October 19, 1995

Mr. Robert E. Denton
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: ISSUANCE OF AMENDMENTS FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M92479) AND UNIT NO. 2 (TAC NO. M92480)

Dear Mr. Denton:

The Commission has issued the enclosed Amendment No. 208 to Facility Operating License No. DPR-53 and Amendment No. 186 to Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated June 6, 1995.

The amendments extend the nominal surveillance interval requirements of selected safety systems instruments from 18 months to a refueling interval of 24 months.

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

Sincerely,

Original signed by:

Daniel G. McDonald, Jr., Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-317
and 50-318

Enclosures:
1. Amendment No. 208 to DPR-53
2. Amendment No. 186 to DPR-69
3. Safety Evaluation

cc w/encls: See next page

DOCUMENT NAME: G:\CC1-2\CC92479.AMD

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PDI-1:LA		PDI-1:PM	E	OGC		PDI-1:D	N
NAME	SLittle		DMcDonald		RBachmann		LMarsh	
DATE	9/19/95		09/20/95		9/29/95		10/19/95	

OFFICIAL RECORD COPY

240018

9510250231 951019
PDR ADOCK 05000317
P PDR

DF01

DATED: October 19, 1995

AMENDMENT NO. 208 TO FACILITY OPERATING LICENSE NO. DPR-53-CALVERT CLIFFS UNIT 1
AMENDMENT NO. 186 TO FACILITY OPERATING LICENSE NO. DPR-69-CALVERT CLIFFS UNIT 2

Docket File
PUBLIC
PDI-1 Reading
S. Varga, 14/E/4
L. Marsh
S. Little
D. McDonald
OGC
G. Hill (2), T-5 C3
C. Grimes, 11/E/22
S. Athavale
ACRS (4)
PD plant-specific file
J. Wermiel
C. Cowgill, Region I

cc: Plant Service list

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

October 19, 1995

Mr. Robert E. Denton
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: ISSUANCE OF AMENDMENTS FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M92479) AND UNIT NO. 2 (TAC NO. M92480)

Dear Mr. Denton:

The Commission has issued the enclosed Amendment No. 208 to Facility Operating License No. DPR-53 and Amendment No. 186 to Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated June 6, 1995.

The amendments extend the nominal surveillance interval requirements of selected safety systems instruments from 18 months to a refueling interval of 24 months.

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

Sincerely,

Daniel G. McDonald, Jr., Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-317
and 50-318

Enclosures:
1. Amendment No. 208 to DPR-53
2. Amendment No. 186 to DPR-69
3. Safety Evaluation

cc w/encls: See next page

Mr. Robert E. Denton
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

cc:

Ms. Mary Krug, President
Calvert County Board of
Commissioners
175 Main Street
Prince Frederick, MD 20678

D. A. Brune, Esquire
General Counsel
Baltimore Gas and Electric Company
P. O. Box 1475
Baltimore, MD 21203

Jay E. Silberg, Esquire
Shaw, Pittman, Potts and Trowbridge
2300 N Street, NW
Washington, DC 20037

Mr. G. L. Detter, Director, NRM
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

Resident Inspector
c/o U.S. Nuclear Regulatory
Commission
P. O. Box 287
St. Leonard, MD 20685

Mr. Richard I. McLean
Administrator - Radioecology
Department of Natural Resources
580 Taylor Avenue
Tawes State Office Building
B3
Annapolis, MD 21401

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Joseph H. Walter
Engineering Division
Public Service Commission of
Maryland
6 St. Paul Centre
Baltimore, MD 21202-6806

Kristen A. Burger, Esquire
Maryland People's Counsel
6 St. Paul Centre
Suite 2102
Baltimore, MD 21202-1631

Patricia T. Birnie, Esquire
Co-Director
Maryland Safe Energy Coalition
P. O. Box 33111
Baltimore, MD 21218

Mr. Larry Bell
NRC Technical Training Center
5700 Brainerd Road
Chattanooga, TN 37411-4017

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:

9510250237 951019
PDR ADOCK 05000317
P PDR

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

LB Marsh

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

LB Marsh

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 AMENDMENTS

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	Insert Pages
3/4 3-1	3/4 3-1
3/4 3-6	3/4 3-6
3/4 3-7	3/4 3-7
3/4 3-9	3/4 3-9
3/4 3-19	3/4 3-19
3/4 3-20	3/4 3-20
3/4 3-21	3/4 3-21
3/4 3-22	3/4 3-22
3/4 3-26	3/4 3-26
3/4 3-32	3/4 3-32
3/4 3-36	3/4 3-36
3/4 4-8	3/4 4-8
3/4 4-18	3/4 4-18
3/4 4-35	3/4 4-35

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

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	NA	NA	S/U[1]	NA
2. Power Level - High				
a. Nuclear Power	S	D[2],M[3],Q[5]	Q	1, 2
b. ΔT Power	S	D[4],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[1]	NA

TABLE 4.3-1 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

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

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(1)(2)(3)	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(1)(6)	1, 2, 3
3. CONTAINMENT ISOLATION (CIS)#				
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(1)(4)	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
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(1)(5)	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(1)	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

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
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 ΔP - High	S	REFUELING INTERVAL	Q	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M(1)	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

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
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

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
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 (Wide Range)	M	REFUELING INTERVAL
7. Steam Generator Pressure	M	REFUELING INTERVAL

TABLE 4.3-10

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
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

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.

