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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 111
License No. DPR-69

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

   A. The applications for amendment by Baltimore Gas and Electric Company (the licensee) dated October 1, 1986 and January 20, 1987 as supplemented on February 16 and February 26, 1988, 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 applications, 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-69 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 111, 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 the date of its issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A. Capra

Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects, I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 3, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 111

FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NO. 50-318

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 1-23	3/4 1-23
3/4 1-24*	3/4 1-24*
3/4 3-29*	3/4 3-29*
3/4 3-30	3/4 3-30
3/4 4-29	3/4 4-29
3/4 4-30*	3/4 4-30*
3/4 7-59	3/4 7-59
3/4 7-60*	3/4 7-60*
3/4 7-61	3/4 7-61
3/4 7-62	3/4 7-62
3/4 7-63	3/4 7-63
3/4 7-64*	3/4 7-64*
3/4 7-65	3/4 7-65
3/4 7-66*	3/4 7-66*

* Overleaf pages provided to maintain document completeness.

REACTIVITY CONTROL SYSTEMS

CEA DROP TIME

LIMITING CONDITION FOR OPERATION

3.1.3.4 The individual full length (shutdown and control) CEA drop time, from a fully withdrawn position, shall be $\leq$ 3.1 seconds from when the electrical power is interrupted to the CEA drive mechanism until the CEA reaches its 90 percent insertion position with:

a. $T_{avg} \geq 515^{o}F$, and

b. All reactor coolant pumps operating.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With the drop time of any full length CEA determined to exceed the above limit, restore the CEA drop time to within the above limit prior to proceeding to MODE 1 or 2.

b. With the CEA drop times within limits but determined at less than full reactor coolant flow, operation may proceed provided THERMAL POWER is restricted to less than or equal to the maximum THERMAL POWER level allowable for the reactor coolant pump combination operating at the time of CEA drop time determination.

SURVEILLANCE REQUIREMENTS

4.1.3.4 The CEA drop time of full length CEAs shall be demonstrated through measurement prior to reactor criticality:

a. For all CEAs following each removal of the reactor vessel head,

b. For specifically affected individual CEAs following any maintenance on or modification to the CEA drive system which could affect the drop time of those specific CEAs, and

c. At least once per refueling interval.

REACTIVITY CONTROL SYSTEMS

SHUTDOWN CEA INSERTION LIMIT

LIMITING CONDITION FOR OPERATION

3.1.3.5 All shutdown CEAs shall be withdrawn to at least 129.0 inches.

APPLICABILITY: MODES 1 and 2*#.

ACTION:

With a maximum of one shutdown CEA withdrawn, except for surveillance testing pursuant to Specification 4.1.3.1.2, to less than 129.0 inches, within one hour either:

a. Withdraw the CEA to at least 129.0 inches, or

b. Declare the CEA inoperable and apply Specification 3.1.3.1.

SURVEILLANCE REQUIREMENTS

4.1.3.5 Each shutdown CEA shall be determined to be withdrawn to at least 129.0 inches:

a. Within 15 minutes prior to withdrawal of any CEAs in regulating groups during an approach to reactor criticality, and

b. At least once per 12 hours thereafter.

*See Special Test Exception 3.10.2.

#With $K_{eff} \geq 1.0$

INSTRUMENTATION

INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The incore detection system shall be OPERABLE with at least one OPERABLE detector segment in each core quadrant on each of the four axial elevations containing incore detectors and as further specified below:

a. For monitoring the AZIMUTHAL POWER TILT:

At least two quadrant symmetric incore detector segment groups at each of the four axial elevations containing incore detectors in the outer 184 fuel assemblies with sufficient OPERABLE detector segments in these detector groups to compute at least two AZIMUTHAL POWER TILT values at each of the four axial elevations containing incore detectors.

b. For recalibration of the excore neutron flux detection system:

1. At least 75% of all incore detector segments,

2. A minimum of 9 OPERABLE incore detector segments at each detector segment level, and

3. A minimum of 2 OPERABLE detector segments in the inner 109 fuel assemblies and 2 OPERABLE segments in the outer 108 fuel assemblies at each segment level.

