April 17, 1987

Docket No.: 50-315

Mr. John Dolan, Vice President
Indiana and Michigan Electric Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Dolan:

The Commission has issued the enclosed Amendment No.107 to Facility Operating License No. DPR-58 for the Donald C. Cook Nuclear Plant, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated January 9, 1987.

The amendment revises the Technical Specifications to extend the period to perform certain surveillances due to the lengthened Cycle 9 operation.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

/S/

Gary M. Holahan, Assistant Director
for Region III and V Reactors
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No.107 to DPR-58
2. Safety Evaluation

cc: w/enclosures
See next page

RIII&V/NRR	RII&V/NRR	RII&V/NRR
DWigginton/mac	PKreutzer	GHolahan
04/10/87	04/10/87	04/17/87

Mr. John Dolan
Indiana and Michigan Electric Company

Donald C. Cook Nuclear Plant

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Regional Administrator, Region III
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J. Feinstein
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Dated: April 17, 1987

AMENDMENT NO. TO DPR-58 - DONALD C. COOK, UNIT 1

Distribution:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

INDIANA AND MICHIGAN ELECTRIC COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 107
License No. DPR-58

1. The Nuclear Regulatory Commission (the Commission) has found that :

   A. The application for amendment by Indiana and Michigan Electric Company (the licensee) dated January 9, 1987, 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. 107 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The Technical Specifications are to become effective within 45 days of receipt of this amendment.

4. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Gary M. Holahan

Gary M. Holahan, Assistant Director
for Region III and V Reactors
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 17, 1987

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO.107 FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 3-41*	3/4 3-41
3/4 3-42	3/4 3-42
3/4 3-56	3/4 3-56
3/4 5-1*	3/4 5-1
3/4 5-2	3/4 5-2
3/4 5-5	3/4 5-5
3/4 6-10	3/4 6-10
3/4 6-13	3/4 6-13
3/4 6-15	3/4 6-15
3/4 6-30	3/4 6-30
3/4 6-33	3/4 6-33
3/4 6-34	3/4 6-34
3/4 7-15	3/4 7-15
3/4 7-17	3/4 7-17
3/4 7-21*	3/4 7-21
3/4 7-22	3/4 7-22
3/4 7-25	3/4 7-25
3/4 7-26*	3/4 7-26
3/4 8-9	3/4 8-9
3/4 8-12	3/4 8-12

* Included for Convenience only

TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION

INSTRUMENTS AND SENSOR LOCATIONS	MEASUREMENT RANGE	MINIMUM INSTRUMENTS OPERABLE
1. STRONG MOTION TRIAXIAL ACCELEROGRAPHS		
a. Reactor Pit FLoor	0-1 g	1
b. Top of Crane Wall	0-1 g	1
c. Free Field	0-1 g	1
2. PEAK RECORDING ACCELEROGRAPHS		
a. Containment Spring Line	0-2 g	1
b. Diesel Generator Room Floor	0-2 g	1
c. Spent Fuel Pool	0-2 g	1

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT CHANNEL	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. STRONG MOTION TRIAXIAL ACCELEROGRAPHS			
a. Reactor Pit Floor			
1. Time History Recorder	M	R*	M
2. Seismic Trigger	NA	R*	NA
b. Top of Crane Wall			
1. Time History Recorder	M	R	M
c. Free Field			
1. Time History Recorder	M	R	M
2. Seismic Trigger	NA	R	NA
2. PEAK RECORDING ACCELEROGRAPHS			
a. Containment Spring Line	NA	R	NA
b. Diesel Generator Room Floor	NA	R	NA
c. Spent Fuel Pool	NA	R	NA

*The provisions of Specification 4.0.6 are applicable.

TABLE 4.3-7

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure	M	R *
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R
5. Pressurizer Water Level	M	R*
6. Steam Line Pressure	M	R *
7. Steam Generator Water Level - Narrow Range	M	R*
8. RWST Water Level	M	R
9. Boric Acid Tank Solution Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator - Limit Switches	M	R*
13. PORV Block Valve Position Indicator - Limit Switches	M	R*
14. Safety Valve Position Indicator - Acoustic Monitor	M	R*

* The provisions of Specification 4.0.6 are applicable.