SURVEILLANCE REQUIREMENTS

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.**

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.

---

* 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.

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

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	NA	NA	S/U(1)	NA
2. Power Level - High				
a. Nuclear Power	S	D(2),M(3),Q(5)	Q	1, 2
b. ΔT Power	S	D(4),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(1)	NA

TABLE 4.3-1 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

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

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	$M^{(1)(2)(3)}$	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	$M^{(1)(6)}$	1, 2, 3
3. CONTAINMENT ISOLATION (CIS)#				
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	$M^{(1)(4)}$	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
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(1)(5)	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(1)	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

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
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 ΔP - High	S	REFUELING INTERVAL	Q	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M[(1)]	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

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
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

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
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

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
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.

SURVEILLANCE REQUIREMENTS

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.

SURVEILLANCE REQUIREMENTS

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.**

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.

---

* 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.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

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

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

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-317 AND 50-318

1.0 INTRODUCTION

By letter dated June 6, 1995, the Baltimore Gas and Electric Company (the licensee) submitted a request for changes to the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 (CCNPP1/2), Technical Specifications (TSs). The requested changes would extend the nominal surveillance interval for certain safety system instruments from existing 18 months to 24 months.

The instruments which will be affected by the proposed amendments are included in the reactor protective system (RPS), engineered safety features actuation system (ESFAS), power-operated relief valve (PORV) actuation, low temperature overpressure protection (LTOP), remote shutdown panel, post-accident monitoring (PAM), containment sump level and radiation monitoring. The surveillance activities which will be affected are instrument channel calibrations, RPS and ESFAS total bypass function operability verification, RPS and ESFAS time response tests, ESFAS manual trip button channel functional tests and ESFAS automatic actuation logic channel functional tests.

CCNPP1/2 has been operating on a 24-month fuel cycle since July 1988 and July 1987, respectively, and have been performing the 18 months surveillance activities, described above, during mid-cycle outages. Extending the surveillance interval from 18 months to 24 months will eliminate the need for scheduling mid-cycle outages. The request for the proposed changes is based on guidance provided by the NRC staff in Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-month Fuel Cycle," dated April 2, 1991.

Specifically, the proposed amendments will revise TS 4.3.1.1.2, TS 4.3.1.1.3, TS Tables 4.3-1, 4.3.2.1.2, 4.3.2.1.3, 4.3-2, 4.3-3, 4.3-6, 4.3-10, 4.4.3.1.b, 4.4.6.1.b, and 4.4.9.3.1.b by extending the surveillance intervals from a nominal 18 months to a refueling interval which is nominally 24 months, not to extend 30 months.

9510250242 951019
PDR ADOCK 05000317
P PDR

2.0 EVALUATION

GL 91-04 provides guidance on how licensees should evaluate effects of 24 month extension on safety of the plant and perform an evaluation to support a conclusion that the effect of such an extension on safety is insignificant. The licensee has performed a detailed engineering review of all instrument loops affected to establish the basis for a 30 month (24 months + 25%) calibration frequency. Using Calvert Cliffs procedures, the analyses were performed to verify that the surveillance interval extensions have a small effect on plant safety and would not invalidate any assumption in the plant licensing basis. The analysis was based on the guidance provided in the following documents: GL 91-04, EPRI document TR-103335, March 1994, "Guidelines for Instrument Calibration Extension/Reduction Programs," ISA-DRP67.04, Part II, Draft Recommended Practice," Methodologies for the Determination of Setpoints for Nuclear Safety-related Instrumentation," Draft 10, and ISA-S-67.04-1987, "Standard for Nuclear Safety-Related Instrumentation."

In its submittal, the licensee has provided summary of results of the analyses for each of the affected instrument loops. The evaluation results indicated that the proposed extension does not require any setpoint changes and that the plant parameter indications are still acceptable, taking into consideration the effects of drift over a 30-month period, for safe plant operation and having the necessary information to effect a safe shutdown of an operating unit.

The NRC staff reviewed the information provided by the licensees and determined that it supported the requested extension in the surveillance interval.

In GL 91-04, the NRC staff discussed seven issues pertaining to increasing the interval for instrument surveillances and identified specific actions that licensees should take to address each of these issues. The NRC staff evaluated the licensee's submittal to verify that it adequately addressed all of the issues identified in the GL necessary to provide an acceptable basis for increasing the calibration interval for instruments that are used to perform safety-related functions.

