

Indiana Michigan  
Power Company  
500 Circle Drive  
Buchanan, MI 49107 1395



July 2, 2003  
AEP:NRC:3090  
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, Unit 1 and Unit 2  
Docket Nos. 50-315 and 50-316  
Supplement to License Amendment Request For Removal of  
Obsolete and/or Expired License Conditions from the Unit 1 and  
Unit 2 Operating Licenses, Editorial Changes to the Unit 1 and  
Unit 2 Operating Licenses, and Administrative Changes to the  
Unit 1 and Unit 2 Technical Specifications

**REFERENCE:** Letter from J. E. Pollock, Indiana Michigan Power Company to  
Nuclear Regulatory Commission Document Control Desk,  
"Donald C. Cook Nuclear Plant Units 1 and 2, Docket Nos.  
50-315 and 50-316 License Amendment Request for Removal of  
Obsolete and/or Expired License Conditions from the Unit 1 and  
2 Operating Licenses (OLs), Editorial Changes to the Unit 1 and  
Unit 2 OLs, and Administrative Changes to the Unit 1 and Unit 2  
Technical Specifications," AEP:NRC:2090, dated August 23,  
2002.

Dear Sir or Madam:

This letter provides a supplement to a previously proposed license amendment involving administrative and editorial changes to the Donald C. Cook Nuclear Plant (CNP) Unit 1 and Unit 2 Operating Licenses (OLs) and Technical Specifications (TSs).

In the referenced letter, Indiana Michigan Power Company (I&M) proposed to remove obsolete and/or expired license conditions from the Unit 1 and Unit 2

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OLs, make editorial changes to the Unit 1 and Unit 2 OLs, and make administrative changes to the Unit 1 and Unit 2 TSs. Subsequent to submittal of the referenced letter, I&M identified additional obsolete and/or expired license conditions that should be deleted and additional administrative changes that should be made to the TSs. I&M also identified the need for additional changes to previously submitted pages. Accordingly, I&M is proposing to include these additional changes in the amendment proposed by the referenced letter.

Additionally, in the referenced letter, I&M proposed to add a new reference "e" to TS 6.9.1.9.2. The description of this new reference inaccurately stated that the new reference reflects the upgrade to VANTAGE+ fuel for "Cycle 17." The description should have stated that the new reference reflects the upgrade to VANTAGE+ fuel for "future Unit 2 cycles."

Enclosure 1 to this letter provides an affirmation regarding the statements made and matters set forth in this letter. Enclosure 2 provides a detailed description and safety analysis to support the additional proposed changes. Attachments 1A and 1B provide TS pages marked to show proposed changes for Unit 1 and Unit 2, respectively. Attachments 2A and 2B provide TS pages with the proposed changes incorporated for Unit 1 and Unit 2, respectively. Attachments 3A and 3B provide the OL pages marked to show the proposed changes for Unit 1 and Unit 2, respectively. Attachments 4A and 4B provide the OL pages with the proposed changes incorporated for Unit 1 and Unit 2, respectively.

The additional changes proposed in this letter are consistent with those proposed in the referenced letter, in that they do not affect plant operation or design. Therefore, the information in this letter does not alter the validity of the original evaluation of no significant hazards considerations performed in accordance with 10 CFR 50.92 documented in Enclosure 2 to the referenced letter. The environmental assessment provided in Enclosure 2 to the referenced letter also remains valid. Therefore, no additional no significant hazard considerations or environmental assessment is provided in Enclosure 2 to this letter.

No pending amendment requests affect the TS pages that are submitted in this request. If any future submittals affect these TS pages, I&M will coordinate the changes to the pages with the Nuclear Regulatory Commission Project Manager to ensure proper TS page control when the associated license amendment requests are approved.

There are no new regulatory commitments made in this letter. If you have any questions or require additional information, please contact Mr. Brian A. McIntyre, Manager of Regulatory Affairs, at (269) 697-5806.

Sincerely,



J. E. Pollock  
Site Vice President

DB/rdw

Enclosures:

- 1 Affirmation
- 2 Supplement to License Amendment Request For Removal of Obsolete and/or Expired License Conditions From the Unit 1 and Unit 2 Operating Licenses, Editorial Changes to the Unit 1 and Unit 2 Operating Licenses, and Administrative Changes to the Unit 1 and Unit 2 Technical Specifications

Attachments:

- 1A and 1B TS Pages Marked to Show Proposed Changes
- 2A and 2B Proposed TS Pages
- 3A and 3B OL Pages Marked to Show Proposed Changes
- 4A and 4B Proposed OL Pages

c: K. D. Curry, Ft. Wayne AEP, w/o enclosures/attachments  
J. E. Dyer, NRC Region III  
J. T. King, MPSC, w/o enclosures/attachments  
MDEQ – DW & RPD, w/o enclosures/attachments  
NRC Resident Inspector  
J. F. Stang, Jr., NRC Washington, DC

Enclosure 1 to AEP:NRC:3090

**AFFIRMATION**

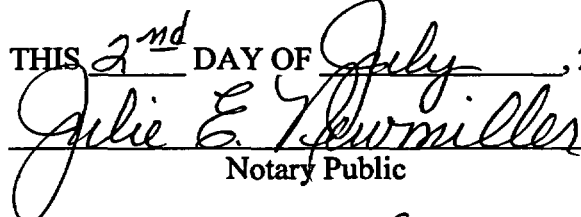
I, J. E. Pollock, being duly sworn, state that I am Site Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M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

Indiana Michigan Power Company



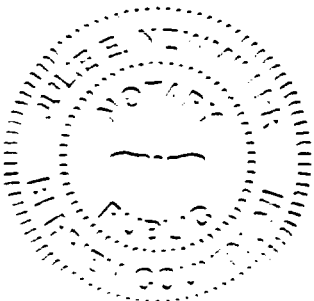
J. E. Pollock  
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 2<sup>nd</sup> DAY OF July, 2003  
  