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

ACCUMULATORS

LIMITING CONDITION FOR OPERATION

3.5.1 Each reactor coolant system accumulator shall be OPERABLE with:

a. The isolation valve open,

b. Between 929 and 971 cubic feet of borated water,

c. A minimum boron concentration of 1950 PPM, and

d. A nitrogen cover-pressure of between 585 and 658 psig.

APPLICABILITY: MODES 1, 2 and 3.*

ACTION:

a. With one accumulator inoperable, except as a result of a closed isolation valve, restore the inoperable accumulator to OPERABLE status within one hour or be in HOT SHUTDOWN within the next 8 hours.

b. With one accumulator inoperable due to the isolation valve being closed, either immediately open the isolation valve or be in HOT STANDBY within one hour and be in HOT SHUTDOWN within the next 8 hours.

SURVEILLANCE REQUIREMENTS

4.5.1 Each accumulator shall be demonstrated OPERABLE:

a. At least once per 12 hours by:

1. Verifying the water level and nitrogen cover-pressure in the tanks, and

2. Verifying that each accumulator isolation valve is open.

*Pressurizer Pressure above 1000 psig.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days and within 6 hours after each solution volume increase of $\geq$ 1% of tank volume by verifying the boron concentration of the accumulator solution.

c. At least once per 31 days when the RCS pressure is above 2000 psig, by verifying that power to the isolation valve operator is disconnected by removal of the breaker from the circuit.

d. Verifying at least once per 18 months that each accumulator isolation valve opens automatically upon receipt of a safety injection test signal.*

*The provisions of Specification 4.0.6 are applicable.

SURVEILLANCE REQUIREMENTS (Continued)

d. At least once per 18 months by: *

1. Verifying automatic isolation and interlock action of the RHR system from the Reactor Coolant System when the Reactor Coolant System pressure is above 600 psig.

2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion.

e. At least once per 18 months, during shutdown, by: *

1. Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection test signal.

2. Verifying that each of the following pumps start automatically upon receipt of a safety injection test signal:

a) Centrifugal charging pump

b) Safety injection pump

c) Residual heat removal pump

f. By verifying that each of the following pumps develops the indicated discharge pressure on recirculation flow when tested pursuant to Specification 4.0.5 at least once per 31 days on a STAGGERED TEST BASIS.

1. Centrifugal charging pump ≥ 2405 psig

2. Safety Injection pump ≥ 1445 psig

3. Residual heat removal pump ≥ 195 psig

g. By verifying the correct position of each mechanical stop for the the following Emergency Core Cooling System throttle valves:

1. Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE.

* The provisions of Specification 4.0.6 are applicable.

Amendment No. 107

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable spray system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct positon.

b. By verifying, that on recirculation flow, each pump develops a discharge pressure of $\geq$ 255 psig at a flow of $\geq$ 700 gpm, when tested pursuant to Specification 4.0.5 at least once per 31 days on a STAGGERED TEST BASIS.

c. At least once per 18 months during shutdown, by: *

1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure--High-High test signal.

2. Verifying that each spray pump starts automatically on a Containment Pressure--High-High test signal.

d. At least once per 5 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

*The provisions of Specification 4.0.6 are applicable.

SURVEILLANCE REQUIREMENTS (Continued)

c. At least once per 18 months during shutdown, by:

1. Cycling each power operated (excluding automatic) valve in the flow path that is not testable during plant operation, through at least one complete cycle of full travel.

2. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure -- High-High signal.*

d. At least once per 5 years by verifying a water flow rate of at least 20 gpm ($\geq$ 20 gpm) but not to exceed 50 gpm ($\leq$ 50 gpm) from the spray additive tank test line to each containment spray system with the spray pump operating on recirculation with a pump discharge pressure $\geq$ 255 psig.

*The provisions of Specification 4.0.6 are applicable.

SURVEILLANCE REQUIREMENTS (Continued)

valve or its associated actuator, control or power circuit by performance of the cycling test, above, and verification of isolation time.

4.6.3.1.2 Each isolation valve specified in Table 3.6-1 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by: *

a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.

4.6.3.1.3 The isolation time of each power operated or automatic valve of Table 3.6-1 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

*The provisions of Specification 4.0.6 are applicable.

