impact causally related to plant operation. Such events shall be recorded and reported to the NRC within 24 hours and followed by a written report.

Similarly, 10 CFR 50.72(b)(2)(xi) states that the licensee shall notify the NRC as soon as practical and in all cases, within four hours of the occurrence of "...any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made." The change proposed will relieve the administrative burden of making duplicate reports to the NRC for the same event. Written reports are still required to be submitted in accordance with Section 5.4.2 of the EPP.

### Section 5.2 Records Retention

This section currently requires retention of records relative to the environmental aspects of plant operation and modifications determined to potentially affect the continued protection of the environment. An administrative requirement to maintain logs is deleted for clarity in that there are no dedicated environmental logs maintained at the site. Entries relative to the environment are maintained as part of operating logs and are required to be documented by specific state permits (i.e., NPDES Permit) and CNP environmental administrative procedures. The state permits and CNP administrative procedures provide proper environmental controls and management by requiring environmental reviews and surveillances. Records associated with non-routine reports will continue to be available to the NRC. The reference to environmental logs has been deleted for clarity but the purpose of the original statement is maintained.

The proposed change of the retention timeframe to the "termination of the operating license" makes the requirement consistent with similar requirements of other regulations (i.e., 10 CFR 50.59). This change has been proposed to provide clarity but does not change the objective of the requirement.

#### Section 5.4.1 Routine Reports

This section currently requires an annual environmental operating report to be submitted to the NRC by May 1 of each year. The report includes summaries and analyses of the results of the monitoring requirements of Section 4.2, a list of EPP non-compliances and the corrective actions taken to remedy them, a list of all changes in the station design or operation, tests, and experiments made in accordance with Section 3.1 involving potentially significant unreviewed environmental questions, and a list of non-routine reports submitted in accordance with Subsection 5.4.2.

The summaries and analyses of the results of the monitoring requirements of Section 4.2 are regulated by federal and state permitting authorities. Environmental non-compliances related to the health and safety of the public or onsite personnel, as well as unusual or important environmental events, are reported to the NRC in accordance with the guidance in 10 CFR 50.72, "Immediate notification requirements for operating nuclear power reactors." Section 10 CFR 50.72(b)(2)(xi) states that the licensee shall notify the NRC as soon as practical and in all cases, within four hours of the occurrence of "...any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made."

Changes in the station design or operation are evaluated under CNP procedures that implement Section 3.1 of this EPP. If an environmental evaluation indicates that an activity involves an unreviewed environmental question, or involves a change to the EPP, NRC approval must be obtained prior to implementation. As described above, Environmental non-compliances are reported as required by 10 CFR 50.72, "Immediate notification requirements for operating nuclear power reactors," and corrective actions will be included in the CNP Corrective Action Program.

Ongoing environmental monitoring and special study program results will be available to the NRC and deviations will be reported in accordance with Section 5.4.2 of the EPP or the Corrective Action Program. The submission of a list of the non-routine reports that have already been submitted would be redundant and administratively burdensome.

With reporting requirements fully addressed through 10 CFR 50.72, 10 CFR 50.90, and existing CNP programs, the administrative requirements to develop an Annual Environmental Operating Report may be deleted.

## **5.0 REGULATORY SAFETY ANALYSIS**

### **5.1 No Significant Hazards Consideration**

The proposed changes would revise Appendix B, Environmental Technical Specification (TS), Part II, "Non-Radiological Environmental Protection Plan," of the Operating License (OL) for each unit. These changes will relieve Donald C. Cook Nuclear Plant (CNP) of the burden of preparing and submitting unnecessary environmental reports, delete obsolete program information, and provide clarification.

CNP has evaluated the proposed changes to the Appendix B, Environmental TS, Part II, "Non-Radiological Environmental Protection Plan," using the criteria in 10 CFR 50.92, and has determined that the proposed changes do not involve a significant hazards consideration. The following information is provided to support a finding of no significant hazards consideration.

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

Response: No. The Environmental Protection Plant (EPP) is concerned with monitoring the effect that plant operations have on the environment for the purpose of protecting the environment and has no effect on any accident postulated in the Updated Final Safety Analysis Report (UFSAR). Accident probabilities or consequences are not affected in any way by the environmental monitoring and reporting required by the EPP. The revision or deletion of portions of Appendix B of the OL will not impact the design or operation of any plant system or component. No environmental protection requirements established by other federal, state, or local agencies are being reduced by this license amendment request.