c. For monitoring the UNRODDED PLANAR RADIAL PEAKING FACTOR, the UNRODDED INTEGRATED RADIAL PEAKING FACTOR, or the linear heat rate:

1. At least 75% of all incore detector locations,

2. A minimum of 9 OPERABLE incore detector segments at each detector segment level, and

3. A minimum of 2 OPERABLE detector segments in the inner 109 fuel assemblies and 2 OPERABLE segments in the outer 108 fuel assemblies at each segment level.

An OPERABLE incore detector segment shall consist of an OPERABLE rhodium detector constituting one of the segments in a fixed detector string.

An OPERABLE incore detector location shall consist of a string in which at least three of the four incore detector segments are OPERABLE.

INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

An OPERABLE quadrant symmetric incore detector segment group shall consist of a minimum of three OPERABLE rhodium incore detector segments in 90° symmetric fuel assemblies.

APPLICABILITY: When the incore detection system is used for:

a. Monitoring the **AZIMUTHAL POWER TILT**,

b. Recalibration of the excore neutron flux detection system, or

c. Monitoring the **UNRODDED PLANAR RADIAL PEAKING FACTOR**, the **UNRODDED INTEGRATED RADIAL PEAKING FACTOR**, or the linear heat rate.

ACTION:

With the incore detection system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The incore detection system shall be demonstrated **OPERABLE**:

a. By performance of a **CHANNEL CHECK** within 24 hours prior to its use and at least once per 7 days thereafter when required for:

1. Monitoring the **AZIMUTHAL POWER TILT**.

2. Recalibration of the excore neutron flux detection system.

3. Monitoring the **UNRODDED PLANAR RADIAL PEAKING FACTOR**, the **UNRODDED INTEGRATED RADIAL PEAKING FACTOR**, or the linear heat rate.

b. **At least once per** Refueling Interval by performance of a CHANNEL CALIBRATION operation which exempts the neutron detectors but includes all electronic components. The neutron detectors shall be calibrated prior to installation in the reactor core.

SURVEILLANCE REQUIREMENTS (Continued)

In addition to the requirements of Specification 4.0.5, each Reactor Coolant Pump flywheel shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.*

4.4.10.1.2 Augmented Inservice Inspection Program for Main Steam and Main Feedwater Piping - The unencapsulated welds greater than 4 inches in nominal diameter in the main steam and main feedwater piping runs located outside the containment and traversing safety related areas or located in compartments adjoining safety related areas shall be inspected per the following augmented inservice inspection program using the applicable rules, acceptance criteria, and repair procedures of the ASME Boiler and Pressure Vessel Code, Section XI, 1983 Edition and Addenda through Summer 1983, for Class 2 components.

Each weld shall be examined in accordance with the above ASME Code requirements, except that 100% of the welds shall be examined, cumulatively, during each 10 year inspection interval. The welds to be examined during each inspection period shall be selected to provide a representative sample of the conditions of the welds. If these examinations reveal unacceptable structural defects in one or more welds, an additional 1/3 of the welds shall be examined and the inspection schedule for the repaired welds shall revert back as if a new interval had begun. If additional unacceptable defects are detected in the second sampling, the remainder of the welds shall also be inspected.

*Reactor coolant pump flywheel inspections for the first inservice inspection interval may be completed by June 1991 in conjunction with the reactor coolant pump motor overhaul program.

REACTOR COOLANT SYSTEM

CORE BARREL MOVEMENT

LIMITING CONDITION FOR OPERATION

3.4.11 Core barrel movement shall be limited to less than the Amplitude Probability Distribution (APD) and Spectral Analysis (SA) Alert Levels for the applicable THERMAL POWER level.

APPLICABILITY: MODE 1.

