



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 10, 2000

Mr. Robert P. Powers, Senior Vice President  
Indiana Michigan Power Company  
Nuclear Generation Group  
500 Circle Drive  
Buchanan, MI 49107

**SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: TECHNICAL SPECIFICATION CHANGES TO REFLECT 10 CFR PART 20 REQUIREMENTS (TAC NOS. MA9397 AND MA9398)**

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 245 to Facility Operating License No. DPR-58 and Amendment No. 226 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated May 30, 2000.

The amendments would make changes to several TSs to reflect implementation of the revised 10 CFR Part 20, "Standards for Protection Against Radiation."

A copy of our related safety evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

John F. Stang, Senior Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures: 1. Amendment No. 245 to DPR-58  
2. Amendment No. 226 to DPR-74  
3. Safety Evaluation

cc w/encls: See next page

DF-01

October 10, 2000

Mr. Robert P. Powers, Senior Vice President  
Indiana Michigan Power Company  
Nuclear Generation Group  
500 Circle Drive  
Buchanan, MI 49107

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENTS RE: TECHNICAL SPECIFICATION CHANGES TO REFLECT  
10 CFR PART 20 REQUIREMENTS (TAC NOS. MA9397 AND MA9398)

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 245 to Facility Operating License No. DPR-58 and Amendment No. 226 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated May 30, 2000.

The amendments would make changes to several TSs to reflect implementation of the revised 10 CFR Part 20, "Standards for Protection Against Radiation."

A copy of our related safety evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,  
/RA/

John F. Stang, Senior Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

- Enclosures: 1. Amendment No. 245 to DPR-58
- 2. Amendment No. 226 to DPR-74
- 3. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION

PUBLIC	GHill(2)
PDIII-1 Reading	OGC
CCraig	ACRS
JStang	SKlementowicz
THarris	AVegel, RIII

\*SE Input Provided

OFFICE	PDIII-1/FM	PDIII-1/LA	IOLB/SC	OGC <i>also with comments</i>	PDIII-1/SC
NAME	JStang	THarris	KGibson*	RWeisman	CCraig
DATE	9/12/00	9/1/00	8/31/00	Oct 2, 2000	10/5/00

AM

DOCUMENT NAME: G:\PDIII-1\DCCOOK\amdMA9397.wpd

OFFICIAL RECORD COPY

Donald C. Cook Nuclear Plant, Units 1 and 2

cc:

Regional Administrator, Region III  
U.S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, IL 60532-4351

Attorney General  
Department of Attorney General  
525 West Ottawa Street  
Lansing, MI 48913

Township Supervisor  
Lake Township Hall  
P.O. Box 818  
Bridgman, MI 49106

U.S. Nuclear Regulatory Commission  
Resident Inspector's Office  
7700 Red Arrow Highway  
Stevensville, MI 49127

David W. Jenkins, Esquire  
Indiana Michigan Power Company  
Nuclear Generation Group  
One Cook Place  
Bridgman, MI 49106

Mayor, City of Bridgman  
P.O. Box 366  
Bridgman, MI 49106

Special Assistant to the Governor  
Room 1 - State Capitol  
Lansing, MI 48909

Drinking Water and Radiological  
Protection Division  
Michigan Department of  
Environmental Quality  
3423 N. Martin Luther King Jr Blvd  
P.O. Box 30630, CPH Mailroom  
Lansing, MI 48909-8130

Robert C. Godley  
Director, Regulatory Affairs  
Indiana Michigan Power Company  
Nuclear Generation Group  
One Cook Place  
Bridgman, MI 49106

David A. Lochbaum  
Union of Concerned Scientists  
1616 P Street NW, Suite 310  
Washington, DC 20036-1495

A. Christopher Bakken, Site Vice President  
Indiana Michigan Power Company  
Nuclear Generation Group  
One Cook Place  
Bridgman, MI 49106

Michael W. Rencheck  
Vice President, Nuclear Engineering  
Indiana Michigan Power Company  
Nuclear Generation Group  
500 Circle Drive  
Buchanan, MI 49107



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 245  
License No. DPR-58

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated May 30, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

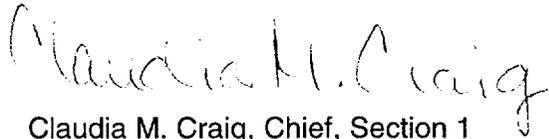
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 245, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Claudia M. Craig, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 10, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 245

TO FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

INSERT

6-7

6-7

6-8

6-8

6-10

6-10

6-14

6-14

6-15

6-15

## 6.0 ADMINISTRATIVE CONTROLS

---

### PROCEDURES AND PROGRAMS (Continued)

6.8.4 The following programs shall be established, implemented, and maintained:

a. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR 20.1001-20.2402, Appendix B, Table 2, Column 2,
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents pursuant to 10 CFR 20.1302 and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,
- 6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,

PROCEDURES AND PROGRAMS (Continued)

- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY shall be limited to the following:
  - a) For noble gases: Less than or equal to a dose rate of 500 mrem/year to the total body and less than or equal to a dose rate of 3000 mrem/year to the skin, and
  - b) For Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to a dose rate of 1500 mrem/year to any organ.
- 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50, and
- 10) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

b. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and
- 3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

## 6.0 ADMINISTRATIVE CONTROLS

---

### 6.9 STARTUP REPORT (Continued)

- 6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

### ANNUAL REPORTS<sup>1</sup>

- 6.9.1.4 Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.
- 6.9.1.5 Reports required on an annual basis shall include:
- a. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) receiving annual exposures greater than 100 mrem according to work and job functions<sup>2</sup>, e.g., reactor operations and surveillance, in-service inspection, routine maintenance, special maintenance (describe maintenance), waste processing and refueling. Also included is a tabulation of the total person rem exposures for station, utility, and other personnel associated with each work and job function. The dose assignment to various duty functions may be estimates based on pocket dosimeter, electronic dosimeter, TLD, or film badge measurements. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total deep dose received shall be assigned to specific major work functions.
  - b. The complete results of steam generator tube in-service inspections performed during the report period (reference Specification 4.4.5.5.b).
  - c. Documentation of all challenges to the pressurizer power operated relief valves (PORVs) or safety valves.
  - d. Information regarding any instances when the I-131 specific activity limit was exceeded.

---

<sup>1</sup> A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

<sup>2</sup> This tabulation supplements the requirements of 20.2206 of 10 CFR Part 20.

## 6.0 ADMINISTRATIVE CONTROLS

### 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 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 on duty and/or the Plant Health Physicist (Plant Radiation Protection Supervisor). 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.

---

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.

## 6.0 ADMINISTRATIVE CONTROLS

---

### 6.13 PROCESS CONTROL PROGRAM (PCP)

#### 6.13.1 Changes to the PCP:

- a. Shall be documented and records of reviews performed shall be retained as required by the Quality Assurance Program Description, Appendix C, Section 6.10.2.n. This documentation shall contain:
  1. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  2. A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
- b. Shall become effective after review and acceptance by the PNSRC and the approval of the Plant Manager.

### 6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

#### 6.14.1 Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by the Quality Assurance Program Description, Appendix C, Section 6.10.2.n. This documentation shall contain:
  1. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  2. A determination that the change will maintain the level of radioactive effluent control pursuant to 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by the PNSRC and the approval of the Plant Manager.
- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 226  
License No. DPR-74

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated May 30, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

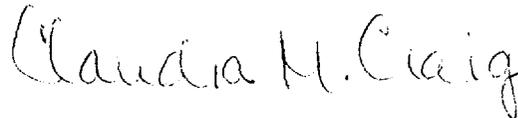
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 226 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Claudia M. Craig, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 10, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 226

FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

INSERT

6-7

6-7

6-8

6-8

6-10

6-10

6-14

6-14

6-15

6-15

PROCEDURES AND PROGRAMS (Continued)

6.8.4 The following programs shall be established, implemented, and maintained:

a. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- 1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR 20.1001-20.2402, Appendix B, Table 2, Column 2,
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents pursuant to 10 CFR 20.1302 and with the methodology and parameters in the ODCM,
- 4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,
- 5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,
- 6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,

PROCEDURES AND PROGRAMS (Continued)

- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY shall be limited to the following:
  - a) For noble gases: Less than or equal to a dose rate of 500 mrem/year to the total body and less than or equal to a dose rate of 3000 mrem/year to the skin, and
  - b) For Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to a dose rate of 1500 mrem/year to any organ.
- 8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50,
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50, and
- 10) Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

b. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and
- 3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

STARTUP REPORT (Continued)

6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

ANNUAL REPORTS<sup>1</sup>

6.9.1.4 Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

6.9.1.5 Reports required on an annual basis shall include:

- a. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) receiving annual exposures greater than 100 mrem according to work and job functions<sup>2</sup>, e.g., reactor operations and surveillance, in-service inspection, routine maintenance, special maintenance (describe maintenance), waste processing and refueling. Also included is a tabulation of the total person rem exposures for station, utility, and other personnel associated with each work and job function. The dose assignment to various duty functions may be estimates based on pocket dosimeter, electronic dosimeter, TLD, or film badge measurements. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total deep dose received shall be assigned to specific major work functions.
- b. The complete results of steam generator tube in-service inspections performed during the report period (reference Specification 4.4.5.5.b).
- c. Documentation of all challenges to the pressurizer power operated relief valves (PORVs) or safety valves.
- d. Information regarding any instances when the I-131 specific activity limit was exceeded.

---

<sup>1</sup> A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

<sup>2</sup> This tabulation supplements the requirements of 20.2206 of 10 CFR Part 20.

## 6.0 ADMINISTRATIVE CONTROLS

---

### 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 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 on duty and/or the Plant Health Physicist (Plant Radiation Protection Supervisor). 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.