Notary Public

My Commission Expires 8-22-2004

**JULIE E. NEWMILLER**  
Notary Public, Berrien County, MI  
My Commission Expires Aug 22, 2004



**Supplement to License Amendment Request For Removal of Obsolete and/or Expired License Conditions from the Unit 1 and Unit 2 Operating Licenses, Editorial Changes to the Unit 1 and Unit 2 Operating Licenses, and Administrative Changes to the Unit 1 and Unit 2 Technical Specifications**

**1.0 DESCRIPTION**

In Reference 1, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Unit 1 and Unit 2, proposed to remove obsolete and/or expired license conditions from the Unit 1 and Unit 2 Facility Operating Licenses (OLs), make editorial changes to the Unit 1 and Unit 2 OLs, and make administrative changes to the Unit 1 and Unit 2 Technical Specifications (TSs). Subsequent to submittal of Reference 1, I&M identified additional obsolete and/or expired license conditions that should be deleted and additional administrative changes that should be made to the TSs. I&M also identified the need for additional changes to previously submitted pages. Accordingly, I&M is proposing to include these additional changes in the amendment proposed by Reference 1.

**2.0 PROPOSED CHANGE**

I&M proposes administrative changes to the following Unit 1 and Unit 2 TSs:

| Unit 1         |           | Unit 2             |               |
|----------------|-----------|--------------------|---------------|
| TS 6.9.1.9.2.e | Page 6-12 | TS 3.4.8, Action a | Page 3/4 4-20 |
| TS 6.12.1.c    | Page 6-14 | TS 4.7.5.1.d       | Page 3/4 7-16 |
|                |           | TS 5.6.2.a         | Page 5-9      |
|                |           | TS 6.12.1.c        | Page 6-14     |

These changes are shown on Attachments 1A, 1B, 2A, and 2B. Unit 1 Page 6-12, and Unit 2 Pages 3/4 7-16, and 5-9, are in addition to those submitted by Reference 1. Unit 1 Page 6-14, and Unit 2 Pages 3/4 4-20, and 6-14 replace the corresponding pages submitted by Reference 1.

In addition, I&M proposes to delete the following obsolete and/or expired license conditions from the Unit 1 and Unit 2 OLs:

| Unit 1                    | Unit 2                    |
|---------------------------|---------------------------|
| License Condition 2.C(5)  | License Condition 2(3)(s) |
| License Condition 2.C(11) | License Condition 2(3)y   |

These changes are shown on Attachments 3A, 3B, 4A, and 4B. These license pages replace the corresponding pages submitted by Reference 1.

### **3.0      BACKGROUND**

Since the original issuance of the Unit 1 and Unit 2 OLs, I&M has incorporated several additional requirements (i.e., license conditions) into the license via the 10 CFR 50.90 license amendment process. In some cases, subsequent license amendments have removed certain license conditions that were no longer applicable. In other cases, license conditions have become obsolete or have expired, but remain part of the OLs. In Reference 1, I&M proposed to remove those license conditions that no longer apply.

In Reference 1, I&M also proposed several administrative changes to the Unit 1 and Unit 2 TS to correct administrative errors which were introduced by prior license amendments.

This supplement proposes deletion of two additional license conditions that are now obsolete, and proposes correction of additional administrative errors which were not included in Reference 1. These changes are being proposed so that the OL will retain only those license conditions that remain pertinent to current plant operations, and so that the TSs are administratively accurate.

### **4.0      TECHNICAL ANALYSIS**

I&M proposes the following administrative changes to specific Unit 1 and Unit 2 TSs.

#### **Proposed TS Changes**

##### **Unit 1**

I&M proposes to add a new reference "e" to TS 6.9.1.9.2. The new reference "e" consists of "WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Reference Core Report"." The new reference "e" reflects the upgrade to VANTAGE+ fuel for future Unit 1 cycles. This upgrade to the VANTAGE+ fuel was approved in License Amendment Nos. 148 and 134, dated August 27, 1990 (Reference 2).

I&M proposes to revise a plant position title in TS Section 6.12.1.c requirements for controlling high radiation areas. I&M proposes to replace "facility Health Physicist" with "Plant Radiation Protection Manager." The proposed change reflects CNP's current organizational structure.

##### **Unit 2**

In Reference 1, I&M proposed to correct a typographical error in Unit 2 TS 3.4.8, Limiting Condition for Operation (LCO), Action "a." Currently, Action "a" reads "...for more than 48 hours during one continuous time interval for exceeding the limit..." However, Action "a" should read "...for more than 48 hours during one continuous time interval or exceeding the limit..." to be consistent with the Unit 1 TS. When this page was issued in Reference 1, the

change was not made correctly, in that the wrong “for” was changed to “or.” I&M has provided a corrected page in this supplement.

I&M proposes to add a new line of text to Unit 2 TS 3/4.7.5, “Control Room Ventilation System.” The new line of text consists of “4.7.5.1.d After every 720 hours of charcoal adsorber operation by either.” This line of text was inadvertently left off during reconciliation of several TS change documents associated with Amendment 240 (Reference 3).

I&M proposes to add the word “Westinghouse” to the beginning of 5.6.2.a. This word was proposed in Reference 4; however, in License Amendment 220, dated January 6, 2000 (Reference 5), this word was not included in the Unit 2 TS.

I&M proposes to revise a plant position title in TS Section 6.12.1.c requirements for controlling high radiation areas. I&M proposes to replace “facility Health Physicist” with “Plant Radiation Protection Manager.” The proposed change reflects CNP’s current organizational structure.

#### Obsolete and/or Expired License Conditions

I&M also proposes to delete the following obsolete and/or expired license conditions from the Unit 1 and Unit 2 OLs.