Therefore, the proposed changes do not involve a significant increase in the probability of occurrence 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 proposed changes are administrative in nature. Environmental monitoring and reporting have no effect on accident initiation. The deletion of portions of Appendix B of the OL will not impact the design or operation of any plant system or component. There will be no affect on the types or amount of any effluents released from CNP.

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

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

Response: No. These proposed changes are administrative in nature. Changes in the reporting requirements and other administrative revisions in accordance with this submittal have no impact on margin of safety. Environmental evaluations will still be performed, when necessary, on changes to plant design or operation to assess the affect on environmental protection. Review, analysis, and investigation of unusual and important environmental events will still be performed in accordance with CNP's Corrective Action Program.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

## **5.2 Applicable Regulatory Requirements/Criteria**

The proposed changes have been evaluated to determine whether applicable regulations and requirements continue to be met. CNP has determined that the proposed changes do not require an exemption or relief from any regulatory requirements, other than stated in the OL, and do not

affect conformance with any plant-specific design criteria differently than described in the UFSAR. The regulatory basis for the establishment of the EPP was 10 CFR 50.36b, "Environmental conditions." This regulation requires that any obligations in the environmental area identified by the Nuclear Regulatory Commission during their OL review be included in an attachment to the license. The conditions are derived from information contained in the environmental report and any supplements to the environmental report submitted, as required by 10 CFR 51.50 and 51.53.

CNP remains bound by other federal, state, and local agency environmental protection regulations. None of these regulatory requirements will be affected by modifying Appendix B of the OL.

## **6.0 ENVIRONMENTAL CONSIDERATIONS**

The proposed amendment relates to recordkeeping, duplicative reporting, and administrative requirements. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10)(ii). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with issuance of this amendment.

## **7.0 PRECEDENT**

The proposed amendment is consistent with those approved for Grand Gulf Nuclear Station, River Bend Station, Waterford Steam Electric Station, and Oyster Creek Nuclear Generating Station in References 1 and 2, stated below.

## **8.0 REFERENCES**

1. Letter from B. Vaidya, NRC, to M. A. Krupa, Entergy Nuclear South, "Grand Gulf Nuclear Station, Unit 1, River Bend Station, Unit 1, Waterford Steam Electric Station, Unit3, - Issuance of Amendment RE: Revision of the Respective Appendix B, Environmental Protection Plans (EPPs) (Non-Radiological) (TAC Nos. MB6705, MB6717, and MB6704 Respectively)," dated April 12, 2004 (ML041040181).
2. Letter from G. E. Miller, NRC, to C. M. Crane, AmerGen Energy Company, LLC., "Oyster Creek Nuclear Generating Station – Issuance of Amendment RE: Revision of Appendix B, Environmental Technical Specifications (TAC No. MC5467)," dated January 4, 2006 (ML053060367).

**Enclosure 1 to AEP-NRC-2008-1**

DONALD C. COOK NUCLEAR PLANT OPERATING LICENSES DPR-58 AND DPR-74,  
MARKED TO SHOW CHANGES

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT NO.1

RENEWED FACILITY OPERATING LICENSE NO. DPR-58

Amendment No. \_\_\_\_\_

1. The U. S. Nuclear Regulatory Commission (the Commission) having previously made the findings set forth in License No. DPR-58 issued October 25, 1974, has now found that:
  - A. The application to renew License No. DPR-58 filed by Indiana Michigan Power Company (I&M or the licensee) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the rules and regulations of the Commission set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
  - B. Construction of the Donald C. Cook Nuclear Plant, Unit No. 1 (the facility), has been completed in conformity with Construction Permit No. CPPR-60 and the application, as amended, the provisions of the Act and the rules and regulation of the Commission;
  - C. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - D. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - E. There is reasonable assurance: (i) that the activities authorized by this renewed operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
  - F. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulation of the Commission;

- G. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. DPR-58 subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
  - J. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70, including 10 CFR Sections 30.33, 40.32, 70.23 and 70.31.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-58, issued October 25, 1974, is superseded by Renewed Facility Operating License No. DPR-58, which is hereby issued to Indiana Michigan Power Company to read as follows:
- A. This renewed operating license applies to the Donald C. Cook Nuclear Plant, Unit No. 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by Indiana Michigan Power Company. The facility is located in Berrien County, Michigan and is described in the "Updated Final Safety Analysis Report," as supplemented and amended, and the Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Indiana Michigan Power Company:
    - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use and operate the facility at the designated location in Berrien County, Michigan, in accordance with the procedures and limitations set forth in this renewed operating license;
    - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
    - (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation

and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not to exceed 3304 megawatts thermal in accordance with the conditions specified herein.