In its submittal, the licensee stated that the as-found and as-left data was not used to make a determination of drift for WEED brand RTDs and for Rosemount Model Numbers 1152, 1153 or 1154 transmitters. The WEED brand RTDs, which are used as temperature sensors, were installed a few years ago. There is limited as-found and as-left data available for statistical analysis. Therefore, industry test results were used in analysis in lieu of as-found and as-left data. The industry testing (NUREG/CR-5560, EPRI/RP-2409-15) has demonstrated that nuclear grade RTDs are bounded by a 30-month drift specification of $\pm$ 0.36°F. At CCNPP1/2, many pressure transmitters, which are affected by this proposed TS revision, have either been replaced or will be replaced in the near future with new Rosemount Model Numbers 1152, 1153 or 1154 transmitters. Because there is limited or no plant-data available for statistical analysis, the manufacturer's test results were used in the analysis in lieu of as-left and as-found data. The manufacturer's testing has demonstrated that sensor parameters of the Rosemount transmitters were bounded by a 30-month stability specification of $\pm$ 0.2% of the upper range limit.

In addition to the Rosemount transmitters and WEED RTDs, the design of the CCNPP1/2 employs few other kinds of devices used as primary sensors for which the licensee believed that drift data is not applicable for surveillance extension analyses. These devices include Neutron detectors, acoustic valve monitors (AVMs), refueling water tank (RWT) level switches and radiation detectors. Evaluation of each such device was performed on a case-by-case basis.

Neutron detectors were excluded from channel calibration because they are passive devices with minimal drift and present difficulty of simulating a meaningful signal. The historical data for AVMs indicated that these passive sensors have operated satisfactorily over their installed lifetime and no adverse trends have been observed. Therefore, the licensee determined that AVM components were not subject to drift mechanisms. The RWT level switches are mechanical devices and their quarterly Channel Functional tests are equivalent to Channel Calibrations. Therefore, 30 month drift was not considered for calibration extension for these switches. Radiation detectors are calibrated by placing a gamma source next to detector. For the "Containment Purge Valve Isolation," the current 18 month surveillance for the loop is performed prior to entering Mode 6, the only Mode for which this loop is required. By continuing to perform the surveillance prior to entering Mode 6, which would be 24 months instead 18 months, will not invalidate any assumption in the plant licensing basis. For "Containment Area High Radiation" loop, the licensee found that during calibrations from 1983 through 1992, except for two post modification calibrations which were not relevent due to the modifications that were implemented, radiation monitors have always been within calibration tolerances and did not require any adjustments. Therefore, the licensee determined that these radiation detectors were not subject to drift mechanisms.

In its submittal, the licensee indicated that total loop uncertainties for 30-month surveillance intervals have been used to evaluate actuation setpoints and their relation to analytical limits for the RPS, ESFAS, PORV, LTOP, containment sump level and radiation monitoring Instruments. No case was found where the setpoints needed to be revised. The remote shutdown and PAM instruments have no setpoints for automatic equipment response, therefore, were not included in the above evaluation.

In its submittal, the licensee indicated that the response of automatic equipment and operator indications were considered in evaluating the ability to achieve a safe shutdown with the associated instrumentation. The 30-month uncertainties calculated for instrument functions that automatically actuate equipment were found to be bounded by the uncertainties assumed in the safety analyses. Plant operators normally rely on guidance provided mainly by the emergency operating procedures (EOPs) to perform a plant shutdown in response to an accident or transient. The Safety Function Status checklists contained in EOPs are used to maintain the plant parameters within their required limits. Calculated uncertainties for instruments were determined to be acceptable for the control of plant parameters necessary to effect a safe shutdown.

In its submittal, the licensee indicated that the routine monitoring program at CCNPP1/2 consists channel calibrations, channel checks, and/or channel functional checks to provide reliable indication of instrument operation. The licensee further indicates that the routine monitoring program has identified improperly operating instruments. The as-found calibration data collected during refueling outages are evaluated as part of the surveillance program. The licensee initiates corrective action(s) when instrument parameter are found to be out of the specified acceptance criteria. In addition, an evaluation was performed to verify that instrument parameter bands used in the surveillances would identify degrading instrument performance. The licensee stated that its existing monitoring program will identify improper operation and that appropriate action will be initiated to address problems associated with drift that could potentially cause plant parameters to exceed accident analyses assumptions.

The NRC staff has determined that, based on the above, the licensee has adequately addressed GL 91-04.

3.0 SUMMARY

Based upon the above review, the NRC staff finds that the licensee has followed the applicable provisions of GL 91-04 and where deviations were identified, provided an adequate justification for each deviation. Therefore, the staff has concluded that the proposed revisions to the TSs are acceptable.

Specifically, TS 4.3.1.1.2, TS 4.3.1.1.3, and TS Tables 4.3-1, 4.3.2.1.2, 4.3.2.1.3, 4.3-2, 4.3-3, 4.3-6, 4.3-10, 4.4.3.1.b, 4.4.6.1.b, and 4.4.9.3.1.b will be revised by extending the surveillance intervals from a nominal 18 months to a refueling interval which is nominally 24 months, not to extend 30 months.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 35061). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

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

Principal Contributor: S. Athavale

Date: October 19, 1995