#### **Unit 1**

- License Condition 2.C(5) – “Spent Fuel Pool Storage – The licensee is authorized to store D. C. Cook Unit 1 and Unit 2 fuel assemblies, new or irradiated up to a total of 3613 fuel assemblies in the shared spent fuel pool at the Donald C. Cook Nuclear Plant subject to the following conditions:”

“Fuel stored in the spent fuel pool shall not have nominal enrichment greater than 4.95% Uranium-235.”

This license condition is being deleted because it contains redundant information. The information contained in this condition is also found in Section 5.6, Fuel Storage, of the TSs. Specifically, Section 5.6.1.1.c contains design criteria for fuel assemblies that are to be stored in Region 1, Region 2 and Region 3. This design criterion for fuel assemblies is based upon their assembly average burnup versus initial nominal enrichment. Section 5.6.4 states, “The fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 3613 fuel assemblies.”

- License Condition 2.C(11) – “During the essential service water pump replacement, a one-time extension of the Technical Specification 3.4.7.1 Action a and b requirement that an inoperable essential service water loop be restored to an operable status within 72 hours may be extended to 140 hours. This extension is applicable only during the

preplanned replacement of an essential service water pump with a modified pump and may not be used when as essential service water pump is found to be inoperable. The extension is subject to the following conditions:"

- "This allowance may be invoked once for each essential service water pump to allow replacement of the pump with a modified pump.
- This allowance may be invoked once for each Unit 1 essential service water loop when the associated Unit 2 essential service water pump is being replaced. This will be done in accordance with Unit 2 Technical Specification 3.7.4.1 Action b.1.
- This allowance is applicable until January 31, 2003.
- When the essential service water loops are declared inoperable during the pump replacement, the systems supported by the essential service water system need not enter their limiting conditions for operation action statements."

This license condition was a one-time extension which was added to the license by Amendment 270, dated September 9, 2002 (Reference 6). This license condition provided a one-time 140-hour allowed outage time for the essential service water (ESW) system, to allow ESW pump replacement. The ESW pump replacement project has been completed; therefore, this license condition is no longer applicable and can be deleted.

## Unit 2

- License Condition 2(3)(s) – "Spent Fuel Pool Storage – The licensee is authorized to store D. C. Cook, Unit 1 and Unit 2 fuel assemblies, new or irradiated up to a total of 3613 fuel assemblies in the shared spent fuel pool at the Donald C. Cook Nuclear Plant subject to the following conditions:"

"Fuel stored in the spent fuel pool shall not have a nominal enrichment greater than 4.95% Uranium-235."

This license condition is being deleted because it contains redundant information. The information contained in this condition is also found in Section 5.6, Fuel Storage, of the TSs. Specifically, Section 5.6.1.1.c contains design criteria for fuel assemblies that are to be stored in Region 1, Region 2 and Region 3. This design criterion for fuel assemblies is based upon their assembly average burnup versus initial nominal enrichment. Section 5.6.4 states, "The fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 3613 fuel assemblies."



- License Condition 2.(3)y – “During the essential service water pump replacement, a one-time extension of the Technical Specification 3.7.4.1 Action a and b requirement that an inoperable essential service water loop be restored to an operable status within 72 hours may be extended to 140 hours. This extension is applicable only during the preplanned replacement of an essential service water pump with a modified pump and may not be used when an essential service water pump is found to be inoperable. The extension is subject to the following conditions:”
  - “This allowance may be invoked once for each essential service water pump to allow replacement of the pump with a modified pump.
  - This allowance may be invoked once for each Unit 2 essential service water loop when the associated Unit 1 essential service water pump is being replaced. This will be done in accordance with Unit 1 Technical Specification 3.7.4.1 Action b.1.
  - This allowance is applicable until January 31, 2003.
  - When the essential service water loops are declared inoperable during the pump replacement, the systems supported by the essential service water system need not enter their limiting conditions for operation action statements.”

This license condition was a one-time extension which was added to the license by Amendment 251, dated September 9, 2002 (Reference 6). This license condition provided a one-time 140-hour allowed outage time for the ESW system, to allow ESW pump replacement. The ESW pump replacement project has been completed; therefore, this license condition is no longer applicable and can be deleted.

## 5.0 REFERENCES

1. Letter from J. E. Pollock, I&M to U. S. Nuclear Regulatory Commission (NRC) Document Control Desk, “Donald C. Cook Nuclear Plant Units 1 and 2, Docket Nos. 50-315 and 50-316 License Amendment Request for Removal of Obsolete and/or Expired License Conditions from the Unit 1 and 2 Operating License (OLs), Editorial Changes to the Unit 1 and Unit 2 OLs, and Administrative Changes to the Unit 1 and Unit 2 Technical Specifications,” AEP:NRC:2090, dated August 23, 2002
2. Letter from Timothy G. Colburn, NRC, to Milton P. Alexich, I&M, “Amendment Nos. 148 and 134 to Facility Operating License Nos. DPR-58 and DPR-74: (TAC Nos. 75395, 75396, and 76816),” dated August 27, 1990
3. Letter from John F. Stang, NRC, to Robert P. Powers, I&M, “Donald C. Cook Nuclear Plant, Units 1 and 2 – Issuance of Amendments (TAC Nos. MA9394 and MA9395),” dated October 24, 2001

4. Letter from R. P. Power, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant Units 1 and 2, Technical Specification Change Request Fuel Rod Zirlo Cladding and Integral Fuel Burnable Absorber (IFBA) Requirements," C1199-13, dated November 3, 1999
5. Letter from John F. Stang, NRC, to Robert P. Powers, I&M, "Issuance of Amendments – Donald C. Cook Nuclear Plant, Units 1 and 2, Re: Fuel Rod Zirlo Cladding and Integral Fuel Burnable Absorber Requirements (TAC Nos. MA7041 and MA7042)," dated January 6, 2000
6. Letter from John F. Stang, NRC, to A. Christopher Bakken III, I&M, "Donald C. Cook Nuclear Plant, Units 1 and 2 – Issuance of Amendments (TAC Nos. MB5729 and MB5730)," dated September 9, 2002

**Attachment 1A to AEP:NRC:3090**

**TECHNICAL SPECIFICATION PAGES  
MARKED TO SHOW PROPOSED CHANGES**

**REVISED PAGES  
UNIT 1**

**6-12**

**6-14**

## **6.0 ADMINISTRATIVE CONTROLS**

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### **MONTHLY REACTOR OPERATING REPORT**

- 6.9.1.8 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the PORVs or safety valves, shall be submitted on a monthly basis to the U.S. Nuclear Regulatory Commission (Attn: Document Control Desk), Washington, D.C. 20555, with a copy to the Regional Office no later than the 15th of each month following the calendar month covered by the report.