(2) Technical Specifications

~~The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan. The Technical Specifications contained in Appendix A and Appendix B, as revised through Amendment No. 305 are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.~~

(3) Less than Four Loop Operation

The licensee shall not operate the reactor at power levels above P-7 (as defined in Table 3.3.1-1 of Specification 3.3.1 of Appendix A to this renewed operating license) with less than four reactor coolant loops in operation until (a) safety analyses for less than four loop operation have been submitted, and (b) approval for less than four loop operation at power levels above P-7 has been granted by the Commission by amendment of this license.



- (4) Indiana Michigan Power Company shall implement and maintain, in effect, all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report for the facility and as approved in the SERs dated December 12, 1977, July 31, 1979, January 30, 1981, February 7, 1983, November 22, 1983, December 23, 1983, March 16, 1984, August 27, 1985, June 30, 1986, January 28, 1987, May 26, 1987, June 16, 1988, June 17, 1988, June 7, 1989, February 1, 1990, February 9, 1990, March 26, 1990, April 26, 1990, March 31, 1993, April 8, 1993, December 14, 1994, January 24, 1995, April 19, 1995, June 8, 1995, and March 11, 1996, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- (5) Deleted by Amendment No. 279
- (6) Deleted by Amendment No. 80
- (7) Deleted by Amendment No. 287
- (8) Deleted by Amendment No. 279
- (9) Deleted by Amendment No. 279
- (10) Deleted by Amendment No. 279
- (11) Deleted by Amendment No. 279
- (12) The 72 hour allowed outage time of Technical Specifications 3.1.2.4 and 3.5.2, Action "a," which was entered at 0130 on January 13, 2005, may be extended by an additional 24 hours to complete repair and testing of the 1 West Centrifugal Charging Pump.
- (13) The 72 hour allowed outage time of Technical Specifications 3.8.1.1.1 Action "a" may be extended to 14 days one time for the 69 kilovolt (alternate) independent offsite power circuit when it is made inoperable to complete connection of the Supplemental Diesel Generators to the existing plant electrical system and to perform upgrades to the alternate offsite power supply circuit.
- (14) Implementation of Amendment No. 287

This amendment authorizes the relocation of certain current Technical Specification requirements and operating license conditions to other licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the other documents, as described in (1) Section 5.0 of the NRC staff's Safety Evaluation and (2) Table LA of Removed Details and Table R of Relocated Specifications attached to the NRC staff's Safety Evaluation, which is enclosed with this amendment.

The schedule for the performance of new and revised Surveillance Requirements (SRs) shall be as follows:

For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval, which begins on the date of implementation of this amendment.

For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of this amendment.

For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment, except as noted below for SRs that have modified acceptance criteria as a result of revised allowable values.

For SRs that have modified acceptance criteria as a result of revised allowable values, the current allowable Values and current channel calibration frequencies are required to be met until the trip setpoints are changed to reflect the new allowable values and channel calibration frequencies. The trip setpoints are required to be changed no later than the unit startup after the first planned outage of sufficient duration to change all of the trip setpoints for the unit following implementation of this amendment.

For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of this amendment, except as noted above for SRs that have modified acceptance criteria as a result of revised allowable values.

(15) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
  - 1. Pre-defined coordinated fire response strategy and guidance
  - 2. Assessment of mutual aid fire fighting assets
  - 3. Designated staging areas for equipment and materials
  - 4. Command and control
  - 5. Training of response personnel
  
- (b) Operations to mitigate fuel damage considering the following:
  - 1. Protection and use of personnel assets
  - 2. Communications
  - 3. Minimizing fire spread
  - 4. Procedures for implementing integrated fire response strategy
  - 5. Identification of readily-available pre-staged equipment
  - 6. Training on integrated fire response strategy
  - 7. Spent fuel pool mitigation measures

- (c) Actions to minimize release to include consideration of:
  - 1. Water spray scrubbing
  - 2. Dose to onsite responders

(16) The licensee shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.

