



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

May 31, 1989

Docket Nos. 50-317
and 50-318

Mr. G. C. Creel
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
MD Rtes. 2 & 4
P. O. Box 1535
Lusby, Maryland 20657

Dear Mr. Creel:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. 64603 AND 64604)

The Commission has issued the enclosed Amendment No. 138 to Facility Operating License No. DPR-53 and Amendment No. 121 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 in response to your application transmitted by letter dated January 20, 1987, as supplemented on January 12 and June 28, 1988.

These amendments delete the current requirement of Technical Specification (TS) Surveillance Requirement 4.6.4.1.2.c to verify that the containment purge air inlet valves (CPA-1410-CV and CPA-1411-CV) and the containment purge air outlet valves (CPA-1412-CV and CPA-1413-CV) close to their actuation positions upon receiving a safety injection actuation system (SIAS) test signal. This amendment also deletes reference to the SIAS action concerning the containment purge valves from TS Table 3.3-3, "Engineered Safety Feature Actuation System Instrumentation," Table 3.3-4, "Engineered Safety Feature Actuation System Instrumentation Trip Valves," and Table 4.3-2, "Engineered Safety Feature Actuation System Surveillance Requirements."

In addition, your January 20, 1987 application, as supplemented on January 12, 1988, requested an additional TS modification. This change would have eliminated redundancy and consolidated containment purge valve TS requirements by relocating their surveillance test requirements from TS 3/4.6.4, "Containment Isolation Valves," and TS 3/4.9.9, "Refueling Operations - Containment Purge Valve Isolation System," into an expanded TS 3/4.9.4, "Refueling Operations - Containment Penetrations." Subsequently,

8906080076 890531
PDR ADOCK 05000317
P PDC

DFol
CP
11

Mr. G. C. Creel

- 2 -

May 31, 1989

in your June 28, 1988 supplement, you requested the withdrawal of this proposed TS modification. The NRC staff concurs with this request and has withdrawn this proposed change from further consideration.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice. Also, the Commission has filed the enclosed Notice of Withdrawal of Application for Amendments to Facility Operating Licenses with the Office of the Federal Register for publication.

Sincerely,

Scott Alexander McNeil

Scott Alexander McNeil, Project Manager
Project Directorate I-1
Division of Reactor Projects, I/II

Enclosures:

1. Amendment No. 138 to DPR-53
2. Amendment No. 121 to DPR-69
3. Safety Evaluation
4. Notice of Withdrawal

cc: w/enclosures
See next page

DISTRIBUTION

Docket file	NRC PDR
PDI-1 Rdg	Local PDR
SVarga	BBoger
CVogan	RCapra
SMcNeil	LTripp, RI
OGC	DHagan
EJordan	BGrimes
TMeek (8)	WJones
JCalvo	ACRS (10)
ARM/LFMB	DLaBarge
JWermiel	

[AMEND 317/318 TACS 64603/64604]

OFC	: PDI-1	: PDI-1 <i>Qth</i>	: OGC <i>DOE</i>	: PDI-1 <i>fu</i>	: SPLB <i>JW</i>	:	:
NAME	: CVogan <i>W</i>	: SMcNeil <i>W</i>	: NROMNEY	: RCapra	: JWermiel	:	:
DATE	: 5/24/89	: 5/24/89	: 5/26/89	: 5/31/89	: 5/24/89	:	:

OFFICIAL RECORD COPY

Mr. G. C. Creel
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant

cc:

Mr. William T. Bowen, President
Calvert County Board of
Commissioners
Prince Frederick, Maryland 20768

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

Mr. Jay E. Silberg, Esq.
Shaw, Pittman, Potts and Trowbridge
1800 M Street, NW
Washington, DC 20036

Mr. W. J. Lippold, General Supervisor
Technical Services Engineering
Calvert Cliffs Nuclear Power Plant
MD Rts 2 & 4, P. O. Box 1535
Lusby, Maryland 20657

Resident Inspector
c/o U.S. Nuclear Regulatory Commission
P. O. Box 437
Lusby, Maryland 20657

Department of Natural Resources
Energy Administration, Power Plant
Siting Program
ATTN: Mr. T. Magette
Tawes State Office Building
Annapolis, Maryland 21204

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



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. 138
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 January 20, 1987, as supplemented on January 12 and June 28, 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 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:

8906080079 890531
PDR ADOCK 05000317
P PDC

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.138, 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.