---

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.

---

## 6.0 ADMINISTRATIVE CONTROLS

---

### 6.13 PROCESS CONTROL PROGRAM (PCP)

#### 6.13.1 Changes to the PCP:

- a. Shall be documented and records of reviews performed shall be retained as required by the Quality Assurance Program Description, Appendix C, Section 6.10.2.n. This documentation shall contain:
  1. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  2. A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
- b. Shall become effective after review and acceptance by the PNSRC and the approval of the Plant Manager.

### 6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

#### 6.14.1 Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by the Quality Assurance Program Description, Appendix C, Section 6.10.2.n. This documentation shall contain:
  1. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  2. A determination that the change will maintain the level of radioactive effluent control pursuant to 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by the PNSRC and the approval of the Plant Manager.
- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 245 TO FACILITY OPERATING LICENSE NO. DPR-58  
AND AMENDMENT NO. 226 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By application dated May 30, 2000, the Indiana Michigan Power Company (the licensee) requested amendments to the Technical Specifications (TSs) for the Donald C. Cook Nuclear Plant, Units 1 and 2. The proposed amendments would make changes to several TSs to reflect implementation of the revised 10 CFR Part 20, "Standards for Protection Against Radiation."

2.0 EVALUATION

A. TS 6.8.4.a, "Radiological Effluent Controls Program"

The licensee has proposed to change the 10 CFR Part 20 reference from "10 CFR Part 20, Appendix B, Table II, Column 2" to the following: "10 CFR 20.1001-20.2402, Appendix B, Table 2, Column 2."

The proposed change updates the 10 CFR Part 20 reference for the concentration values that the licensee uses to control the release of radioactive material in its liquid effluents. The use of the new concentration values will not change the licensee's ability to maintain liquid radioactive effluents as low as is reasonably achievable. Accordingly, the proposed change is acceptable.

B. TS 6.8.4.a, "Radiological Effluent Controls Program," and TS 6.14, "Offsite Dose Calculation Manual"

The licensee has proposed to change the 10 CFR Part 20 section reference from "in accordance with 10 CFR 20.106" to "pursuant to 10 CFR 20.1302."

The proposed change is administrative with no substantive impact on its own. Accordingly, the proposed change is acceptable.

C. TS 6.9.1.5, "Annual Reports"

The licensee has proposed to expand the reporting requirements of this TS to provide additional data on the total radiation dose received in a specified work and job function. The current TS requirement is to report only those radiation exposures incurred by individuals

receiving more than 100 mrem for a specified work and job function. However, the bulk of the total dose associated with many work and job functions is typically incurred by individuals receiving less than 100 mrem. The revised report will include information on individuals who received less than 100 mrem. This will provide a more realistic report of the radiation doses actually associated with a job or work function and will provide a better correlation with the radiation exposure data reported in accordance with 10 CFR 20.2206. Therefore, the proposed change is acceptable.

D. TS 6.9.1.5, "Annual Reports"

The licensee has proposed to add the use of electronic dosimetry as a source of data, change the wording for reporting "whole body dose" to "deep dose," and correct a spelling error in the word "totaling."

The proposed changes are administrative with no substantive impact on their own. Accordingly, the proposed changes are acceptable.

E. TS 6.9.1.5, "Annual Reports"

The licensee has proposed to change the 10 CFR Part 20 section reference in Note 2 from "20.407" to "20.2206."

The proposed change is administrative with no substantive impact on its own. Accordingly, the proposed change is acceptable.

F. TS 6.12, "High Radiation Area"

The licensee has proposed to update the 10 CFR Part 20 section references, wording, and the definition for "high radiation area" to be consistent with the revised 10 CFR Part 20 requirements.

The proposed changes are administrative and are acceptable.

G. TS 6.8.4.a, "Radiological Effluent Controls Program"

The licensee has proposed to replace the reference to "10 CFR 20, Appendix B, Table II, Column 1" in TS 6.8.4.a.7, and replace it with the instantaneous dose rate limitations in Section 3.2.4, "Gaseous Effluents," which are contained in the licensee's Offsite Dose Calculation Manual. The specific limitations to be added are: a) for noble gases, less than or equal to a dose rate of 500 mrem/year to the total body and less than or equal to a dose rate of 3000 mrem/year to the skin, and b) for Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days, less than or equal to a dose rate of 1500 mrem/year to any organ.

The proposed change is consistent with the guidance in NUREG-0472, "Standard Radiological Effluent Technical Specifications." The use of the new dose rate-based control will not change the licensee's ability to maintain gaseous radioactive effluents as low as is reasonably achievable. Accordingly, the proposed change is acceptable.

### 3.0 STATE CONSULTATION

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

### 4.0 ENVIRONMENTAL CONSIDERATION

This amendment relates to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

### 5.0 CONCLUSION

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

Principal Contributor: S. Klementowicz

Date: October 10, 2000