CONTAINMENT SYSTEMS

ICE CONDENSER DOORS

LIMITING CONDITION FOR OPERATION

3.6.5.3 The ice condenser inlet doors, intermediate deck doors, and top deck doors shall be closed and OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more ice condenser doors open or otherwise inoperable, POWER OPERATION may continue for up to 14 days provided the ice bed temperature is monitored at least once per 4 hours and the maximum ice bed temperature is maintained $\leq$ 27°F; otherwise, restore the doors to their closed positions or OPERABLE status (as applicable) within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.3.1 Inlet Doors - Ice condenser inlet doors shall be:

a. Continuously monitored and determined closed by the inlet door position monitoring system, and

b. Demonstrated OPERABLE during shutdown (MODES 5 and 6) at least once per 9 months by:*

1. Verifying that the torque required to initially open each door is $\leq$ 675 inch pounds.

2. Verifying that opening of each door is not impaired by ice, frost or debris.

3. Testing a sample of at least 50% of the doors and verifying that the torque required to open each door is less than 195 inch-pounds when the door is 40 degrees open. This torque is defined as the "door opening torque" and is equal to the nominal door torque plus a frictional

*The provisions of Specification 4.0.6 are applicable.

INLET DOOR POSITION MONITORING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.5.4 The inlet door position monitoring system shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the inlet door position monitoring system inoperable, POWER OPERATION may continue for up to 14 days, provided the ice bed temperature monitoring system is OPERABLE and the maximum ice bed temperature is $\leq$ 27°F when monitored at least once per 4 hours; otherwise, restore the inlet door position monitoring system to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.4 The inlet door position monitoring system shall be determined OPERABLE by:

a. Performing a CHANNEL CHECK at least once per 12 hours,

b. Performing a CHANNEL FUNCTIONAL TEST at least once per 18 months, and *

c. Verifying that the monitoring system correctly indicates the status of each inlet door as the door is opened and reclosed during its testing per Specification 4.6.5.3.1.*

*The provisions of Specification 4.0.6 are applicable.

DIVIDER BARRIER PERSONNEL ACCESS DOORS AND EQUIPMENT HATCHES

LIMITING CONDITION FOR OPERATION

3.6.5.5 The personnel access doors and equipment hatches between the containment's upper and lower compartments shall be OPERABLE and closed.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With a personnel access door or equipment hatch inoperable or open except for personnel transit entry and T_{avg} > 200°F, restore the door or hatch to OPERABLE status or to its closed position (as applicable) within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.5.1 The personnel access doors and equipment hatches between the containment's upper and lower compartments shall be determined closed by a visual inspection prior to increasing the Reactor Coolant System T_{avg} above 200°F and after each personnel transit entry when the Reactor Coolant System T_{avg} is above 200°F.

4.6.5.5.2 The personnel access doors and equipment hatches between the containment's upper and lower compartments shall be determined OPERABLE by visually inspecting the seals and sealing surfaces of these penetrations and verifying no detrimental misalignments, cracks or defects in the sealing surfaces, or apparent deterioration of the seal material:

a. Prior to final closure of the penetration each time it has been opened, and

b. At least once per 10 years for penetrations containing seals fabricated from resilient materials.*

*The provisions of Specification 4.0.6 are applicable.

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3.1 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.3.1 At least two component cooling water loops shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. At least once per 18 months during shutdown, by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.*

c. At least once per 31 days on a STAGGERED TEST BASIS, by verifying that each pump develops at least 93% of the discharge pressure for the applicable flow rate as determined from the manufacturer's Pump Performance Curve.

*The provisions of Specification 4.0.6 are applicable.

3/4.7.4 ESSENTIAL SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4.1 At least two independent essential service water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one service water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.4.1 At least two essential service water loops shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. At least once per 18 months during shutdown, by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.*

c. At least once per 31 days on a STAGGERED TEST BASIS, by verifying that each pump develops at least 93% of the discharge pressure for the applicable flow rate as determined from the manufacturer's Pump Performance Curve.

* The provisions of Specification 4.0.6 are applicable.

SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying within 31 days after removal that a laboratory analysis of a carbon sample obtained from a test canister demonstrates a removal efficiency of $\geq$ 90% for radioactive methyl iodide when the sample is tested in accordance with ANSI N510 - 1975 (130°C, 95% R.H.); or

2. Verifying within 31 days after removal that a laboratory analysis of at least two carbon samples demonstrate a removal efficiency of $\geq$ 90% for radioactive methyl iodide when the samples are tested in accordance with ANSI N510 - 1975 (130°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%.