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 31, 1989



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. 121
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 January 20, 1987, as supplemented on January 12 and June 28, 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 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. 121, 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.

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 31, 1989

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 138 FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 121 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Revise Appendix A as follows:

Remove Pages

3/4 3-13
3/4 3-14*
3/4 3-17*
3/4 3-18
3/4 3-23
3/4 3-24*
3/4 6-19*
3/4 6-20
3/4 6-21
3/4 6-22*

Insert Pages

3/4 3-13
3/4 3-14*
3/4 3-17*
3/4 3-18
3/4 3-23
3/4 3-24*
3/4 6-19*
3/4 6-20
3/4 6-21
3/4 6-22*

*Overleaf pages provided for continuity purposes only.

TABLE 3.3-3 (Continued)ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES ACTION</u>	
6. CONTAINMENT PURGE VALVES ISOLATION					
a. Manual (Purge Valve Control Switches)	2/Penetration	1/Penetration	2/Penetration	6**	8
b. Containment Radiation - High Area Monitor	4	2	3	6**	8
7. LOSS OF POWER					
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	4/Bus	2/Bus	3/Bus	1, 2, 3	7*
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	4/Bus	2/Bus	3/Bus	1, 2, 3	7*

** Must be OPERABLE only in MODE 6 when the valves are required OPERABLE and they are open.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
8. CVCS ISOLATION					
a. Manual (CVCS Isolation Valve Control Switches)	1/Valve	1/Valve	1/Valve	1, 2, 3, 4	6
b. West Penetration Room/Letdown Heat Exchanger Room Pressure - High	4	2	3	1, 2, 3, 4	7*
9. AUXILIARY FEEDWATER ACTUATION SYSTEM (AFAS)					
a. Manual (Trip Buttons)	2 sets of 2 per S/G	1 set of 2 per S/G	2 sets of 2 per S/G	1, 2, 3	6
b. Steam Generator Level - Low	4/SG	2/SG	3/SG	1, 2, 3	7
c. Steam Generator ΔP High	4/SG	2/SG	3/SG	1, 2, 3	7

CALVERT CLIFFS - UNIT 1

3/4 3-14

Amendment No. 54, 88

TABLE 3.3-4

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. SAFETY INJECTION (SIAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure - High	≤ 4.75 psig	≤ 4.75 psig
c. Pressurizer Pressure - Low	≥ 1725 psia	≥ 1725 psia
2. CONTAINMENT SPRAY (CSAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure -- High	≤ 4.75 psig	≤ 4.75 psig
3. CONTAINMENT ISOLATION (CIS) #		
a. Manual CIS (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure - High	≤ 4.75 psig	≤ 4.75 psig
4. MAIN STEAM LINE ISOLATION		
a. Manual (MSIV Hand Switches and Feed Head Isolation Hand Switches)	Not Applicable	Not Applicable
b. Steam Generator Pressure - Low	≥ 685 psia	≥ 685 psia

Containment isolation of non-essential penetrations is also initiated by SIAS (functional units 1.a and 1.c).

TABLE 3.3-4 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

<u>FUNCTIONAL UNIT</u>	<u>TRIP VALUE</u>	<u>ALLOWABLE VALUES</u>
5. CONTAINMENT SUMP RECIRCULATION (RAS)		
a. Manual RAS (Trip Buttons)	Not Applicable	Not Applicable
b. Refueling Water Tank - Low	≥ 24 inches above tank bottom	≥ 24 inches above tank bottom
6. CONTAINMENT PURGE VALVES ISOLATION		
a. Manual (Purge Valve Control Switches)	Not Applicable	Not Applicable
b. Containment Radiation - High Area Monitor	≤ 220 mr/hr	≤ 220 mr/hr
7. LOSS OF POWER		
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	2450 ± 105 volts with a 2 ± 0.2 second time delay	2450 ± 105 volts with a 2 ± 0.2 second time delay
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	3628 ± 25 volts with a 8 ± 0.4 second time delay	3628 ± 25 volts with a 8 ± 0.4 second time delay

