



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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 208  
License No. DPR-53

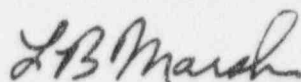
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated June 6, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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-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. 208, 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 and shall be implemented prior to restart of the Unit 1 spring 1996 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION



Ledyard B. Marsh, Director  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: October 19, 1995



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

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 186  
License No. DPR-69

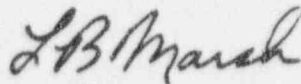
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated June 6, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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-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. 186, 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Ledyard B. Marsh, Director  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: October 19, 1995

ATTACHMENT TO LICENSE AMENDMENT:

AMENDMENT NO. 208 FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 186 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Revise Appendix A as follows:

Remove Pages

3/4 3-1  
3/4 3-6  
3/4 3-7  
3/4 3-9  
3/4 3-19  
3/4 3-20  
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Insert Pages

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### 3/4.3 INSTRUMENTATION

#### 3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION

##### LIMITING CONDITION FOR OPERATION

---

3.3.1.1 As a minimum, the reactor protective instrumentation channels and bypasses of Table 3.3-1 shall be **OPERABLE**.

APPLICABILITY: As shown in Table 3.3-1.

ACTION: As shown in Table 3.3-1.

##### SURVEILLANCE REQUIREMENTS

---

4.3.1.1.1 Each reactor protective instrumentation channel shall be demonstrated **OPERABLE** by the performance of the **CHANNEL CHECK**, **CHANNEL CALIBRATION** and **CHANNEL FUNCTIONAL TEST** operations during the **MODES** and at the frequencies shown in Table 4.3-1.

4.3.1.1.2 The logic for the bypasses shall be demonstrated **OPERABLE** prior to each reactor **STARTUP** unless performed during the preceding 92 days. The total bypass function shall be demonstrated **OPERABLE** at least once per **REFUELING INTERVAL** during **CHANNEL CALIBRATION** testing of each channel affected by bypass operation.

4.3.1.1.3 The **REACTOR TRIP SYSTEM RESPONSE TIME** of each reactor trip function\* shall be demonstrated to be within its limit at least once per **REFUELING INTERVAL**. Each test shall include at least one channel per function such that all channels are tested at least once every **N REFUELING INTERVALS** where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

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\* Neutron detectors are exempt from response time testing.



TABLE 4.3-1

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. Manual Reactor Trip	NA	NA	S/U <sup>(1)</sup>	NA
2. Power Level - High				
a. Nuclear Power	S	D <sup>(2)</sup> , M <sup>(3)</sup> , Q <sup>(5)</sup>	Q	1, 2
b. ΔT Power	S	D <sup>(4)</sup> , REFUELING INTERVAL	Q	1
3. Reactor Coolant Flow - Low	S	REFUELING INTERVAL	Q	1, 2
4. Pressurizer Pressure - High	S	REFUELING INTERVAL	Q	1, 2
5. Containment Pressure - High	S	REFUELING INTERVAL	Q	1, 2
6. Steam Generator Pressure - Low	S	REFUELING INTERVAL	Q	1, 2
7. Steam Generator Water Level - Low	S	REFUELING INTERVAL	Q	1, 2
8. Axial Flux Offset	S	REFUELING INTERVAL	Q	1
9. a. Thermal Margin/Low Pressure	S	REFUELING INTERVAL	Q	1, 2
b. Steam Generator Pressure Difference-High	S	REFUELING INTERVAL	Q	1, 2
10. Loss of Load	NA	NA	S/U <sup>(1)</sup>	NA

TABLE 4.3-1 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
11. Wide Range Logarithmic Neutron Flux Monitor	S	REFUELING INTERVAL <sup>(5)</sup>	S/U <sup>(1)</sup>	1, 2, 3, 4, 5 and
12. Reactor Protection System Logic Matrices	NA	NA	Q and S/U <sup>(1)</sup>	1, 2
13. Reactor Protection System Logic Matrix Relays	NA	NA	Q and S/U <sup>(1)</sup>	1, 2
14. Reactor Trip Breakers	NA	NA	M	1, 2 and *



### 3/4.3 INSTRUMENTATION

#### 3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

##### LIMITING CONDITION FOR OPERATION

---

3.3.2.1 The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and bypasses shown in Table 3.3-3 shall be **OPERABLE** with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

- a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable **ACTION** requirement of Table 3.3-3 until the channel is restored to **OPERABLE** status with the trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With an ESFAS instrumentation channel inoperable, take the **ACTION** shown in Table 3.3-3.