SURVEILLANCE REQUIREMENTS (Continued)

e. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is < 6 inches Water Gauge while operating the ventilation system at a flow rate of 6000 cfm ± 10%.

2. Verifying that on a Safety Injection Signal from either Unit 1 or Unit 2, or on a containment phase A isolation signal, the system automatically diverts its inlet flow through the HEPA filters and charcoal adsorber bank and that either fan can then be manually started in the recirculation mode.*

3. Verifying that the system maintains the control room at a positive pressure of ≥ 1/16 inch W. G. relative to the outside atmosphere at a system flow rate of 6000 cfm ± 10%.

f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove ≥ 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 ± 10%.

g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove ≥ 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 ± 10%.

*The provisions of Specification 4.0.6 are applicable.

SURVEILLANCE REQUIREMENTS (Continued)

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 25,000 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 25,000 cfm $\pm$ 10%.

d. At least once per 18 months by:

1. Verifying that the pressure drop accross the combined HEPA filters and charcoal adsorber banks is < 6 inches Water Gauge while operating the ventilation system at a flow rate of 25,000 cfm $\pm$ 10%.

2. Verifying that the air flow distribution is uniform within 20% accross HEPA filters and charcoal adsorbers when tested in accordance with ANSI N510 - 1975.

3. Verifying that the standby fan starts automatically on a Containment Pressure--High-High Signal and diverts its exhaust flow through the HEPA filters and charcoal adsorber banks on a Containment Pressure-High-High Signal.*

e. After each complete or partial replacement of HEPA filter band by 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 25,000 cfm $\pm$ 10%.

f. After each complete or partial replacement of a charcoal adsorber bank by 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 25,000 cfm $\pm$ 10%.

*The provisions of Specification 4.0.6 are applicable.

3/4.7.7 SEALED SOURCE CONTAMINATION

LIMITING CONDITION FOR OPERATION

3.7.7.1 Each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material, shall be free of $\geq$ 0.005 microcuries of removable contamination.

APPLICABILITY: At all times.

ACTION

a. Each sealed source with removable contamination in excess of the above limits shall be immediately withdrawn from use and:

   1. Either decontaminated and repaired, or

   2. Disposed of in accordance with Commission Regulations.

b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.1.1 Test Requirements - Each sealed source shall be tested for leakage and/or contamination by:

a. The licensee, or

b. Other persons specifically authorized by the Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

4.7.7.1.2 Test Frequencies - Each category of sealed sources shall be tested at the frequency described below.

a. Sources in use (excluding startup sources previously subjected to core flux) - At least once per six months for all sealed sources containing radioactive materials.

2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level (fluid at the bottom of the maximum level indication mark), is ≥ 1.200,

3. The pilot cell voltage is ≥ 2.10 volts, and

4. The overall battery voltage is ≥ 250 volts.

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

1. The voltage of each connected cell is ≥ 2.10 volts under float charge and has not decreased more than 0.05 volts from the value observed during the original acceptance test, and

2. The specific gravity, corrected to 77°F and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is ≥ 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and

3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.

c. At least once per 18 months by verifying that:

1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration.

2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

3. The battery charger will supply at least 140 amperes at ≥ 250 volts for at least 4 hours.

d. At least once per 18 months, during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the emergency loads for the times specified in Table 4.8-1A with the battery charger disconnected. The battery terminal voltage shall be maintained ≥ 210 volts throughout the battery service test.*

e. At least once per 60 months, during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. This performance discharge test shall be performed in place of the battery service test.

* The provisions of Specification 4.0.6 are applicable.

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

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

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

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

APPLICABILITY: MODES 5 and 6.