(17) Ice Condenser Ice Fusion Time Requirement

The licensee is authorized to change the Updated Final Safety Analysis Report (UFSAR) to allow inspection of each ice condenser within 24 hours of experiencing a seismic event greater than or equal to an operating-basis earthquake within the 5-week period after ice basket replenishment has been completed to confirm that adverse ice fallout has not occurred which could impede the ability of the ice condenser lower inlet doors to open. This action would be taken, in lieu of requiring a 5-week waiting period following ice basket replenishment, prior to beginning ascension to power operations, as set forth in the application for amendment dated February 29, 2008, and evaluated in the safety evaluation accompanying Amendment No. 303. The licensee shall update the UFSAR by adding a description of this change, as authorized by this amendment, and in accordance with 10 CFR 50.71(e).

D. Physical Protection

The Indiana Michigan Power Company shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revision to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans<sup>1</sup>, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Donald C. Cook Nuclear Plant Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 1," submitted by letter dated May 10, 2006.

E. Deleted by Amendment No. 80

F. Deleted by Amendment No. 80

G. In all places of this renewed operating license, the reference to the Indiana and Michigan Electric Company is amended to read Indiana Michigan Power Company.

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<sup>1</sup> The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

- H. Deleted by Amendment No. 287
- I. Deleted by Amendment No. 287
- J. The licensee is authorized to use digital signal processing instrumentation in the reactor protection system.
- K. Updated Final Safety Analysis Report

The Indiana Michigan Power Company Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The Indiana Michigan Power Company shall complete these activities no later than October 25, 2014, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed operating license. Until that update is complete, Indiana Michigan Power Company may make changes to the programs and activities described in the supplement without prior Commission approval, provided that Indiana Michigan Power Company evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- L. All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of ASTM E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future insertion.
3. This renewed operating license is effective as of the date of issuance and shall expire at midnight, October 25, 2034.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

J. E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachments:

- 1. Appendix A – Technical Specifications
- 2. Appendix B – Environmental Technical Specifications

Date of Issuance: August 30, 2005

Renewed License No. DPR-58

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2

RENEWED FACILITY OPERATING LICENSE NO. DPR-74

Amendment No. \_\_\_\_\_

1. The U. S. Nuclear Regulatory Commission (the Commission) having previously made the findings set forth in License No. DPR-74 issued on December 23, 1977, has now found that:
  - A. The application to renew License No. DPR-74 filed by Indiana Michigan Power Company (I&M or the licensee) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the rules and regulations of the Commission set forth in 10 CFR Chapter I and all required notifications to other agencies or bodies have been duly made;
  - B. Construction of the Donald C. Cook Nuclear Plant, Unit No. 2 (the facility), has been completed in conformity with Construction Permit No. CPPR-61 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
  - C. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
  - D. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - E. There is reasonable assurance: (i) that the activities authorized by this renewed operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
  - F. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;

- G. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. DPR-74 subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
  - J. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed operating license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70, including 10 CFR Sections 30.33, 40.32, 70.23 and 70.31.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-74, issued December 23, 1977, is superseded by Renewed Facility Operating License No. DPR-74, which is hereby issued to the Indiana Michigan Power Company to read as follows:
- A. This renewed operating license applies to the Donald C. Cook Nuclear Plant, Unit No. 2, a pressurized water reactor and associated equipment (the facility), owned by the Indiana Michigan Power Company. The facility is located in Berrien County, Michigan and is described in the "Updated Final Safety Analysis Report" as supplemented and amended and the Environmental Report as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Indiana Michigan Power Company:
    - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use and operate, the facility at the designated location in Berrien County, Michigan, in accordance with the procedures and limitations set forth in this renewed operating license;
    - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
    - (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and

radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not to exceed 3468 megawatts thermal in accordance with the conditions specified herein and in Attachment 1 to the renewed operating license. The preoperational tests, startup tests and other items identified in Attachment 1 to this renewed operating license shall be completed. Attachment 1 is an integral part of this renewed operating license.

(2) Technical Specifications

~~The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. \_\_\_\_\_, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan. The Technical Specifications contained in Appendix A and Appendix B, as revised through Amendment No. 288 are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.~~

(3) Additional Conditions

- (a) Deleted by Amendment No. 76
- (b) Deleted by Amendment No. 2
- (c) Leak Testing of Emergency Core Cooling System Valves

Indiana Michigan Power Company shall prior to completion of the first inservice testing interval leak test each of the two valves in series in the

residual heat removal, safety injection and boron injection systems in accordance with the specifications of Section XI of the American Society of Mechanical Engineers Code. In addition, prior to completion of the first inservice testing interval, test connections which allow individual leak testing of the charging pump system discharge check valves shall be installed and the check valves shall be leak tested. The tests shall be repeated at the conclusion of each subsequent inservice inspection interval.