##### SURVEILLANCE REQUIREMENTS

---

4.3.2.1.1 Each ESFAS instrumentation channel shall be demonstrated **OPERABLE** by the performance of the **CHANNEL CHECK, CHANNEL CALIBRATION** and **CHANNEL FUNCTIONAL TEST** operations during the **MODES** and at the frequencies shown in Table 4.3-2.

4.3.2.1.2 The logic for the bypasses shall be demonstrated **OPERABLE** during the at power **CHANNEL FUNCTIONAL TEST** of channels affected by bypass operation. The total bypass function shall be demonstrated **OPERABLE** at least once per **REFUELING INTERVAL** during **CHANNEL CALIBRATION** testing of each channel affected by bypass operation.

4.3.2.1.3 The **ENGINEERED SAFETY FEATURES RESPONSE TIME** of each ESFAS function shall be demonstrated to be within the limit at least once per **REFUELING INTERVAL**. Each test shall include at least one channel per function such that all channels are tested at least once every **N REFUELING INTERVALS** where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. SAFETY INJECTION (SIAS)				
a. Manual (Trip buttons)	NA	NA	REFUELING INTERVAL	NA
b. Containment Pressure - High	S	REFUELING INTERVAL	Q	1, 2, 3
c. Pressurizer Pressure - Low	S	REFUELING INTERVAL	Q	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M <sup>(1)(2)(3)</sup>	1, 2, 3
2. CONTAINMENT SPRAY (CSAS)				
a. Manual (Trip buttons)	NA	NA	REFUELING INTERVAL	NA
b. Containment Pressure - High	S	REFUELING INTERVAL	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M <sup>(1)(6)</sup>	1, 2, 3
3. CONTAINMENT ISOLATION (CIS) <sup>g</sup>				
a. Manual CIS (Trip buttons)	NA	NA	REFUELING INTERVAL	NA
b. Containment Pressure - High	S	REFUELING INTERVAL	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M <sup>(1)(4)</sup>	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
4. MAIN STEAM LINE ISOLATION (SGIS)				
a. Manual SGIS (MSIV Hand Switches and Feed Head Isolation Hand Switches)	NA	NA	REFUELING INTERVAL	NA
b. Steam Generator Pressure - Low	S	REFUELING INTERVAL	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M <sup>(1)(5)</sup>	1, 2, 3
5. CONTAINMENT SUMP RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	NA	NA	REFUELING INTERVAL	NA
b. Refueling Water Tank - Low	NA	REFUELING INTERVAL	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M <sup>(1)</sup>	1, 2, 3
6. CONTAINMENT PURGE VALVES ISOLATION				
a. Manual (Purge Valve Control Switches)	NA	NA	REFUELING INTERVAL	NA
b. Containment Radiation - High Area Monitor	S	REFUELING INTERVAL	Q	6**

### 3/4.3 INSTRUMENTATION

#### 3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION

##### LIMITING CONDITION FOR OPERATION

---

3.3.1.1 As a minimum, the reactor protective instrumentation channels and bypasses of Table 3.3-1 shall be **OPERABLE**.

APPLICABILITY: As shown in Table 3.3-1.

ACTION: As shown in Table 3.3-1.

##### SURVEILLANCE REQUIREMENTS

---

4.3.1.1.1 Each reactor protective instrumentation channel shall be demonstrated **OPERABLE** by the performance of the **CHANNEL CHECK, CHANNEL CALIBRATION** and **CHANNEL FUNCTIONAL TEST** operations during the **MODES** and at the frequencies shown in Table 4.3-1.

4.3.1.1.2 The logic for the bypasses shall be demonstrated **OPERABLE** prior to each reactor **STARTUP** unless performed during the preceding 92 days. The total bypass function shall be demonstrated **OPERABLE** at least once per **REFUELING INTERVAL** during **CHANNEL CALIBRATION** testing of each channel affected by bypass operation.