ACTION:

a. With the APD and/or SA exceeding their applicable Alert Levels, POWER OPERATION may proceed provided the following actions are taken:

   1. APD shall be measured and processed at least once per 24 hours,

   2. SA shall be measured at least once per 24 hours and shall be processed at least once per 7 days, and

   3. A Special Report, identifying the cause(s) for exceeding the applicable Alert Level, shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days of detection.

b. With the APD and/or SA exceeding their applicable Action Levels, measure and process APD and SA data within 24 hours to determine if the core barrel motion is exceeding its limits. With the core barrel motion exceeding its limits, reduce the core barrel motion to within its Action Levels within the next 24 hours or be in HOT STANDBY within the following 6 hours.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.11.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying the contained water supply volume.

b. At least once per 31 days on a STAGGERED TEST BASIS by starting the electric motor driven pump and operating it for at least 15 minutes. This test shall be performed on a STAGGERED TEST BASIS with the test required by 4.7.11.1.2.a.2.

c. 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.

d. At least once per 12 months by performance of a system flush of the filled portions of the system.

e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each pump develops at least 2500 gpm at a discharge pressure of 125 psig,

3. Verifying that each high pressure pump starts (sequentially) to maintain the fire suppression water system pressure $\geq$ 80 psig.

g. At least once per refueling interval by: (1) performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association, and (2) performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence and cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.11.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1. The diesel fuel oil day storage tank contains at least 174 gallons of fuel, and

2. The diesel starts from ambient conditions and operates for at least 30 minutes. This test shall be performed on a STAGGERED TEST BASIS with the test required by Specification 4.7.11.1.1.b.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM D975-74 when checked for viscosity, water and sediment.

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

1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service, and

2. Verifying the diesel starts from ambient conditions on the auto-start signal and operates for $\geq$ 20 minutes while loaded with the fire pump.

4.7.11.1.3 The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1. The electrolyte level of each battery is above the plates, and

2. The overall battery voltage is $\geq$ 24 volts.

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

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

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

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

PLANT SYSTEMS

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.11.2 The spray and/or sprinkler systems shown in Table 3.7-5 shall be OPERABLE:

'LITY: Whenever equipment in the spray/sprinkler protected areas is to be OPERABLE.

:

a. With one or more of the required spray and/or sprinkler systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant safe shutdown systems or components could be damaged; for other areas, establish an hourly fire watch patrol. Restore the system to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule forrestoring the system to OPERABLE status.

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

SURVEILLANCE REQUIREMENTS

4.7.11.2 Each of the above required spray and/or sprinkler systems 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, not locked, sealed or otherwise secured in position, is in its correct position.

b. At least once per 12 months by cycling each valve in the flow path through at least one complete cycle of full travel.

c. At least once per 18 months

1. By performing a system functional test which includes simulated automatic actuation of the system, and verifying that the automatic valves in the flow path actuate to their correct positions on a simulated test signal.

SURVEILLANCE REQUIREMENTS (Continued)

2. By a visual inspection of the area in the vicinity of each nozzle(s) to verify the spray pattern will not be obstructed.

TABLE 3.7-5

FIRE PROTECTION SPRINKLERS

UNIT 2

SPRINKLER LOCATION	CONTROL VALVE ELEVATION
Unit 2 Aux Feed Pump Room 605*	12'-0"
Unit 2 East Piping Area Room 408*	45'-0"
Unit 2 East Elec Pen Room 409*	45'-0"
Unit 2 West Elec Pen Room 414*	45'0"
Cable Chase 2A*	45'-0"
Cable Chase 2B*	45'-0"
Unit 2 Main Steam Piping Room 309*	45'0"
Unit 2 Component Cooling Pp Room 201	5'-0"
Unit 2 East Piping Area 203*	5'-0"
Unit 2 Rad Exh Vent Equip Room 204*	5'-0"
Unit 2 Service Water Pp Room 205*	5'-0"
Unit 2 Boric Acid Tk and Pp Room 215*	5'-0"
Unit 2 Reactor Coolant Makeup Pump Room 216A*	5'-0"
Unit 2 Charging Pump Room 105*	(-)10'-0"
Unit 2 Misc Waste Monitor Tk Room 106*	(-)10'-0"
Unit 2 ECCS Pump Room 101*	(-)15'-0"
21 Diesel Generator	45'-0"
Unit 2 East Pipe Pen Room 206/310*	5'-0"

---

* Sprinklers required to ensure the OPERABILITY of redundant safe shutdown equipment.