- (d) Deleted by Amendment No. 39
- (e) Deleted by Amendment No. 5
- (f) Deleted by Amendment No. 2
- (g) Deleted by Amendment No. 60
- (h) Deleted by Amendment No. 63
- (i) Deleted by Amendment No. 19
- (j) Power Operation with Fewer than Four Reactor Coolant Pumps in Operation

Indiana Michigan Power Company shall not operate the reactor at power levels above P-7 (as defined in Table 3.3.1-1 of Specification 3.3.1 of Appendix A to this renewed operating license) with fewer than four reactor coolant loops in operation until safety analyses for fewer than four loop operation have been submitted and approval for fewer than four loop operation at power levels above P-7 has been granted by the Commission by Amendment of this license.

- (k) Deleted by Amendment No. 16
- (l) Deleted by Amendment No. 63
- (m) Deleted by Amendment No. 19
- (n) Deleted by Amendment No. 28
- (o) Indiana Michigan Power Company shall implement and maintain, in effect, all provisions of the approved Fire Protection Program as described in the Updated Final Safety Analysis Report for the facility and as approved in the SERs dated December 12, 1977, July 31, 1979, January 30, 1981, February 7, 1983, November 22, 1983, December 23, 1983, March 16, 1984, August 27, 1985, June 30, 1986, January 28, 1987, May 26, 1987, June 16, 1988, June 17, 1988, June 7, 1989, February 1, 1990, February 9, 1990, March 26, 1990, April 26, 1990, March 31, 1993,



April 8, 1993, December 14, 1994, January 24, 1995, April 19, 1995, June 8, 1995, and March 11, 1996, subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if these changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- (p) Deleted by Amendment No. 121
- (q) Deleted by Amendment No. 2
- (r) Deleted by Amendment No. 68
- (s) Deleted by Amendment No. 261
- (t) Deleted by Amendment No. 63
- (u) Deleted by Amendment No. 261
- (v) Deleted by Amendment No. 269
- (w) Deleted by Amendment No. 261
- (x) Deleted by Amendment No. 261
- (y) Deleted by Amendment No. 261
- (z) The 72-hour allowed outage time of Technical Specifications 3.8.1.1 Action "b" which was entered at 0923, on December 7, 2003, may be extended one time by an additional 72 hours to complete repair and testing of the 2 AB diesel generator.
- (aa) The 72 hour allowed outage time of Technical Specifications 3.8.1.1 Action "a" may be extended to 14 days one time for the 69 kilovolt (alternate) independent offsite power circuit when it is made inoperable to complete connection of the Supplemental Diesel Generators to the existing plant electrical system and to perform upgrades to the alternate offsite power supply circuit.
- (bb) Implementation of Amendment No. 269

This amendment authorizes the relocation of certain current Technical Specification requirements and operating license conditions to other licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the other documents, as described in (1) Section 5.0 of the NRC staff's Safety Evaluation and (2) Table LA of Removed Details and Table R of Relocated Specifications attached to the NRC staff's Safety Evaluation, which is enclosed with this amendment.

The schedule for the performance of new and revised Surveillance Requirements (SRs) shall be as follows:

For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval, which begins on the date of implementation of this amendment.

For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of this amendment.

For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment, except as noted below for SRs that have modified acceptance criteria as a result of revised allowable values.

For SRs that have modified acceptance criteria as a result of revised allowable values, the current allowable Values and current channel calibration frequencies are required to be met until the trip setpoints are changed to reflect the new allowable values and channel calibration frequencies. The trip setpoints are required to be changed no later than the unit startup after the first planned outage of sufficient duration to change all of the trip setpoints for the unit following implementation of this amendment.

For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of this amendment, except as noted above for SRs that have modified acceptance criteria as a result of revised allowable values.