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>
5. CONTAINMENT SUMP RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	NA	NA	R	NA
b. Refueling Water Tank - Low	NA	R	M	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	R	NA
b. Containment Radiation - High Area Monitor	S	R	M	6**
7. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	NA	R	M	1, 2, 3
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	NA	R	M	1, 2, 3
8. CVCS ISOLATION				
West Penetration Room/Letdown Heat Exchanger Room Pressure - High	NA	R	M	1, 2, 3, 4
9. AUXILIARY FEEDWATER				
a. Manual (Trip Buttons)	NA	NA	R	NA
b. Steam Generator Level - Low	S	R	M	1, 2, 3
c. Steam Generator Δ P - High	S	R	M	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M(1)	1, 2, 3

** Must be OPERABLE only in MODE 6 when the valves are required OPERABLE and they are open.

TABLE 4.3-2 (Continued)

TABLE NOTATION

- (1) The logic circuits shall be tested manually at least once per 31 days.
- (3) SIAS logic circuits A-5, B-5, A-10 and B-10 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.
- (4) CIS logic circuits A-5 and B-5 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.
- (5) SGIS logic circuits A-1 and B-1 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.
- (6) CSAS logic circuits A-3 and B-3 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

TABLE 3.6-1

CONTAINMENT ISOLATION VALVES

<u>PENETRATION NO.</u>	<u>ISOLATION CHANNEL</u>	<u>ISOLATION VALVE IDENTIFICATION NO.</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SECONDS)</u>
1A	SIAS A	PS-5465-CV	R.C. and Pressurizer Sampling	<7
	SIAS A	PS-5466-CV		<7
	SIAS A	PS-5467-CV		<7
	SIAS B	PS-5464-CV		<7
1B	SIAS A	WGS-2180-CV	Containment Vent Header to Waste Gas	<7
	SIAS B	WGS-2181-CV		<7
1C	SIAS A	CVC-506-CV	RCP Seals Controlled Bleedoff	<7
	SIAS B	CVC-505-CV		<7
1D	NA	PS-6529-SV*	Post Accident Sampling Liquid Return to RC Drain Tank	NA
2A	SIAS A	CVC-515-CV	Letdown Line	<13
	SIAS B	CVC-516-CV		<13
	NA	CVC-105		NA
	NA	CVC-103		NA
2B	NA	CVC-517-CV	Charging Line	NA
	NA	CVC-518-CV		NA
	NA	CVC-519-CV		NA
	NA	CVC-435-RV		NA
	NA	CVC-184		NA

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

<u>PENETRATION NUMBER</u>	<u>ISOLATION CHANNELS</u>	<u>ISOLATION VALVE IDENTIFICATION NO.</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SECONDS)</u>
7A	NA NA	Blind Flange ILRT-1	ILRT	NA NA
7B	NA NA	Blind Flange ILRT-2	ILRT	NA NA
8	SIAS A SIAS B	EAD-5462-MOV EAD-5463-MOV	Containment Normal Sump	≤ 13 ≤ 13
9	NA NA	SI-340 SI-326	Containment Spray	NA NA
10	NA NA	SI-330 SI-316	Containment Spray	NA NA
13	CRS A CRS B	CPA-1410-CV(3) CPA-1411-CV(3)	Purge Air Inlet	≤ 7** ≤ 7**

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

<u>PENETRATION NUMBER</u>	<u>ISOLATION CHANNELS</u>	<u>ISOLATION VALVE IDENTIFICATION NO.</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SECONDS)</u>
14	CRS A CRS B	CPA-1412-CV(3) CPA-1413-CV(3)	Purge Air Outlet	≤ 7** ≤ 7**
15	SIAS A SIAS B	RE-5291-CV RE-5292-CV	Purge Air Monitor	≤ 7 ≤ 7
16	CIS A	CC-3832-CV	Component Cooling Water Inlet	≤ 18
18	CIS B	CC-3833-CV	Component Cooling Water Outlet	≤ 18
19A	NA CIS A	IA-337 IA-2080-MOV	Instrument Air	NA ≤ 13
19B	NA NA	PA-1040* PA-1044*	Plant Air	NA NA
20A	NA NA NA NA NA	N ₂ -344 N ₂ -612-CV* N ₂ -622-CV* N ₂ -632-CV* N ₂ -642-CV*	Nitrogen Supply	NA NA NA NA NA