### **CORE OPERATING LIMITS REPORT**

- 6.9.1.9.1 Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT before each reload cycle or any remaining part of a reload cycle for the following:

- a. Moderator Temperature Coefficient Limits for Specification 3/4.1.1.4,
- b. Rod Drop Time Limits for Specification 3/4.1.3.3,
- c. Shutdown Rod Insertion Limits for Specification 3/4.1.3.4,
- d. Control Rod Insertion Limits for Specification 3/4.1.3.5,
- e. Axial Flux Difference for Specification 3/4.2.1,
- f. Heat Flux Hot Channel Factor for Specification 3/4.2.2,
- g. Nuclear Enthalpy Rise Hot Channel Factor for Specification 3/4.2.3, and
- h. Allowable Power Level for Specification 3/4.2.6.

- 6.9.1.9.2 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC in:

- a. WCAP-9272-P-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985 (Westinghouse Proprietary),
- b. WCAP-8385, "Power Distribution Control and Load Following Procedures - Topical Report," September 1974 (Westinghouse Proprietary),
- c. WCAP-10216-P-A, Revision 1A, "Relaxation of Constant Axial Offset Control/F<sub>Q</sub> Surveillance Technical Specification," February 1994 (Westinghouse Proprietary),
- d. WCAP-10266-P-A Rev. 2, "The 1981 Version of Westinghouse Evaluation Mode Using BASH Code," March 1987 (Westinghouse Proprietary).

WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Reference Core Report," July 1991 (Westinghouse Proprietary).

## 6.0 ADMINISTRATIVE CONTROLS

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### 6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

### 6.12 HIGH RADIATION AREA

6.12.1 Pursuant to 10 CFR 20.1601(c), in lieu of the requirements of 10 CFR 20.1601(a) and (b), each high radiation area in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 100 mrem but less than or equal to 1000 mrem in 1 hour at 30 cm from the radiation source or 30 cm from any surface that the radiation penetrates, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit\*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made aware of it.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist ~~Plant Radiation Protection Manager~~ in the Radiation Work Permit.

6.12.2 The requirements of 6.12.1 shall also apply to each high radiation area in which the radiation level at 30 cm from the radiation source or 30 cm from any surface that the radiation penetrates is greater than 1000 mrem in 1 hour. When possible, locked doors shall be provided to prevent unauthorized entry into such areas, and the keys shall be maintained under the administrative control of the Shift Supervisor ~~Manager~~ on duty and/or the Plant Health Physicist (Plant Radiation Protection Supervisor ~~Manager~~). Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work areas. In the event that it is not possible or practicable to provide locked doors due to area size or configuration, the area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device.

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\* Health Physics (Radiation Protection) personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

**Attachment 1B to AEP:NRC:3090**

**TECHNICAL SPECIFICATION PAGES  
MARKED TO SHOW PROPOSED CHANGES**

**REVISED PAGES  
UNIT 2**

**3/4 4-20**

**3/4 7-16**

**5-9**

**6-14**

**3/4     LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.4   REACTOR COOLANT SYSTEM**

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**SPECIFIC ACTIVITY**

**LIMITING CONDITION FOR OPERATION**

**3.4.8     The specific activity of the primary coolant shall be limited to:**

- a.        Less than or equal to 1 microCurie per gram DOSE EQUIVALENT I-131, and
- b.        Less than or equal to  $100/\bar{E}$  microCuries per gram of gross radioactivity.

**APPLICABILITY:**        MODES 1, 2, 3, 4 and 5

**ACTION:**

MODES 1, 2 and 3\*

- a.        With the specific activity of the reactor coolant greater than 1 microCurie per gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval for  $\bar{E}$  exceeding the limit line shown on Figure 3.4-1, be in HOT STANDBY with  $T_{avg}$  less than 500°F within 6 hours.
- b.        With the specific activity of the reactor coolant greater than  $100/\bar{E}$  microCuries per gram, be in HOT STANDBY with  $T_{avg}$  less than 500°F within 6 hours.

MODES 1, 2, 3, 4 and 5

- a.        With the specific activity of the reactor coolant greater than 1 microCurie per gram DOSE EQUIVALENT I-131 or greater than  $100/\bar{E}$  microCuries per gram, perform the sampling and analysis requirements of item 4a of Table 4.4-4 until the specific activity of the reactor coolant is restored to within its limits.

**SURVEILLANCE REQUIREMENTS**

**4.4.8     The specific activity of the reactor coolant shall be determined to be within the limits by performance of the sampling and analysis program of Table 4.4-4.**

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\* With  $T_{avg}$  greater than or equal to 500°F.