4.3.1.1.3 The **REACTOR TRIP SYSTEM RESPONSE TIME** of each reactor trip function shall be demonstrated to be within its limit at least once per **REFUELING INTERVAL**. Each test shall include at least one channel per function such that all channels are tested at least once every **N REFUELING INTERVALS** where **N** is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

---

\* Neutron detectors are exempt from response time testing.



TABLE 4.3-1

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. Manual Reactor Trip	NA	NA	S/U <sup>(1)</sup>	NA
2. Power Level - High				
a. Nuclear Power	S	D <sup>(2)</sup> , M <sup>(3)</sup> , Q <sup>(5)</sup>	Q	1, 2
b. $\Delta T$ Power	S	D <sup>(4)</sup> , REFUELING INTERVAL	Q	1
3. Reactor Coolant Flow - Low	S	REFUELING INTERVAL	Q	1, 2
4. Pressurizer Pressure - High	S	REFUELING INTERVAL	Q	1, 2
5. Containment Pressure - High	S	REFUELING INTERVAL	Q	1, 2
6. Steam Generator Pressure - Low	S	REFUELING INTERVAL	Q	1, 2
7. Steam Generator Water Level - Low	S	REFUELING INTERVAL	Q	1, 2
8. Axial Flux Offset	S	REFUELING INTERVAL	Q	1
9. a. Thermal Margin/Low Pressure	S	REFUELING INTERVAL	Q	1, 2
b. Steam Generator Pressure Difference - High	S	REFUELING INTERVAL	Q	1, 2
10. Loss of Load	NA	NA	S/U <sup>(1)</sup>	NA



TABLE 4.3-1 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
11. Wide Range Logarithmic Neutron Flux Monitor	S	REFUELING INTERVAL <sup>(5)</sup>	S/U <sup>(1)</sup>	1, 2, 3, 4, 5 and
12. Reactor Protection System Logic Matrices	NA	NA	Q and S/U <sup>(1)</sup>	1, 2
13. Reactor Protection System Logic Matrix Relays	NA	NA	Q and S/U <sup>(1)</sup>	1, 2
14. Reactor Trip Breakers	NA	NA	H	1, 2 and *

### 3/4.3 INSTRUMENTATION

#### 3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

##### LIMITING CONDITION FOR OPERATION

---

3.3.2.1 The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and bypasses shown in Table 3.3-3 shall be **OPERABLE** with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

- a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable **ACTION** requirement of Table 3.3-3 until the channel is restored to **OPERABLE** status with the trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With an ESFAS instrumentation channel inoperable, take the **ACTION** shown in Table 3.3-3.

##### SURVEILLANCE REQUIREMENTS

---

4.3.2.1.1 Each ESFAS instrumentation channel shall be demonstrated **OPERABLE** by the performance of the **CHANNEL CHECK, CHANNEL CALIBRATION** and **CHANNEL FUNCTIONAL TEST** operations during the **MODES** and at the frequencies shown in Table 4.3-2.

4.3.2.1.2 The logic for the bypasses shall be demonstrated **OPERABLE** during the at power **CHANNEL FUNCTIONAL TEST** of channels affected by bypass operation. The total bypass function shall be demonstrated **OPERABLE** at least once per **REFUELING INTERVAL** during **CHANNEL CALIBRATION** testing of each channel affected by bypass operation.

4.3.2.1.3 The **ENGINEERED SAFETY FEATURES RESPONSE TIME** of each ESFAS function shall be demonstrated to be within the limit at least once per **REFUELING INTERVAL**. Each test shall include at least one channel per function such that all channels are tested at least once every N **REFUELING INTERVALS** where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. SAFETY INJECTION (SIAS)				
a. Manual (Trip buttons)	NA	NA	REFUELING INTERVAL	NA
b. Containment Pressure - High	S	REFUELING INTERVAL	Q	1, 2, 3
c. Pressurizer Pressure - Low	S	REFUELING INTERVAL	Q	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M <sup>(1)(2)(3)</sup>	1, 2, 3
2. CONTAINMENT SPRAY (CSAS)				
a. Manual (Trip buttons)	NA	NA	REFUELING INTERVAL	NA
b. Containment Pressure - High	S	REFUELING INTERVAL	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M <sup>(1)(6)</sup>	1, 2, 3
3. CONTAINMENT ISOLATION (CIS) <sup>f</sup>				
a. Manual CIS (Trip buttons)	NA	NA	REFUELING INTERVAL	NA
b. Containment Pressure - High	S	REFUELING INTERVAL	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M <sup>(1)(4)</sup>	1, 2, 3