PLANT SYSTEMS

HALON SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.11.3 The following Halon systems shall be OPERABLE with the storage tanks having at least 95% of full charge weight (or level) and 90% of full charge pressure.

a. Cable spreading rooms total flood system, and associated vertical cable chase 1C, Unit 2.

b. 4160 volt switchgear rooms 27 & 45" elevation Unit 2.

APPLICABILITY: Whenever equipment protected by the Halon system is required to be OPERABLE.

ACTION:

a. With both the primary and backup Halon systems protecting the areas inoperable, within one hour establish an hourly fire watch with backup fire suppression equipment for those areas protected by the inoperable Halon system. Restore the system to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

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

SURVEILLANCE REQUIREMENTS

4.7.11.3 Each of the above required Halon systems 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 is in its correct position.

b. At least once per 6 months by verifying Halon storage tank weight (level) and pressure.

c. At least once per 12 months by performing a visual inspection of the nozzle(s) and visible flow paths for obstructions.

d. At least once per 18 months by verifying the system, including associated ventilation dampers and fire door release mechanisms, actuates manually and automatically, upon receipt of a simulated actuation signal, and

e. Following completion of major maintenance or modifications on the system(s), within 72 hours by performance of a flow test through headers and nozzles to assure no blockage.

PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITION FOR OPERATION

3.7.11.4 The fire hose stations shown in Table 3.7-6 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

a. With one or more of the fire hose stations shown in Table 3.7-6 inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose station within 1 hour. Restore the fire hose station(s) to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the fire hose station(s) to OPERABLE status.

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

SURVEILLANCE REQUIREMENTS

4.7.11.4 Each of the fire hose stations shown in Table 3.7-6 shall be demonstrated OPERABLE;

a. At least once per 31 days by visual inspection of the station to assure all required equipment is at the station. Hose stations located in the containment shall be visually inspected on each scheduled reactor shutdown, but not more frequently than every 31 days.

b. At least once per 18 months for hose stations located outside the containment and once per refueling interval for hose stations inside the containment by:

1. Removing the hose for inspection and re-racking, and

2. Replacement of all degraded gaskets in couplings.

c. At least once per 3 years for hose stations located outside the containment and once per refueling interval for hose stations inside the containment by:

1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.

2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater that the maximum pressure available at that hose station or replacement with a new hose.

TABLE 3.7-6

FIRE HOSE STATIONS

UNIT 2

LOCATION	ELEVATION	NUMBER OF HOSE STATIONS
1. Containment	10'	2
	45'	2
	69'	2
2. Auxiliary Building	-15'*	1**
	-10'*	2**
	5'	3
	27'	2
	45'	4
	69'*	3
3. Turbine Building, Heater Bay Outside Service Water Pump Rooms and Aux Feedwater Pump Rooms	12'	2
Outside Switchgear Room	27'	1
Outside Switchgear Room	45'	2
4. Intake Structure	10'*	1

*Fire Hose Stations required for primary protection to ensure the OPERABILITY of safety related equipment.

**Hose Stations which serve both Units 1 and 2.

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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 129
License No. DPR-53

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

   A. The applications for amendment by Baltimore Gas and Electric Company (the licensee) dated October 1, 1986 and January 20, 1987, as supplemented on February 16 and February 26, 1988, 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 applications, 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-53 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 129, 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 the date of its issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A. Capra

Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects, I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 3, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 129

FACILITY OPERATING LICENSE NO. DPR-53

DOCKET NO. 50-317

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 1-23	3/4 1-23
3/4 1-24*	3/4 1-24*
3/4 3-29	3/4 3-29
3/4 3-30	3/4 3-30
3/4 4-27*	3/4 4-27*
3/4 4-28	3/4 4-28
3/4 7-67	3/4 7-67
3/4 7-68*	3/4 7-68*
3/4 7-69	3/4 7-69
3/4 7-70	3/4 7-70
3/4 7-73	3/4 7-73
3/4 7-74*	3/4 7-74*

* Overleaf pages provided to maintain document completeness.