ACTION:

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

SURVEILLANCE REQUIREMENTS

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

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

*The provisions of Specification 4.0.6 are applicable.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 107 TO FACILITY OPERATING LICESNSE NO. DPR-58

INDIANA AND MICHIGAN ELECTRIC COMPANY

DONALD C. COOK NUCLEAR PLANT UNIT NO. 1

DOCKET NO. 50-315

INTRODUCTION

By letter dated January 9, 1987, (and through subsequent telephone conferences) the Indiana and Michigan Electric Company (licensee) submitted a request to amend the Technical Specifications (TS) of the D. C. Cook, Unit 1. The amendment proposal calls for the one-time extension of certain surveillances currently required to be conducted at the end of the 18 month period (cycle 9) which was initiated following the last refueling outage. The affected surveillances are as follows:

1) TS 4.8.2.3.2.d - Battery service test required at least every 18 months (during shutdown) verifying adequacy of batteries to service and maintain emergency loads. (TS 4.8.2.4.2 is included as part of this request because it references TS 4.8.2.3.2.d).

2) Engineered Safety Features (ESF) response time testing

(i) TS 4.5.1.d - accumulator isolation valves - SI actuation

(ii) TS 4.5.2.e - Emergency Core Cooling System - automatic valves, centrifugal charging pump, safety injection pump, residual heat removal pump - SI actuation

(iii) TS 4.6.2.1.c - containment spray automatic valves and pumps -- high high containment pressure actuation

(iv) TS 4.6.2.2.c.2 - spray additive system automatic valves -- high high containment pressure actuation

(v) TS 4.6.3.1.2 - containment isolation valves on Phase A and Phase B isolation signals; containment purge and exhaust valves and containment purge and exhaust isolation signals.

(vi) TS 4.7.3.1.b - component cooling water automatic valves - SI actuation signal

(vii) TS 4.7.4.1.b - essential service water automatic valves - SI actuation

(viii) TS 4.7.5.1.e.2 - control room ventilation - SI actuation

(ix) TS 4.7.6.1.d.3 - ESF ventilation - high high containment pressure actuation

3) TS 4.8.1.1.1.b - Reserve Power transfer Test - (TS 4.8.1.2 is included as part of this request because it references TS 4.8.1.1.1.b)

4) Table 4.3-4, (TS 3.3.3.3) item 1.a, Channel calibration for strong motion triaxial accelerographs.

5) Table 4.3-7, Calibration of Power Operated Relief Valves (PORV), block valve position indicator - limit switches.

6) Table 4.3-7, item 14, Calibration of acoustic monitor

7) TS 4.4.4.2, Testing pressurizer heaters from the emergency power supply

8) TS 4.6.5.3&4, Testing ice condenser inlet doors and door position monitoring system.

9) TS 4.6.5.5, Testing of containment penetration seals

These extensions are being sought because the length of the refueling cycle has been extended beyond its originally projected 18 month duration due to the cumulative impact of (1) a licensee imposed limit of operation at 90 percent of rated thermal power and (2) forced outages of 41 days and 10 days each. (Re licensee's letter to H. Denton dated October 1, 1986.

EVALUATION

1. Licensee requests the extension of the battery service tests identified in TS 4.8.2.3.2.d. This surveillance effort requires verification, every 18 months (during shutdown) that battery capacity (with its charger disconnected) is adequate to supply associated emergency loads. The TS specifically requires that this test be performed during operating modes 5 or 6 (shutdown). If this test were to be performed according to the current schedule (based on the date of the previous refueling outage), the unit would be required to shut down before April 20, 1987. (This date in-

cludes the grace period allowed by TS 4.0.2). The Unit's current rate of fuel burn is projected to allow operation at least until May 23, 1987, the currently scheduled date of the next refueling outage.
The staff's view is that licensee's request for this one-time extension is acceptable. The weekly surveillance checks of electrolyte levels, specific grivities and cell voltages should likely detect any battery deterioration which may occur during the allowed extension. These requirements, coupled with the fact that the batteries were replaced during the last refueling outage and the requested extension is for a short period, satisfies the staff that the extension will not adversely affect the safe operation of the plant nor pose a significant risk to public health and safety.

2. Licensee requests permission to extend the surveillance intervals established for response time testing of equipment systems which actuate on ESF signals. These systems along with appropriate actuation signals, are identified in the background information presented earlier in this SER. The licensee indicates that these tests are currently scheduled to commence April 30, 1987 with all systems undergoing testing by May 7, 1987. In order to perform these surveillances during unit shutdown, the current schedule would require slippage, of less than one month to May 23, 1987 with all identified systems undergoing testing by May 30, 1987. Since the length of this extension is short and since the affected equipment systems and ESF actuation logic channels undergo periodic surveillance checks, there is not likely to be any adverse impact on reactor safety and the licensee's extension request is granted. Therefore the staff finds the one-time extension request acceptable.