CALVERT CLIFFS - UNIT 2

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3/4.3 INSTRUMENTATION

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
4. MAIN STEAM LINE ISOLATION (SGIS)				
a. Manual SGIS (MSIV Hand Switches and Feed Head Isolation Hand Switches)	NA	NA	REFUELING INTERVAL	NA
b. Steam Generator Pressure - Low	S	REFUELING INTERVAL	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M <sup>(1)(5)</sup>	1, 2, 3
5. CONTAINMENT SUMP RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	NA	NA	REFUELING INTERVAL	NA
b. Refueling Water Tank - Low	NA	REFUELING INTERVAL	Q	1, 2, 3
c. Automatic Actuation Logic	NA	NA	M <sup>(1)</sup>	1, 2, 3
6. CONTAINMENT PURGE VALVES ISOLATION				
a. Manual (Purge Valve Control Switches)	NA	NA	REFUELING INTERVAL	NA
b. Containment Radiation - High Area Monitor	S	REFUELING INTERVAL	Q	6**

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
7. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	NA	REFUELING INTERVAL	Q	1, 2, 3
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	NA	REFUELING INTERVAL	Q	1, 2, 3
8. CVCS ISOLATION				
West Penetration Room/Letdown Heat Exchanger Room Pressure - High	NA	REFUELING INTERVAL	Q	1, 2, 3, 4
9. AUXILIARY FEEDWATER				
a. Manual (Trip Buttons)	NA	NA	REFUELING INTERVAL	NA
b. Steam Generator Level - Low	S	REFUELING INTERVAL	Q	1, 2, 3
c. Steam Generator $\Delta P$ - High	S	REFUELING INTERVAL	Q	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M <sup>(1)</sup>	1, 2, 3



TABLE 4.3-2 (Continued)

TABLE NOTATION

- # Containment isolation of non-essential penetrations is also initiated by SIAS (functional units 1.a and 1.c).
- \*\* Must be **OPERABLE** only in **MODE 6** when the valves are required **OPERABLE** and they are open.
- (1) The logic circuits shall be tested manually at least once per 31 days.
  - (2) SIAS logic circuits A-10 and B-10 shall be tested monthly with the exception of the Safety Injection Tank isolation valves. The SIAS logic circuits for these valves are exempted from testing during operation; however, these logic circuits shall be tested at least once per **REFUELING INTERVAL** during shutdown.
  - (3) SIAS logic circuits A-5 and B-5 are exempted from testing during operation; however, these logic circuits shall be tested at least once per **REFUELING INTERVAL** during shutdown.
  - (4) CIS logic circuits A-5 and B-5 are exempted from testing during operation; however, these logic circuits shall be tested at least once per **REFUELING INTERVAL** during shutdown.
  - (5) SGIS logic circuits A-1 and B-1 are exempted from testing during operation; however, these logic circuits shall be tested at least once per **REFUELING INTERVAL** during shutdown.
  - (6) CSAS logic circuits A-3 and B-3 are exempted from testing during operation; however, these logic circuits shall be tested at least once per **REFUELING INTERVAL** during shutdown.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. AREA MONITORS				
a. Containment				
i. Purge & Exhaust Isolation	S	REFUELING INTERVAL	M	6
b. Containment Area High Range	S	REFUELING INTERVAL	M	1, 2, 3, & 4
2. PROCESS MONITORS				
a. Containment				
i. Gaseous Activity				
a) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
ii. Particulate Activity				
a) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
b. Noble Gas Effluent Monitors				
i. Main Vent Wide Range	S	R	M	1, 2, 3, & 4
ii. Main Steam Header	S	R	M	1, 2, 3, & 4

### 3/4.3 INSTRUMENTATION

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Wide Range Neutron Flux	M	NA
2. Reactor Trip Breaker Indication	M	NA
3. Reactor Coolant Cold Leg Temperature	M	REFUELING INTERVAL
4. Pressurizer Pressure	M	REFUELING INTERVAL
5. Pressurizer Level	M	REFUELING INTERVAL
6. Steam Generator Level	M	REFUELING INTERVAL
7. Steam Generator Pressure	M	REFUELING INTERVAL

