



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:

8704300204 870417
PDR ADCK 05000315
PDR

(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, 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:

<u>Remove Pages</u>	<u>Insert Pages</u>
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

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>MEASUREMENT RANGE</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
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

<u>INSTRUMENT CHANNEL</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
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

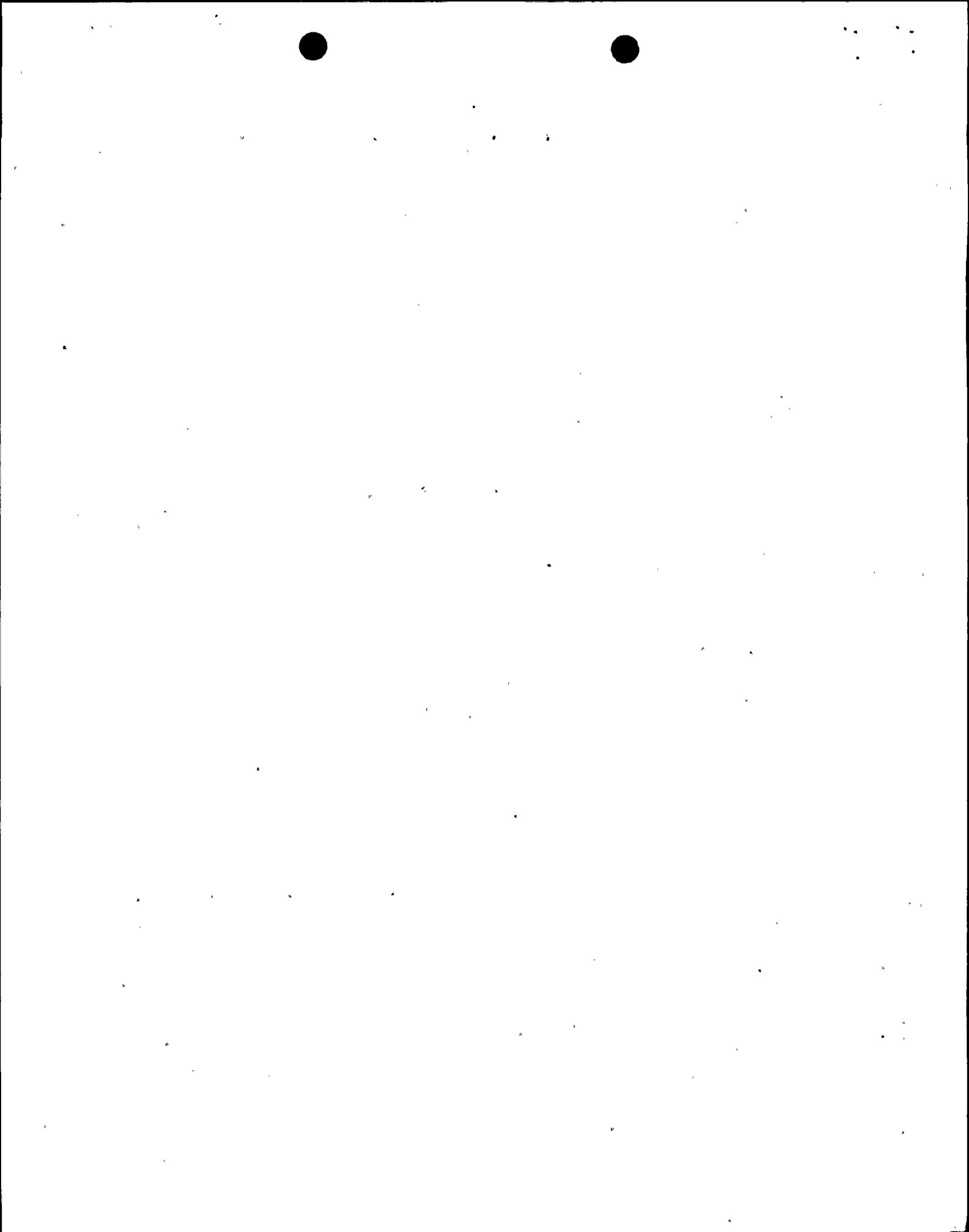
*The provisions of Specification 4.0.6 are applicable.

TABLE 4.3-7

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
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* 1
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.

EMERGENCY CORE COOLING SYSTEMS

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.

EMERGENCY CORE COOLING SYSTEMS

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 \geq 2405 psig
 2. Safety Injection pump \geq 1445 psig
 3. Residual heat removal pump \geq 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

CONTAINMENT SYSTEMS

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 position.
- b. By verifying, that on recirculation flow, each pump develops a discharge pressure of ≥ 255 psig at a flow of ≥ 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.

CONTAINMENT SYSTEMS

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 (≥ 20 gpm) but not to exceed 50 gpm (≤ 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 ≥ 255 psig.

*The provisions of Specification 4.0.6 are applicable.

CONTAINMENT SYSTEMS

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 $< 27^{\circ}\text{F}$; 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 ≤ 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.