3. Licensee reouests an extension of surveillance interval for performing the reserve power transfer test required by TS 4.8.1.1.1.b and TS 4.8.1.2. These TS call for the testing of the unit's ability to automatically transfer from the normal auxiliary source to the preferred reserve source. The licensee indicates that the automatic transfer function has been demonstrated functional on three separate occasions during 1986 as a result of unit trips from power. Given that the automatic transfer has performed satisfactorily and only a two month extension has been requested, the staff's view is that the granting of this extension is not likely to result in a significant risk to the public health and safety. The staff therefore recommends that licensee's request for a two month extension be granted.

4. Licensee requests permission to extend surveillance requirements for TS Table 4.3-4, item 1a; TS Table 4.3-7, item 13; TS Table 4.3-7, item 14; and TS 4.4.4.2. (The specific items of surveillance as identified in the background information presented earlier in this SER.) Staff recommends that these requests be approved. Each of these surveillances is currently scheduled to be initiated after the May 23, 1987 date of the next refueling outage. However these instruments' primary safety functions are most needed during operating modes 1-4. While the plant is shutdown for refueling, these safety functions are of less importance. The staff therefore feels that sufficient justification exists to grant a one-time extension for these surveillances until the end of the refueling outage.

5. Licensee requests permission to extend surveillance requirement for TS 4.6.5.3 and 4.6.5.4 for testing the lower inlet doors and the door position monitoring system.

Currently, the TS require surveillance testing of the lower inlet doors at least once per 9 months and testing of the lower inlet door monitoring system at the same time. Furthermore, the current technical specifications require a channel functional test of the lower inlet door monitoring system at 18 months. The licensee has proposed extending the surveillance intervals until the end of the Cycle 9-10 refueling outage (currently scheduled to begin on or about May 23, 1987) in order to avoid a surveillance outage before the next refueling outage. A surveillance outage to satisfy the current technical specifications test schedule would be necessary since the testing in question cannot be performed at power due to ALARA considerations. In the last surveillance of the lower inlet doors (June 1986) all doors were demonstrated by testing to be operable. Surveillance performed in December 1985 revealed the failure of 7 (out of 48) lower inlet doors. The licensee concludes that those failures were the result of an earlier ice condenser defrost operation performed after September 1985 which caused accumulation of ice on the doors. Therefore, the licensee modified the ice condenser defrost procedure to require the testing of door opening torques and visual inspection of the doors following a defrost operation. Surveillance testing in April and September of 1985 showed no failure of doors, lending credence to the hypothesis that defrost operations created conditions leading to inoperable door conditions.

Since the lower inlet doors and the door position monitoring system were scheduled to be tested by May 21, 1987 and the refueling outage is scheduled to begin about May 23, 1987, the proposed request for an extension of the surveillance interval until the end of the upcoming refueling outage involves only a short time period of operation in modes 1-4. Furthermore, recent history of door performance suggests the licensee has investigated this matter and taken actions to prevent potential problems. Consequently, the staff concludes that this extension of the surveillance interval will have no significant impact on safety and is, therefore, acceptable.

6. Licensee requests permission to extend surveillance requirements for TS 4.6.5.5 for testing containment penetration seals.

With regard to the seals on the personnel access doors and equipment hatches, the licensee has similarly requested an extension of the surveillance interval until the end of the Cycle 9-10 refueling outage. Current requirements dictate testing of the seals by July 2, 1987. While this is later than the scheduled beginning of the outage, the licensee has requested an extension so that testing of the seals may be performed at the end of the outage, which is prudent since use of access doors may result in seal damage.

To support the extension the licensee notes that testing of the seals cannot be performed at power due to ALARA considerations and that the T/S require the access doors and hatches to be closed in modes 1-4. Furthermore, the licensee has stated that visual inspection of the personnel access doors and equipment hatches performed under TS 4.6.5.5.2.a has revealed no apparent deterioration of the seals. The staff finds the above considerations sufficient to warrant this extension of the surveillance interval called for in T.S. 4.6.5.5.2.b.

Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 51.22(c)(9). Pursuant to 10 CFR 50.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

Conclusion

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: April 17, 1987