(cc) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (I) Fire fighting response strategy with the following elements:
  - 1. Pre-defined coordinated fire response strategy and guidance
  - 2. Assessment of mutual aid fire fighting assets
  - 3. Designated staging areas for equipment and materials
  - 4. Command and control
  - 5. Training and response personnel
  
- (II) Operations to mitigate fuel damage considering the following:
  - 1. Protection and use of personnel assets
  - 2. Communications
  - 3. Minimizing fire spread
  - 4. Procedures for implementing integrated fire response strategy
  - 5. Identification of readily-available pre-staged equipment

6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

- (III) Actions to minimize release to include consideration of:
1. Water spray scrubbing
  2. Dose to onsite responders

(dd) The licensee shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.

(ee) Ice Condenser Ice Fusion Time Requirement

The licensee is authorized to change the Updated Final Safety Analysis Report (UFSAR) to allow inspection of each ice condenser within 24 hours of experiencing a seismic event greater than or equal to an operating-basis earthquake within the 5-week period after ice basket replenishment has been completed to confirm that adverse ice fallout has not occurred which could impede the ability of the ice condenser lower inlet doors to open. This action would be taken, in lieu of requiring a 5-week waiting period following ice basket replenishment, prior to beginning ascension to power operations, as set forth in the application for amendment dated February 29, 2008, and evaluated in the safety evaluation accompanying Amendment No. 286. The licensee shall update the UFSAR by adding a description of this change, as authorized by this amendment, and in accordance with 10 CFR 50.71(e).

D. Physical Protection

The Indiana Michigan Power Company shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans<sup>1</sup>, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Donald C. Cook Nuclear Plant Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 1," submitted by letter dated May 10, 2006.

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<sup>1</sup> The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

- E. Deleted by Amendment No. 63
- F. In all places of this renewed operating license, the reference to the Indiana and Michigan Electric Company is amended to read Indiana Michigan Power Company.
- G. Deleted by Amendment No. 269
- H. Deleted by Amendment No. 269
- I. Deleted by Amendment No. 261

(1) Deleted by Amendment No. 261

(2) Deleted by Amendment No. 261

- J. The licensee is authorized to use digital signal processing instrumentation in the reactor protection system.
- K. Updated Final Safety Analysis Report

The Indiana Michigan Power Company Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The Indiana Michigan Power Company shall complete these activities no later than December 23, 2017, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed operating license. Until that update is complete, Indiana Michigan Power Company may make changes to the programs and activities described in the supplement without prior Commission approval, provided that Indiana Michigan Power Company evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- L. All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of ASTM E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future insertion.
3. This renewed operating license is effective as of the date of issuance and shall expire at midnight, December 23, 2037.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

J. E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachments:

1. Preoperational Tests, Startup Tests and Other Items Which Must Be Completed Prior to Proceeding to Succeeding Operational Modes.
2. Appendix A – Technical Specifications
3. Appendix B – Environmental Technical Specifications

Date of Issuance: August 30, 2005

ATTACHMENT TO RENEWED LICENSE NO. DPR-74

PREOPERATIONAL TESTS, START-UP TESTS AND  
OTHER ITEMS WHICH MUST BE COMPLETED PRIOR TO  
PROCEEDING TO SUCCEEDING OPERATIONAL MODES

This attachment identifies certain preoperational tests, start-up tests and other items which must be completed to the Commission's satisfaction prior to proceeding to certain specified Operational Modes. Indiana Michigan Power Company shall not proceed beyond the authorized Operational Modes without prior written authorization from the Commission.

- A. Indiana and Michigan Electric Company may at the license issue date proceed directly to Operational Mode 6 (initial fuel loading) and may subsequently proceed to Operational Mode 1 (power operation) except as noted below.
- B. The following items must be completed prior to proceeding to Operational Mode 6 (initial fuel loading):
  1. Satisfactory completion of the following preoperational tests:
    - a. The (CVCS) Boron Makeup (S/7) preoperational test.
- C. The following items must be completed prior to proceeding to Operational Mode 4 (hot shutdown):
  1. Evaluation of water hammers experienced in the nonessential service water system. (Operations)
  2. Evaluation of complete power loss (AC & DC) to one train of engineered safeguards resulting in complete loss of status lights or the complete loss of power to the other train resulting in complete loss of alarm annunciators. (Operations)
  3. Evaluation of effects of loss of reactor coolant system wide range temperature indication on loss of the one distribution bus. (Operations)
- D. The following items must be completed prior to proceeding to Operational Mode 2 (initial criticality):
  1. Deleted by Amendment 2.
  2. Deleted by Amendment 2.
  3. Deleted by Amendment 2.
  4. Deleted by Amendment 2.