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

<u>PENETRATION NO.</u>	<u>ISOLATION CHANNEL</u>	<u>ISOLATION VALVE IDENTIFICATION NO.</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SECONDS)</u>
20B	NA NA	N ₂ -389 N ₂ -345	Nitrogen Supply	NA NA
20C	NA NA	N ₂ -346 N ₂ -392	Nitrogen Supply	NA NA
23	SIAS A	RCW-4260-CV	R.C. Drain Tank Drains	<7
24	SIAS B	PS-6531-SV	Oxygen Sample Line	<7
37	NA NA	PSW-1019 PSW-1008	Plant Water	NA NA
38	NA	DW-5460-CV*	Demineralized Water	NA
39	NA NA	SI-463 SI-455	Safety Injection Tank Test Line	NA NA
41	NA NA	SI-652-MOV (2) SI-651-MOV (2)	Shutdown Cooling	NA NA

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. CONTAINMENT PURGE VALVES ISOLATION					
a. Manual (Purge Valve Control Switches)	2/Penetration	1/Penetration	2/Penetration	6**	8
b. Containment Radiation - High Area Monitor	4	2	3	6**	8
7. LOSS OF POWER					
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	4/Bus	2/Bus	3/Bus	1, 2, 3	7*
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	4/Bus	2/Bus	3/Bus	1, 2, 3	7*

** Must be OPERABLE only in MODE 6 when the valves are required OPERABLE and they are open.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
8. CVCS ISOLATION					
a. Manual (CVCS Isolation Valve Control Switches)	1/Valve	1/Valve	1/Valve	1, 2, 3, 4	6
b. West Penetration Room/Letdown Heat Exchanger Room Pressure - High	4	2	3	1, 2, 3, 4	7*
9. AUXILIARY FEEDWATER					
a. Manual	2 sets of 2 per S/G	1 set of 2 per S/G	2 sets of 2 per S/G	1, 2, 3	6
b. Steam Generator Level - Low	4/SG	2/SG	3/SG	1, 2, 3	7
c. Steam Generator ΔP High	4/SG	2/SG	3/SG	1, 2, 3	7

TABLE 3.3-4
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. SAFETY INJECTION (SIAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure - High	≤ 4.75 psig	≤ 4.75 psig
c. Pressurizer Pressure - Low	≥ 1725 psia	≥ 1725 psia
2. CONTAINMENT SPRAY (CSAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure -- High	≤ 4.75 psig	≤ 4.75 psig
3. CONTAINMENT ISOLATION (CIS) #		
a. Manual CIS (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure - High	≤ 4.75 psig	≤ 4.75 psig
4. MAIN STEAM LINE ISOLATION		
a. Manual (MSIV Hand Switches and Feed Head Isolation Hand Switches)	Not Applicable	Not Applicable
b. Steam Generator Pressure - Low	≥ 685 psia	≥ 685 psia

Containment isolation of non-essential penetrations is also initiated by SIAS (functional units 1.a and 1.c).

TABLE 3.3-4 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

<u>FUNCTIONAL UNIT</u>	<u>TRIP VALUE</u>	<u>ALLOWABLE VALUES</u>
5. CONTAINMENT SUMP RECIRCULATION (RAS)		
a. Manual RAS (Trip Buttons)	Not Applicable	Not Applicable
b. Refueling Water Tank - Low	≥ 24 inches above tank bottom	≥ 24 inches above tank bottom
6. CONTAINMENT PURGE VALVES ISOLATION		
a. Manual (Purge Valve Control Switches)	Not Applicable	Not Applicable
b. Containment Radiation - High Area Monitor	≤ 220 mr/hr	≤ 220 mr/hr
7. LOSS OF POWER		
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	2450 ± 105 volts with a 2 ± 0.2 second time delay	2450 ± 105 volts with a 2 ± 0.2 second time delay
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	3628 ± 25 volts with a 8 ± 0.4 second time delay	3628 ± 25 volts with a 8 ± 0.4 second time delay

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>
5. CONTAINMENT SUMP RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	NA	NA	R	NA
b. Refueling Water Tank - Low	NA	R	M	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	R	NA
b. Containment Radiation - High Area Monitor	S	R	M	6**
7. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	NA	R	M	1, 2, 3
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	NA	R	M	1, 2, 3
8. CVCS ISOLATION				
West Penetration Room/Letdown Heat Exchanger Room Pressure - High	NA	R	M	1, 2, 3, 4
9. AUXILIARY FEEDWATER				
a. Manual (Trip Buttons)	NA	NA	R	NA
b. Steam Generator Level - Low	S	R	M	1, 2, 3
c. Steam Generator Δ P - High	S	R	M	1, 2, 3
d. Automatic Actuation Logic	NA	NA	M(1)	1, 2, 3