TABLE 4.3-10

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Containment Pressure	M	REFUELING INTERVAL
2. Wide Range Logarithmic Neutron Flux Monitor	M	NA
3. Reactor Coolant Outlet Temperature	M	REFUELING INTERVAL
4. Pressurizer Pressure	M	REFUELING INTERVAL
5. Pressurizer Level	M	REFUELING INTERVAL
6. Steam Generator Pressure	M	REFUELING INTERVAL
7. Steam Generator Level (Wide Range)	M	REFUELING INTERVAL
8. Auxiliary Feedwater Flow Rate	M	REFUELING INTERVAL
9. RCS Subcooled Margin Monitor	M	REFUELING INTERVAL
10. PORV/Safety Valve Acoustic Monitor	NA	REFUELING INTERVAL
11. PORV Solenoid Power Indication	NA	NA
12. Feedwater Flow	M	REFUELING INTERVAL
13. Containment Water Level (Wide Range)	M	REFUELING INTERVAL
14. Reactor Vessel Water Level	M	NA
15. Core Exit Thermocouple System	M	R*

\* The performance of a CHANNEL CALIBRATION operation exempts the Core Exit Thermocouple but includes all electronic components. The Core Exit Thermocouple shall be calibrated prior to installation in the reactor core.

### 3/4.4 REACTOR COOLANT SYSTEM

#### SURVEILLANCE REQUIREMENTS

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4.4.3.1 Each PORV shall be demonstrated **OPERABLE**:

- a. At least once per 31 days by performance of a **CHANNEL FUNCTIONAL TEST**, in accordance with Table 4.3-1, Item 4.
- b. At least once per **REFUELING INTERVAL** by performance of a **CHANNEL CALIBRATION**.

4.4.3.2 Each block valve shall be demonstrated **OPERABLE** at least once per 92 days by operating the valve through one complete cycle of full travel unless the block valve is closed to meet the requirements of Action a, b, or c in Specification 3.4.3.



### 3/4.4 REACTOR COOLANT SYSTEM

#### SURVEILLANCE REQUIREMENTS

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4.4.6.1 The Leakage Detection Systems shall be demonstrated **OPERABLE** by:

- a. Containment Atmosphere Gaseous and Particulate Monitoring Systems-performance of **CHANNEL CHECK, CHANNEL CALIBRATION** and **CHANNEL FUNCTIONAL TEST** at the frequencies specified in Table 4.3-3, and
- b. Containment Sump Level Alarm System-performance of **CHANNEL CALIBRATION** at least once per **REFUELING INTERVAL**.

### 3/4.4 REACTOR COOLANT SYSTEM

#### LIMITING CONDITION FOR OPERATION (Continued)

2. Verify the excessive flow condition did not raise pressure above the maximum allowable pressure for the given RCS temperature on Figure 3.4.9-1 or Figure 3.4.9-2.
  3. If a pressure limit was exceeded, take action in accordance with Specification 3.4.9.1.
- h. The provisions of Specification 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

4.4.9.3.1 Each PORV shall be demonstrated **OPERABLE** by:

- a. Performance of a **CHANNEL FUNCTIONAL TEST** on the PORV actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the PORV is required **OPERABLE** and at least once per 31 days thereafter when the PORV is required **OPERABLE**.
- b. Performance of a **CHANNEL CALIBRATION** on the PORV actuation channel at least once per **REFUELING INTERVAL**.
- c. Verifying the PORV block valve is open at least once per 72 hours when the PORV is being used for overpressure protection.
- d. Testing in accordance with the inservice test requirements pursuant to Specification 4.0.5.

4.4.9.3.2 The RCS vent(s) shall be verified to be open at least once per 12 hours\* when the vent(s) is being used for overpressure protection.

4.4.9.3.3 All high pressure safety injection pumps, except the above **OPERABLE** pump, shall be demonstrated inoperable at least once per 12 hours by verifying that the motor circuit breakers have been removed from their electrical power supply circuits or by verifying their discharge valves are locked shut. The automatic opening feature of the high pressure safety injection loop MOVs shall be verified disabled at least once per 12 hours. The above **OPERABLE** pump shall be verified to have its handswitch in pull-to-lock at least once per 12 hours.

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\* Except when the vent pathway is locked, sealed, or otherwise secured in the open position, then verify these vent pathways open at least once per 31 days.