5. Deleted by Amendment 2.

Amendment No. 2 6. Prior to Mode 1 operation not to exceed 678 megawatts thermal (twenty percent of rated power) resolution of the following conditions is required. Written approval by the Commission is required prior to operation at greater than twenty percent of rated power.

A. Deleted by Amendment No. 70.

Amendment No. 6 B. Deleted by Amendment No. 70.

\* Amendments 2, 4, and 6 change 6.

**Enclosure 2 to AEP-NRC-2008-1**

DONALD C. COOK NUCLEAR PLANT OPERATING LICENSES DPR-58 AND DPR-74,  
APPENDIX B, ENVIRONMENTAL TECHNICAL SPECIFICATIONS, PART II,  
NON-RADIOLOGICAL ENVIRONMENTAL PROTECTION PLAN  
MARKED TO SHOW CHANGES



APPENDIX B  
ENVIRONMENTAL TECHNICAL SPECIFICATIONS  
FOR  
DONALD C. COOK NUCLEAR PLANT  
UNITS 1 and 2  
BERRIEN COUNTY, MICHIGAN  
DOCKET NUMBERS 50-315 and 50-316

PART II – NONRADIOLOGICAL  
ENVIRONMENTAL PROTECTION PLAN

DONALD C. COOK NUCLEAR PLANT  
UNITS 1 and 2

ENVIRONMENTAL PROTECTION PLAN  
(NON-RADIOLOGICAL)

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1.0 OBJECTIVES OF THE ENVIRONMENTAL PROTECTION PLAN

The Non-Radiological Environmental Protection Plan (EPP) is to provide for protection of environmental values during ~~construction and~~ operation of the nuclear facility. The principle objectives of the EPP are as follows:

- (1) Verify that the station is operated in an environmentally acceptable manner, as established by the ~~FES\*~~ Final Environmental Statement (FES) – Operating License Stage (FES-OL) and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects.

Environmental concerns identified in the ~~FES~~OL which related to water quality matters are regulated by way of the licensee's NPDES permit.

~~\*Final Environmental Statement~~

## 2.0 ENVIRONMENTAL PROTECTION ISSUES

In the FES Operating License dated August 1973, the Staff considered the environmental impacts associated with the operation of the Donald C. Cook Nuclear Plant (CNP). Certain environmental issues were identified which required study or license conditions to resolve and to assure adequate protection of the environment. The Appendix B Environmental Technical Specifications (ETS) accompanying the license included monitoring programs and other requirements to permit resolution of the issues. Prior to issuance of this EPP, the requirements remaining in the ETS were:

### 2.1 Aquatic Issues

- ~~1. Protection of the aquatic environment by limiting the thermal stress to which aquatic organisms will be subjected during transit through the plant.~~
- ~~2. The avoidance of possible adverse effects on lake biota due to deicing operations.~~
- ~~3. Protection of aquatic life by limiting the release of chlorine from plant operation.~~
- ~~4. Monitoring of the movement of chemicals introduced into the groundwater from the onsite absorption field.~~
- ~~5. Limit the plant discharge of corrosion and deposit inhibitors used in the plant systems.~~
- ~~6. The need for aquatic monitoring to confirm that effects on phytoplankton, periphyton, zooplankton, benthic invertebrates, and fish due to plant operation are no greater than predicted.~~
- ~~7. The need for special studies to document levels of intake entrainment and impingement in relation to the densities of important species in the plant vicinity.~~
- ~~8. The need for visual underwater observations in the intake and discharge area to observe the physical and ecological conditions.~~

~~These Aquatic Issues are addressed by the effluent limitations, monitoring requirements and the Section 316(b) demonstration requirement contained in the effective NPDES permit issued by the State of Michigan, Department of Natural Resources. The NRC will rely on this agency for regulation of matters involving water quality and aquatic biota.~~

Effluent limitations and monitoring requirements are contained in the effective NPDES or Groundwater permits issued by the federal or state permitting authority. The NRC will rely on these agencies for regulation of these matters as they involve water quality and aquatic biota.

2.2 Terrestrial Issues

The remaining terrestrial issue is the need for controlled use of herbicides if such are used for maintenance of transmission rights-of-way. NRC requirements with regard to this terrestrial issue are specified in Subsection 4.2.

### 3.0 CONSISTENCY REQUIREMENTS

#### 3.1 Plant Design and Operation

This licensee may make changes in station design or operation, or perform tests or experiments affecting the environment provided such changes, tests or experiments do not involve an unreviewed environmental question, and do not involve a change in the EPP.<sup>1</sup> Changes in plant design or operation or performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this section.