**3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.7 PLANT SYSTEMS**

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**SURVEILLANCE REQUIREMENTS (Continued)**

**1. After every 720 hours of charcoal adsorber operation by either:**

1. Verifying within 31 days after removal that a laboratory analysis of a carbon sample obtained from a test canister shows a penetration of less than or equal to 1.0% for radioactive methyl iodide when the sample is tested in accordance with ASTM D3803-1989, 30°C, 95% R.H.; or
2. Verifying within 31 days after removal that a laboratory analysis of at least two carbon samples shows a penetration of less than or equal to 1.0% for radioactive methyl iodide when the samples are tested in accordance with ASTM D3803-1989, 30°C, 95% R.H. and the samples are prepared by either:
  - a) Emptying one entire bed from a removed adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed, or
  - b) Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

Subsequent to reinstalling the adsorber tray used for obtaining the carbon sample, the system shall be demonstrated OPERABLE by also:

- a) Verifying that the charcoal adsorbers remove  $\geq 99\%$  of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 6000 cfm  $\pm 10\%$ , and
- b) Verifying that the HEPA filter banks remove  $\geq 99\%$  of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 6000 cfm  $\pm 10\%$ .



## 5.0 DESIGN FEATURES

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### 5.6 FUEL STORAGE (Continued)

#### CRITICALITY - NEW FUEL

5.6.2 The new fuel storage racks are designed and shall be maintained with:

- a. ~~Westinghouse~~ Fuel assemblies having either a maximum enrichment of 4.55 weight % U-235, or an enrichment between 4.55 and 4.95 weight % U-235 with the minimum number of integral fuel burnable absorber pins as shown on Figure 5.6-4 (interpolation of the Boron-10 loading between 1.0X and 1.5X and between 1.5X and 2.0X is acceptable);
- b.  $k_{\text{eff}} \leq 0.95$  if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.7 of the UFSAR;
- c.  $k_{\text{eff}} \leq 0.98$  if moderated by aqueous foam, which includes an allowance for uncertainties as described in Section 9.7 of the UFSAR; and
- d. A nominal 21 inch center to center distance between fuel assemblies placed in the storage racks.

#### DRAINAGE

5.6.3 The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 629'4".

#### CAPACITY

5.6.4 The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 3613 fuel assemblies.

## **6.0 ADMINISTRATIVE CONTROLS**

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### **6.11 RADIATION PROTECTION PROGRAM**

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

### **6.12 HIGH RADIATION AREA**

6.12.1 Pursuant to 10 CFR 20.1601(c), in lieu of the requirements of 10 CFR 20.1601(a) and (b), each high radiation area in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 100 mrem but less than or equal to 1000 mrem in 1 hour at 30 cm from the radiation source or 30 cm from any surface that the radiation penetrates, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit\*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made aware of it.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist ~~Plant Radiation Protection Manager~~ in the Radiation Work Permit.

6.12.2 The requirements of 6.12.1 shall also apply to each high radiation area in which the radiation level at 30 cm from the radiation source or 30 cm from any surface that the radiation penetrates is greater than 1000 mrem in 1 hour. When possible, locked doors shall be provided to prevent unauthorized entry into such areas, and the keys shall be maintained under the administrative control of the Shift Supervisor ~~Manager~~ on duty and/or the Plant Health Physicist ~~(Plant Radiation Protection Supervisor Manager)~~. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work areas. In the event that it is not possible or practicable to provide locked doors due to area size or configuration, the area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device.

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\* Health Physics (Radiation Protection) personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

**Attachment 2A to AEP:NRC:3090**

**PROPOSED TECHNICAL SPECIFICATION PAGES**

**REVISED PAGES  
UNIT 1**

**6-12**

**6-14**

## **6.0 ADMINISTRATIVE CONTROLS**

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### **MONTHLY REACTOR OPERATING REPORT**

- 6.9.1.8 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the PORVs or safety valves, shall be submitted on a monthly basis to the U.S. Nuclear Regulatory Commission (Attn: Document Control Desk), Washington, D.C. 20555, with a copy to the Regional Office no later than the 15th of each month following the calendar month covered by the report.

### **CORE OPERATING LIMITS REPORT**

- 6.9.1.9.1 Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT before each reload cycle or any remaining part of a reload cycle for the following:
- a. Moderator Temperature Coefficient Limits for Specification 3/4.1.1.4,
  - b. Rod Drop Time Limits for Specification 3/4.1.3.3,
  - c. Shutdown Rod Insertion Limits for Specification 3/4.1.3.4,
  - d. Control Rod Insertion Limits for Specification 3/4.1.3.5,
  - e. Axial Flux Difference for Specification 3/4.2.1,
  - f. Heat Flux Hot Channel Factor for Specification 3/4.2.2,
  - g. Nuclear Enthalpy Rise Hot Channel Factor for Specification 3/4.2.3, and
  - h. Allowable Power Level for Specification 3/4.2.6.
- 6.9.1.9.2 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC in:
- a. WCAP-9272-P-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985 (Westinghouse Proprietary),
  - b. WCAP-8385, "Power Distribution Control and Load Following Procedures - Topical Report," September 1974 (Westinghouse Proprietary),
  - c. WCAP-10216-P-A, Revision 1A, "Relaxation of Constant Axial Offset Control/F<sub>Q</sub> Surveillance Technical Specification," February 1994 (Westinghouse Proprietary),
  - d. WCAP-10266-P-A Rev. 2, "The 1981 Version of Westinghouse Evaluation Mode Using BASH Code," March 1987 (Westinghouse Proprietary).
  - e. WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Reference Core Report," July 1991 (Westinghouse Proprietary).

## **6.0 ADMINISTRATIVE CONTROLS**

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### **6.11 RADIATION PROTECTION PROGRAM**

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

### **6.12 HIGH RADIATION AREA**

**6.12.1** Pursuant to 10 CFR 20.1601(c), in lieu of the requirements of 10 CFR 20.1601(a) and (b), each high radiation area in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 100 mrem but less than or equal to 1000 mrem in 1 hour at 30 cm from the radiation source or 30 cm from any surface that the radiation penetrates, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit\*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made aware of it.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the Plant Radiation Protection Manager in the Radiation Work Permit.