REACTIVITY CONTROL SYSTEMS

CEA DROP TIME

LIMITING CONDITION FOR OPERATION

3.1.3.4 The individual full length (shutdown and control) CEA drop time, from a fully withdrawn position, shall be $\leq$ 3.1 seconds from when the electrical power is interrupted to the CEA drive mechanism until the CEA reaches its 90 percent insertion position with:

a. $T_{avg} \geq 515^{o}F$, and

b. All reactor coolant pumps operating.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With the drop time of any full length CEA determined to exceed the above limit, restore the CEA drop time to within the above limit prior to proceeding to MODE 1 or 2.

b. With the CEA drop times within limits but determined at less than full reactor coolant flow, operation may proceed provided THERMAL POWER is restricted to less than or equal to the maximum THERMAL POWER level allowable for the reactor coolant pump combination operating at the time of CEA drop time determination.

SURVEILLANCE REQUIREMENTS

4.1.3.4 The CEA drop time of full length CEAs shall be demonstrated through measurement prior to reactor criticality:

a. For all CEAs following each removal of the reactor vessel head,

b. For specifically affected individual CEAs following any maintenance on or modification to the CEA drive system which could affect the drop time of those specific CEAs, and

c. At least once per refueling interval.

REACTIVITY CONTROL SYSTEMS

SHUTDOWN CEA INSERTION LIMIT

LIMITING CONDITION FOR OPERATION

3.1.3.5 All shutdown CEAs shall be withdrawn to at least 129.0 inches.

APPLICABILITY: MODES 1 and 2*#.

ACTION:

With a maximum of one shutdown CEA withdrawn, except for surveillance testing pursuant to Specification 4.1.3.1.2, to less than 129.0 inches, within one hour either:

a. Withdraw the CEA to at least 129.0 inches, or

b. Declare the CEA inoperable and apply Specification 3.1.3.1.

SURVEILLANCE REQUIREMENTS

4.1.3.5 Each shutdown CEA shall be determined to be withdrawn to at least 129.0 inches:

a. Within 15 minutes prior to withdrawal of any CEAs in regulating groups during an approach to reactor criticality, and

b. At least once per 12 hours thereafter.

*See Special Test Exception 3.10.2.

#With $K_{eff} \geq 1.0$

INSTRUMENTATION

INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The incore detection system shall be OPERABLE with at least one OPERABLE detector segment in each core quadratn on each of the four axial elevations containing incore detectors and as further specified below:

a. For monitoring the AZIMUTHAL POWER TILT:

At least two quadrant symmetric incore detector segment groups at each of the four axial elevations containing incore detectors in the outer 184 fuel assemblies with sufficient OPERABLE detector segments in these detector groups to computer at least two AZIMUTHAL POWER TILT values at each of the four axial elevations containing incore detectors.

b. For recalibration of the incore neutron flux detector system:

1. At least 75% of all incore detector segments,

2. A minimum of 9 OPERABLE incore detector segments at each detector segment level, and

3. A minimum of 2 OPERABLE detector segments in the inner 109 fuel assemblies and 2 OPERABLE segments in the outer 108 fuel assemblies at each segment level.

c. For monitoring the UNRODDED PLANAR RADIAL PEAKING FACTOR, the UNRODDED INTEGRATED RADIAL PEAKING FACTOR, or the linear heat rate:

1. At least 75% of all incore detector segments,

2. A minimum of 9 OPERABLE incore detector segments at each detector segment level, and

3. A minimum of 2 OPERABLE detector segments in the inner 109 fuel assemblies and 2 OPERABLE segments in the outer 108 fuel assemblies at each segment level.