Before engaging in unauthorized construction or operational activities which may significantly affect the environment, the licensee shall prepare and record an environmental evaluation of such activity. Activities are excluded from this requirement if all measurable non-radiological effects are confined to the on-site areas previously disturbed during site preparation and plant construction. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activities and obtain prior approval from the NRC. When such activity involves a change in the EPP, such activity and change to the EPP may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3.

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FES as modified by staff's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level [in accordance with 10 CFR Part 51.5(b)(2)] or (3) a matter not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include a written evaluation which provide bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question nor constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. ~~The licensee shall include as part of its Annual Environmental Operating Report (per Subsection 5.4.1) a brief description, analysis, interpretations, and evaluations of such changes, tests and experiments.~~

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<sup>1</sup> This provision does not relieve the licensee of the requirements of 10 CFR 50.59.

### 3.2 Reporting Related to the NPDES Permits and State Certifications

~~Violations of the NPDES Permit or the State certification (pursuant to Section 401 of the Clean Water Act) shall be reported to the NRC by submittal of copies of the reports required by the NPDES Permit or certification.~~

~~Changes and additions to the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.~~

~~The NRC shall be notified of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES permit at the same time the application is submitted to the permitting agency.~~

The NRC shall be provided with a copy of the current NPDES permit or state certification within 30 days of approval. Changes to the NPDES permit or state certification shall be reported to the NRC within 30 days of the date the change is approved.

### 3.3 Changes Required for Compliance with Other Environmental Regulations

~~Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with [that are either regulated or mandated by] other federal, state, or local environmental regulations are not subject to the requirements of Section 3.1. [However, if any environmental impacts of a change are not evaluated under other federal, state, or local environmental regulations, then those impacts are subject to the requirements of Section 3.1.]~~

#### 4.0 ENVIRONMENTAL CONDITIONS

##### 4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact related to plant operation shall be recorded and promptly reported to the NRC Operations Center within 24 hours ~~by telephone, telegraph, or facsimile transmissions~~ followed by a written report per Subsection 5.4.2. If an event is reportable under 10 CFR 50.72, then a duplicate immediate report under this Subsection is not required. However, a written report is required in accordance with Section 5.4.2.

No routine monitoring programs are required to implement this condition.

##### 4.2 Environmental Monitoring

###### 4.2.1 Herbicide Application

The use of herbicides within rights-of-way within the Plant site shall conform to the approved use of selected herbicides as registered by the Environmental Protection Agency and approved by State authorities and applied as directed by said authorities.



## 5.0 ADMINISTRATIVE PROCEDURES

### 5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the EPP. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organization structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

### 5.2 Records Retention

~~Records and logs relative to the environmental aspects of plant operation associated with this EPP~~ shall be made and retained in a manner convenient for review and inspection. These records and logs shall be made available to NRC on request.

Records of modifications to plant structures, systems and components determined to potentially affect the continued protection of the environment shall be retained for the life of the plant until the date of the termination of the Operating License. All other records, ~~data and logs~~ and procedures relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

### 5.3 Changes in Environmental Protection Plan

Request of change in the EPP shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the EPP.

### 5.4 Plant Reporting Requirements

#### 5.4.1 ~~Routine Reports~~ Deleted

~~An Annual Environmental Operating Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The initial report shall be submitted prior to May 1 of the year following issuance of the EPP.~~

~~The report shall include summaries and analysis of the results of the environmental protection activities required by Subsection 4.2 of this EPP for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous nonradiological environmental monitoring reports, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of trends towards irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of action to alleviate the problem.~~

The Annual Environmental Operating Report shall also include:

- ~~(a) A list of EPP noncompliance and the corrective actions take to remedy them.~~
- ~~(b) A list of all changes in station design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental issue.~~
- ~~(c) A list of non-routine reports submitted in accordance with Subsection 5.4.2.~~

~~In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing data shall be submitted as soon as possible in a supplementary report.~~

#### 5.4.2 Non-routine Reports

A written report shall be submitted to the NRC within 30 days of occurrence of non-routine event. The report shall (a) describe, analyze and evaluate the event, including extent and magnitude of the impact and plant operating characteristics, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection which also require reports to other Federal, State or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided a copy of such report at the same time it is submitted to the other agency.