**6.12.2** The requirements of 6.12.1 shall also apply to each high radiation area in which the radiation level at 30 cm from the radiation source or 30 cm from any surface that the radiation penetrates is greater than 1000 mrem in 1 hour. When possible, locked doors shall be provided to prevent unauthorized entry into such areas, and the keys shall be maintained under the administrative control of the Shift Manager on duty and/or Plant Radiation Protection Manager. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work areas. In the event that it is not possible or practicable to provide locked doors due to area size or configuration, the area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device.

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\* Health Physics (Radiation Protection) personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

**Attachment 2B to AEP:NRC:3090**

**PROPOSED TECHNICAL SPECIFICATION PAGES**

**REVISED PAGES  
UNIT 2**

**3/4 4-20**

**3/4 7-16**

**5-9**

**6-14**

**3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS**  
**3/4.4 REACTOR COOLANT SYSTEM**

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SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

3.4.8 The specific activity of the primary coolant shall be limited to:

- a. Less than or equal to 1 microCurie per gram DOSE EQUIVALENT I-131, and
- b. Less than or equal to  $100/\bar{E}$  microCuries per gram of gross radioactivity.

APPLICABILITY: MODES 1, 2, 3, 4 and 5

ACTION:

MODES 1, 2 and 3\*

- a. With the specific activity of the reactor coolant greater than 1 microCurie per gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in HOT STANDBY with  $T_{avg}$  less than 500°F within 6 hours.
- b. With the specific activity of the reactor coolant greater than  $100/\bar{E}$  microCuries per gram, be in HOT STANDBY with  $T_{avg}$  less than 500°F within 6 hours.

MODES 1, 2, 3, 4 and 5

- a. With the specific activity of the reactor coolant greater than 1 microCurie per gram DOSE EQUIVALENT I-131 or greater than  $100/\bar{E}$  microCuries per gram, perform the sampling and analysis requirements of item 4a of Table 4.4-4 until the specific activity of the reactor coolant is restored to within its limits.

SURVEILLANCE REQUIREMENTS

4.4.8 The specific activity of the reactor coolant shall be determined to be within the limits by performance of the sampling and analysis program of Table 4.4-4.

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\* With  $T_{avg}$  greater than or equal to 500°F.

SURVEILLANCE REQUIREMENTS (Continued)

- d. After every 720 hours of charcoal adsorber operation by either:
1. Verifying within 31 days after removal that a laboratory analysis of a carbon sample obtained from a test canister shows a penetration of less than or equal to 1.0% for radioactive methyl iodide when the sample is tested in accordance with ASTM D3803-1989, 30°C, 95% R.H.; or
  2. Verifying within 31 days after removal that a laboratory analysis of at least two carbon samples shows a penetration of less than or equal to 1.0% for radioactive methyl iodide when the samples are tested in accordance with ASTM D3803-1989, 30°C, 95% R.H. and the samples are prepared by either:
    - a) Emptying one entire bed from a removed adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed, or
    - b) Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

Subsequent to reinstalling the adsorber tray used for obtaining the carbon sample, the system shall be demonstrated OPERABLE by also:

- a) Verifying that the charcoal adsorbers remove  $\geq 99\%$  of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 6000 cfm  $\pm 10\%$ , and
- b) Verifying that the HEPA filter banks remove  $\geq 99\%$  of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 6000 cfm  $\pm 10\%$ .



## 5.0 DESIGN FEATURES

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### 5.6 FUEL STORAGE (Continued)

#### CRITICALITY - NEW FUEL

5.6.2 The new fuel storage racks are designed and shall be maintained with:

- a. Westinghouse fuel assemblies having either a maximum enrichment of 4.55 weight % U-235, or an enrichment between 4.55 and 4.95 weight % U-235 with the minimum number of integral fuel burnable absorber pins as shown on Figure 5.6-4 (interpolation of the Boron-10 loading between 1.0X and 1.5X and between 1.5X and 2.0X is acceptable);
- b.  $k_{\text{eff}} \leq 0.95$  if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.7 of the UFSAR;
- c.  $k_{\text{eff}} \leq 0.98$  if moderated by aqueous foam, which includes an allowance for uncertainties as described in Section 9.7 of the UFSAR; and
- d. A nominal 21 inch center to center distance between fuel assemblies placed in the storage racks.

#### DRAINAGE

5.6.3 The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 629'4".

#### CAPACITY

5.6.4 The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 3613 fuel assemblies.

## **6.0 ADMINISTRATIVE CONTROLS**

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### **6.11 RADIATION PROTECTION PROGRAM**

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

### **6.12 HIGH RADIATION AREA**

6.12.1 Pursuant to 10 CFR 20.1601(c), in lieu of the requirements of 10 CFR 20.1601(a) and (b), each high radiation area in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 100 mrem but less than or equal to 1000 mrem in 1 hour at 30 cm from the radiation source or 30 cm from any surface that the radiation penetrates, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit\*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made aware of it.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the Plant Radiation Protection Manager in the Radiation Work Permit.

6.12.2 The requirements of 6.12.1 shall also apply to each high radiation area in which the radiation level at 30 cm from the radiation source or 30 cm from any surface that the radiation penetrates is greater than 1000 mrem in 1 hour. When possible, locked doors shall be provided to prevent unauthorized entry into such areas, and the keys shall be maintained under the administrative control of the Shift Manager on duty and/or the Plant Radiation Protection Manager. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work areas. In the event that it is not possible or practicable to provide locked doors due to area size or configuration, the area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device.

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\* Health Physics (Radiation Protection) personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

**Attachment 3A to AEP:NRC:3090**

**FACILITY OPERATING LICENSE PAGES  
MARKED TO SHOW PROPOSED CHANGES**

**REVISED PAGES  
UNIT 1**

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(3) Less than Four Loop Operation

The licensee shall not operate the reactor at power levels above P-7 (defined in Table 3.3-1 of Specification 3.3.1.1 of Appendix A to this license) with less than ~~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.