An OPERABLE incore detector segment shall consist of an OPERABLE rhodium detector constituting one of the segments in a fixed detector string.

An OPERABLE incore detector location shall consist of a string in which at least three of the four incore detector segments are OPERABLE.

LIMITING CONDITION FOR OPERATION (Continued)

An OPERABLE quadrant symmetric incore detector segment group shall consist of a minimum of three OPERABLE rhodium incore detector segments in 90° symmetric fuel assemblies.

APPLICABILITY: When the incore detection system is used for:

a. Monitoring the **AZIMUTHAL POWER TILT**,

b. Recalibration of the excore neutron flux detection system, or

c. Monitoring the **UNRODDED PLANAR RADIAL PEAKING FACTOR**, the **UNRODDED INTEGRATED RADIAL PEAKING FACTOR**, or the linear heat rate.

ACTION:

With the incore detection system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The incore detection system shall be demonstrated **OPERABLE**:

a. By performance of a **CHANNEL CHECK** within 24 hours prior to its use and at least once per 7 days thereafter when required for:

1. Monitoring the **AZIMUTHAL POWER TILT**.

2. Recalibration of the excore neutron flux detection system.

3. Monitoring the **UNRODDED PLANAR RADIAL PEAKING FACTOR**, the **UNRODDED INTEGRATED RADIAL PEAKING FACTOR**, or the linear heat rate.

b. At least once per refueling interval by performance of a **CHANNEL CALIBRATION** operation which exempts the neutron detectors but includes all electronic components. The neutron detectors shall be calibrated prior to installation in the reactor core.

REACTOR COOLANT SYSTEM

3/4.4.10 STRUCTURAL INTEGRITY

ASME CODE CLASS 1, 2 AND 3 COMPONENTS

LIMITING CONDITION FOR OPERATION

3.4.10.1 The structural integrity of ASME Code Class 1, 2 and 3 components shall be maintained in accordance with Specification 4.4.10.1.

APPLICABILITY: ALL MODES.

ACTION:

a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature more than 50°F above the minimum temperature required by NDT considerations.

b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature above 200°F.

c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.

d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.10.1.1 The structural integrity of ASME Code Class 1, 2 and 3 components shall be demonstrated:

a. Per the requirements of Specification 4.0.5, and

b. Per the requirements of the augmented inservice inspection program specified in Specification 4.4.10.1.2.

SURVEILLANCE REQUIREMENTS (Continued)

In addition to the requirements of Specification 4.0.5, each Reactor Coolant Pump flywheel shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.*

4.4.10.1.2 Augmented Inservice Inspection Program for Main Steam and Main Feedwater Piping - The unencapsulated welds greater than 4 inches in nominal diameter in the main steam and main feedwater piping runs located outside the containment and traversing safety related areas or located in compartments adjoining safety related areas shall be inspected per the following augmented inservice inspection program using the applicable rules, acceptance criteria, and repair procedures of the ASME Boiler and Pressure Vessel Code, Section XI, 1983 Edition and Addenda through Summer 1983, for Class 2 components.

Each weld shall be examined in accordance with the above ASME Code requirements, except that 100% of the welds shall be examined, cumulatively, during each 10 year inspection interval. The welds to be examined during each inspection period shall be selected to provide a representative sample of the conditions of the welds. If these examinations reveal unacceptable structural defects in one or more welds, an additional 1/3 of the welds shall be examined and the inspection schedule for the repaired welds shall revert back as if a new interval had begun. If additional unacceptable defects are detected in the second sampling, the remainder of the welds shall also be inspected.

*Reactor coolant pump flywheel inspections for the first inservice inspection interval may be completed by June 1990 in conjunction with the reactor coolant pump motor overhaul program.