CONTAINMENT SYSTEMS

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 $\leq 27^{\circ}\text{F}$ 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.

CONTAINMENT SYSTEMS

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 $T_{avg} > 200^{\circ}\text{F}$, 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.

PLANT SYSTEMS

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.

PLANT SYSTEMS

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 STANDSBY 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.

PLANT SYSTEMS

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 $\pm 10\%$.

PLANT SYSTEMS

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 $6000 \text{ cfm} \pm 10\%$.
 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 $\geq 1/16$ inch W. G. relative to the outside atmosphere at a system flow rate of $6000 \text{ cfm} \pm 10\%$.
- f. After each complete or partial replacement of a HEPA filter bank 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 $6000 \text{ cfm} \pm 10\%$.
- g. 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 $6000 \text{ cfm} \pm 10\%$.

*The provisions of Specification 4.0.6 are applicable.

PLANT SYSTEM

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 across 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% across 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 $> 99\%$ 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.

PLANT SYSTEMS

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 ≥ 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.

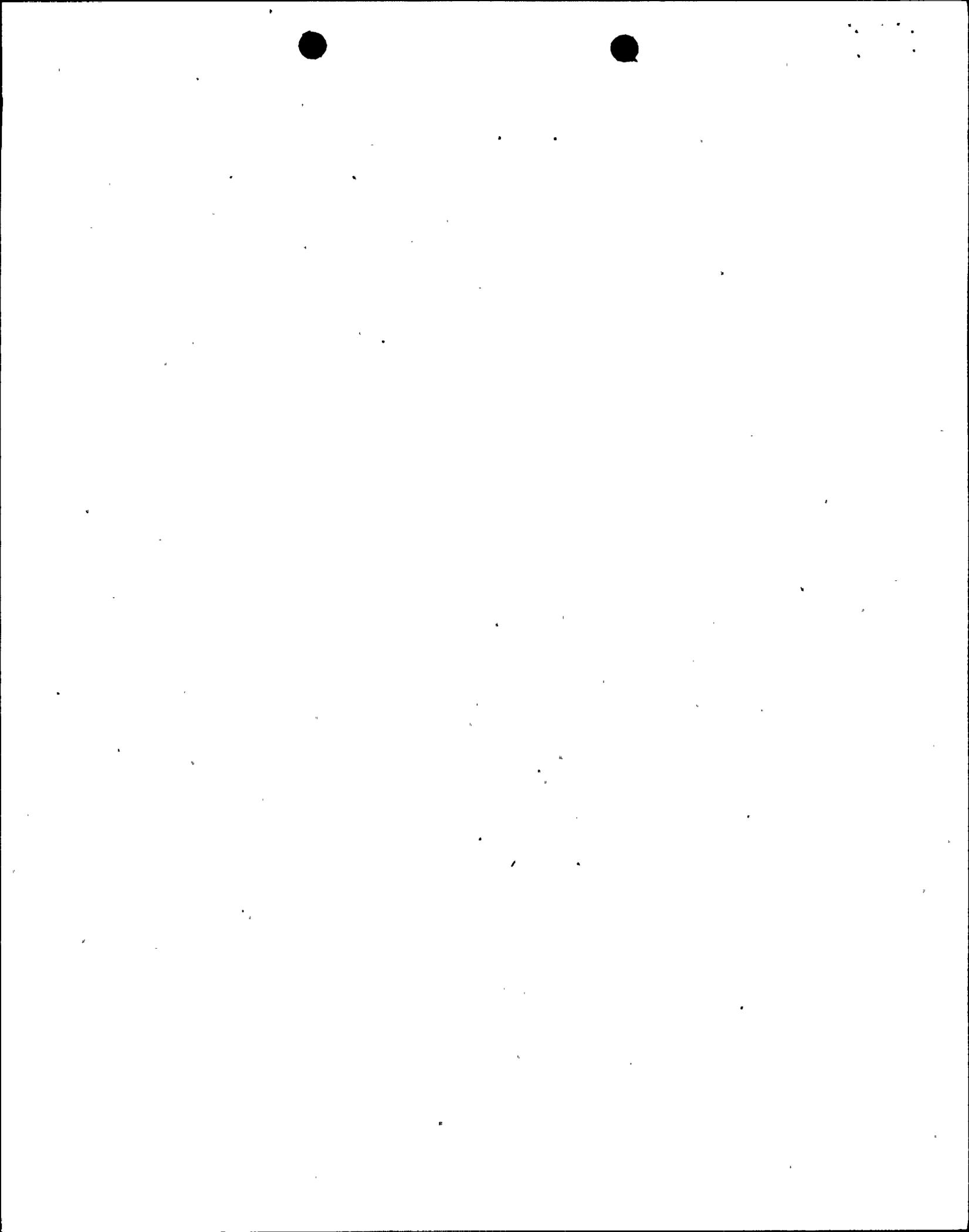
- a. Sources in use (excluding startup sources previously subjected to core flux) - At least once per six months for all sealed sources containing radioactive materials.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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 4.6-1A 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.