Amendment No.  
31, 194, 208

- 2.C(4) 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 those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(5) ~~Spent Fuel Pool Storage~~

Amendment No.  
118, 136, 169

~~The licensee is authorized to store D. C. Cook Unit 1 and Unit 2 fuel assemblies, new or irradiated up to a total of 3613 fuel assemblies in the shared spent fuel pool at the Donald C. Cook Nuclear Plant subject to the following conditions:~~

~~Fuel stored in the spent fuel pool shall not have nominal enrichment greater than 4.95% Uranium-235~~

- (6) Deleted by Amendment 80.

(7) Secondary Water Chemistry Monitoring Program

The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall be described in the station chemistry manual and shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
2. Identification of the procedures used to measure the values of the critical parameters;
3. Identification of process sampling points;
4. Procedure for the recording and management of data;
5. Procedures defining corrective actions for off control point chemistry conditions; and

Amendment No.  
36

6. A procedure identifying (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective actions.

Amendment No. 169      ~~(8) The provisions of Specification 3/4.9.7 are not applicable for loads being moved over the pool for the duration of the spent fuel pool reracking project. Control of loads moving over the spent fuel pool during the spent fuel pool reracking project shall comply with the criteria of NUREG-0612 "Control of Heavy Loads at Nuclear Power Plants." Administrative controls shall be in place to prevent any load not rigged in compliance with the criteria of NUREG-0612 from passing over the spent fuel pool with the crane interlocks, required by T/S 3/4.9.7, disengaged.~~

Amendment No. 227      ~~2.C(9) The steam generator tube inspection surveillance requirements of Technical Specification 4.4.5.3 have been extended until the start of cycle 17, not to exceed January 31, 2001. In the event the steam generators are replaced prior to the start of cycle 17, the retired steam generators are exempted from further surveillance under T/S 4.4.5.3.~~

Amendment No. 265      ~~2.C(10) Technical Specification surveillance requirements 4.6.5.3.1.b.3, 4.6.5.3.1.b.4, and 4.6.5.3.1.b.5 need not be performed until prior to ascension into Mode 4 at the completion of fuel cycle 18 refueling outage. If Unit 1 enters Mode 5 for sufficient duration prior to the fuel cycle 18 refueling outage, I&M will perform the surveillance testing required by TS 4.6.5.3.1.b.3, 4.6.5.3.1.b.4, and 4.6.5.3.1.b.5.~~

Amendment No. 270      ~~2.C(11) During the essential service water pump replacement, a one-time extension of the Technical Specification 3.4.7.1 Action a and b requirement that an inoperable essential service water loop be restored to an operable status within 72 hours may be extended to 140 hours. This extension is applicable only during the preplanned replacement of an essential service water pump with a modified pump and may not be used when an essential service water pump is found to be inoperable. The extension is subject to the following conditions:~~

- ~~• This allowance may be invoked once for each essential service water pump to allow replacement of the pump with a modified pump.~~
- ~~• This allowance may be invoked once for each Unit 1 essential service water loop when the associated Unit 2 essential service water pump is being replaced. This will be done in accordance with Unit 2 Technical Specification 3.7.4.1 Action b.1.~~
- ~~• This allowance is applicable until January 31, 2003.~~
- ~~• When the essential service water loops are declared inoperable during the pump replacement, the systems supported by the essential service water system need not enter their limiting conditions for operation action statements.~~

**\*2.D      Physical Protection**

Amendment No. 122      The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard 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 to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Donald C. Cook Nuclear Plant Security Plan," with revisions submitted through July 21, 1988; "Donald C. Cook Nuclear Plant Training

**Attachment 3B to AEP:NRC:3090**

**FACILITY OPERATING LICENSE PAGES  
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Amendment  
No. 12, 180, 192

- (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 those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

Amendment  
No. 64, 121

- (p) Deleted by Amendment
- (q) Deleted by Amendment 2.
- (r) Deleted by Amendment 68.
- (s) Spent Fuel Pool Storage

Amendment  
No. 104, 121, 152

~~The licensee is authorized to store D. C. Cook, Unit 1 and Unit 2 fuel assemblies, new or irradiated up to a total of 3613 fuel assemblies in the shared spent fuel pool at the Donald C. Cook Nuclear Plant subject to the following conditions:~~

~~Fuel stored in the spent fuel pool shall not have a nominal enrichment greater than 4.95% Uranium-235.~~

- ~~\* Amendment 3 deleted Paragraph (s), Amendment 13 added a new Paragraph (s).~~

- (t) Deleted by Amendment 63.

Amendment  
No. 152

- (u) ~~The provisions of Specification 3/4.9.7 are not applicable for loads being moved over the pool for the duration of the spent fuel pool reracking project. Control of loads moving over the spent fuel pool during the spent fuel pool reracking project shall comply with the criteria of NUREG-0612, "Controls of Heavy Loads at Nuclear Power Plants." Administrative controls shall be in place to prevent any load not rigged in compliance with the criteria of NUREG-0612 from passing over the spent fuel pool with the crane interlocks, required by T/S 3/4.9.7, disengaged.~~

v. Secondary Water Chemistry Monitoring Program

The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall be described in the station chemistry manual and shall include:

- |                      |   |
|----------------------|---|
| Amendment<br>No. 18  | <ol style="list-style-type: none"><li>1. Identification of a sampling schedule for the critical parameters and control points for these parameters;</li><li>2. Identification of the procedures used to measure the values of the critical parameters;</li><li>3. Identification of process sampling points;</li><li>4. Procedure for the recording and management of data;</li><li>5. Procedures defining corrective actions for off control point chemistry conditions; and</li><li>6. A procedure identifying (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective actions.</li></ol>  |
| Amendment<br>No. 232 | <p>w. <del>The steam generator tube inspection surveillance maximum inspection interval of Technical Specification 4.4.5.3 is extended until the start of cycle 13, but no later than June 30, 2002.</del></p>  |
| Amendment<br>No. 234 | <p>x. <del>The emergency diesel generator engine Technical Specification surveillance requirements of 4.8.1.1.2.e.1 and 4.8.1.1.2.e.7 have been extended to allow their performance during refueling outage 13, but no later than December 31, 2001.</del></p> <p><del>The station battery service testing Technical Specification surveillance requirements 4.8.2.3.2.d and 4.8.2.5.2.d have been extended to allow them to be performed during the refueling outage 13, but no later than December 31, 2001.</del></p>  |
| Amendment<br>No. 254 | <p>y. <del>During the essential service water pump replacement, a one-time extension of the Technical Specification 3.7.4.1 Action a and b requirement that an inoperable essential service water loop be restored to an operable status within 72 hours may be extended to 140 hours. This extension is applicable only during the preplanned replacement of an essential service water pump with a modified pump and may not be used when an essential service water pump is found to be inoperable. The extension is subject to the following conditions:</del></p> <ul style="list-style-type: none"><li><del>• This allowance may be invoked once for each essential service water pump to allow replacement of the pump with a modified pump.</del></li><li><del>• This allowance may be invoked once for each Unit 2 essential service water loop when the associated Unit 1 essential service water pump is being replaced. This will be done in accordance with Unit 1 Technical Specification 3.7.4.1 Action b.1.</del></li></ul> |



- ~~This allowance is applicable until January 31, 2003.~~
- ~~When the essential service water loops are declared inoperable during the pump replacement, the systems supported by the essential service water system need not enter their limiting conditions for operation action statements.~~

D. Physical Protection

Amendment  
No. 109

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard 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 to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Donald C. Cook Nuclear Plant Security Plan," with revisions submitted through July 21, 1988; "Donald C. Cook Nuclear Plant Training and Qualification Plan," with revisions submitted through December 19, 1986; and "Donald C. Cook Nuclear Plant Safeguards Contingency Plan," with revisions submitted through June 10, 1988. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

E. Deleted by Amendment 63.

F. Deleted by Amendment 6.

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G. System Integrity

Amendment  
No. 34

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

\*\*

H. Iodine Monitoring

Amendment  
No. 34

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

Amendment  
No. 29

\*\*

- I. In all places of this license, the reference to the Indiana and Michigan Power Company is deleted and all references to "the licensees" is amended to read "the licensee". The intent is to recognize the Indiana

**Attachment 4A to AEP:NRC:3090**

**PROPOSED FACILITY OPERATING  
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**REVISED PAGES  
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(3) Less than Four Loop Operation

The licensee shall not operate the reactor at power levels above P-7 (defined in Table 3.3-1 of Specification 3.3.1.1 of Appendix A to this 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.

Amendment No.  
31, 194, 208

2.C(4) 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 those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(5) Deleted by Amendment

(6) Deleted by Amendment 80.

(7) Secondary Water Chemistry Monitoring Program

The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall be described in the station chemistry manual and shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
2. Identification of the procedures used to measure the values of the critical parameters;
3. Identification of process sampling points;
4. Procedure for the recording and management of data;
5. Procedures defining corrective actions for off control point chemistry conditions; and

Amendment No.  
36

6. A procedure identifying (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective actions.

(8) Deleted by Amendment

2.C(9) Deleted by Amendment

2.C(10) Deleted by Amendment

2.C(11) Deleted by Amendment

**\*2.D Physical Protection**

Amendment No.  
122

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard 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 to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Donald C. Cook Nuclear Plant Security Plan," with revisions submitted through July 21, 1988; "Donald C. Cook Nuclear Plant Training and Qualification Plan," with revisions submitted through December 19, 1986; and Donald C. Cook Nuclear Plant Safeguards Contingency Plan," with revisions submitted through June 10, 1988. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

E. Deleted by Amendment 80.

**\*\* 2.F. Deleted by Amendment 80.**

Amendment No.  
33

**\* 2.G In all places of this license, the reference to the Indiana and Michigan Power Company is deleted and all references to "the licensees" is amended to read "the licensee". The intent is to recognize the Indiana and Michigan Electric Company as the sole licensee of the Donald C. Cook Nuclear Plant.**

Amendment No.  
49

**\* 2.H System Integrity**

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low a practical levels. The program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

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**PROPOSED FACILITY OPERATING  
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Amendment  
No. 12, 180, 192

- (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 those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

Amendment  
No. 64, 121

- (p) Deleted by Amendment
- (q) Deleted by Amendment 2.
- (r) Deleted by Amendment 68.
- (s) Deleted by Amendment
- (t) Deleted by Amendment 63.
- (u) Deleted by Amendment

v. Secondary Water Chemistry Monitoring Program

The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall be described in the station chemistry manual and shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
2. Identification of the procedures used to measure the values of the critical parameters;
3. Identification of process sampling points;
4. Procedure for the recording and management of data;
5. Procedures defining corrective actions for off control point chemistry conditions; and
6. A procedure identifying (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective actions.

Amendment  
No. 18

- w. Deleted by Amendment
- x. Deleted by Amendment
- y. Deleted by Amendment

**D. Physical Protection**

Amendment  
No. 109

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard 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 to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Donald C. Cook Nuclear Plant Security Plan," with revisions submitted through July 21, 1988; "Donald C. Cook Nuclear Plant Training and Qualification Plan," with revisions submitted through December 19, 1986; and "Donald C. Cook Nuclear Plant Safeguards Contingency Plan," with revisions submitted through June 10, 1988. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

E. Deleted by Amendment 63.

F. Deleted by Amendment 6.

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**G. System Integrity**

Amendment  
No. 34

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

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**H. Iodine Monitoring**

Amendment  
No. 34

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.