SURVEILLANCE REQUIREMENTS

4.7.11.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying the contained water supply volume.

b. At least once per 31 days on a STAGGERED TEST BASIS by starting the electric motor driven pump and operating it for at least 15 minutes. This test shall be performed on a STAGGERED TEST BASIS with the test required by 4.7.11.1.2.a.2.

c. 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.

d. At least once per 12 months by performance of a system flush of the filled portions of the system.

e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each pump develops at least 2500 gpm at a discharge pressure of 125 psig,

3. Verifying that each high pressure pump starts (sequentially) to maintain the fire suppression water system pressure $\geq$ 80 psig.

g. At least once per refueling interval by: (1) performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association, and (2) performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence and cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.11.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1. The diesel fuel oil day storage tank contains at least 174 gallons of fuel, and

2. The diesel starts from ambient conditions and operates for at least 30 minutes. This test shall be performed on a STAGGERED TEST BASIS with the test required by Specification 4.7.11.1.1.b.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM D975-74 when checked for viscosity, water and sediment.

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

1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service, and

2. Verifying the diesel starts from ambient conditions on the auto-start signal and operates for $\geq$ 20 minutes while loaded with the fire pump.

4.7.11.1.3 The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1. The electrolyte level of each battery is above the plates, and

2. The overall battery voltage is $\geq$ 24 volts.

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

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

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

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

PLANT SYSTEMS

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.11.2 The spray and/or sprinkler systems shown in Table 3.7-5 shall be OPERABLE:

APPLICABILITY: Whenever equipment in the spray/sprinkler protected areas is required to be OPERABLE.

ACTION:

a. With one or more of the required spray and/or sprinkler systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant safe shutdown systems or components could be damaged; for other areas, establish an hourly fire watch patrol. Restore the system to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

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

SURVEILLANCE REQUIREMENTS

4.7.11.2 Each of the above required spray and/or sprinkler systems 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, not locked, sealed or otherwise secured in position, is in its correct position.

b. At least once per 12 months by cycling each valve in the flow path through at least one complete cycle of full travel.

c. At least once per 18 months

1. By performing a system functional test which includes simulated automatic actuation of the system, and verifying that the automatic valves in the flow path actuate to their correct positions on a simulated test signal.

SURVEILLANCE REQUIREMENTS (Continued)

2. By a visual inspection of the area in the vicinity of each nozzle(s) to verify the spray pattern will not be obstructed.

PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITION FOR OPERATION

3.7.11.4 The fire hose stations shown in Table 3.7-6 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

a. With one or more of the fire hose stations shown in Table 3.7-6 inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose station within 1 hour. Restore the fire hose station(s) to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the fire hose station(s) to OPERABLE status.

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

SURVEILLANCE REQUIREMENTS

4.7.11.4 Each of the fire hose stations shown in Table 3.7-6 shall be demonstrated OPERABLE;

a. At least once per 31 days by visual inspection of the station to assure all required equipment is at the station. Hose stations located in the containment shall be visually inspected on each scheduled reactor shutdown, but not more frequently than every 31 days.

b. At least once per 18 months for hose stations located outside the containment and once per refueling interval for hose stations inside the containment by:

1. Removing the hose for inspection and re-racking, and

2. Replacement of all degraded gaskets in couplings.

c. At least once per 3 years for hose stations located outside the containment and once per refueling interval for hose stations inside the containment by:

1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.

2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater that the maximum pressure available at that hose station or replacement with a new hose.

TABLE 3.7-6

FIRE HOSE STATIONS

LOCATION	ELEVATION	NUMBER OF HOSE STATIONS
1. Containment	10'	2
	45'	2
	69'	2
2. Auxiliary Building	-15'*	1**
	-10'*	2**
	5'	6
	27'	3
	45'	5
	69'*	4
3. Turbine Building, Heater Bay Outside Service Water Pump Rooms and Aux Feedwater Pump Rooms	12'	3
Outside Switchgear Room	27'	2
Outside Switchgear Room	45'	3
4. Intake Structure	10'*	1

*Fire Hose Stations required for primary protection to ensure the OPERABILITY of safety related equipment.

**Hose Stations which serve both Units 1 and 2.