** Must be OPERABLE only in MODE 6 when the valves are required OPERABLE and they are open.

TABLE 4.3-2 (Continued)

TABLE NOTATION

- (1) The logic circuits shall be tested manually at least once per 31 days.
- (3) SIAS logic circuits A-5, B-5, A-10 and B-10 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.
- (4) CIS logic circuits A-5 and B-5 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.
- (5) SGIS logic circuits A-1 and B-1 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.
- (6) CSAS logic circuits A-3 and B-3 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

TABLE 3.6-1 (Continued)
CONTAINMENT ISOLATION VALVES

<u>PENETRATION NUMBER</u>	<u>ISOLATION CHANNELS</u>	<u>ISOLATION VALVE IDENTIFICATION NO.</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SECONDS)</u>
7A	NA NA	Blind Flange ILRT-1	ILRT	NA NA
7B	NA NA	Blind Flange ILRT-2	ILRT	NA NA
8	SIAS A SIAS B	EAD-5462-MOV EAD-5463-MOV	Containment Normal Sump	≤ 13 ≤ 13
9	NA NA	SI-340 SI-326	Containment Spray	NA NA
10	NA NA	SI-330 SI-316	Containment Spray	NA NA
13	CRS A CRS B	CPA-1410-CV(3) CPA-1411-CV(3)	Purge Air Inlet	≤ 7** ≤ 7**

TABLE 3.6-1

CONTAINMENT ISOLATION VALVES

<u>PENETRATION NO.</u>	<u>ISOLATION CHANNEL</u>	<u>ISOLATION VALVE IDENTIFICATION NO.</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SECONDS)</u>
1A	SIAS A SIAS A SIAS A SIAS B	PS-5465-CV PS-5466-CV PS-5467-CV PS-5464-CV	R.C. and Pressurizer Sampling	<7
1B	SIAS A SIAS B	WGS-2180-CV WGS-2181-CV	Containment Vent Header to Waste Gas	<7 <7
1C	SIAS A SIAS B	CVC-506-CV CVC-505-CV	RCP Seals Controlled Bleedoff	<7 <7
1D	NA	PS-6529SV*	Post Accident Sampling Liquid Return to RC Drain Tank	NA
2A	SIAS A SIAS B NA NA	CVC-515-CV CVC-516-CV CVC-105 CVC-103	Letdown Line	<13 <13 NA NA
2B	NA NA NA NA NA	CVC-517-CV CVC-518-CV CVC-519-CV CVC-435-RV CVC-184	Charging Line	NA NA NA NA NA

TABLE 3.6-1 (Continued)
CONTAINMENT ISOLATION VALVES

<u>PENETRATION NUMBER</u>	<u>ISOLATION CHANNELS</u>	<u>ISOLATION VALVE IDENTIFICATION NO.</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SECONDS)</u>
14	CRS A CRS B	CPA-1412-CV(3) CPA-1413-CV(3)	Purge Air Outlet	≤ 7** ≤ 7**
15	SIAS A SIAS B	RE-5291-CV RE-5292-CV	Purge Air Monitor	≤ 7 ≤ 7
16	CIS A	CC-3832-CV	Component Cooling Water Inlet	≤ 18
18	CIS B	CC-3833-CV	Component Cooling Water Outlet	≤ 18
19A	NA CIS A	IA-175 IA-2080-MOV	Instrument Air	NA ≤ 13
19B	NA NA	PA-137* PA-1044*	Plant Air	NA NA
20A	NA NA NA NA NA	N ₂ -347 N ₂ -612-CV* N ₂ -622-CV* N ₂ -632-CV* N ₂ -642-CV*	Nitrogen Supply	NA NA NA NA NA

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

<u>PENETRATION NO.</u>	<u>ISOLATION CHANNEL</u>	<u>ISOLATION VALVE IDENTIFICATION NO.</u>	<u>FUNCTION</u>	<u>ISOLATION TIME (SECONDS)</u>
20B	NA NA	N ₂ -348 N ₂ -395	Nitrogen Supply	NA NA
20C	NA NA	N ₂ -349 N ₂ -398	Nitrogen Supply	NA NA
23	SIAS A	RCW-4260-CV	R.C. Drain Tank Drains	<u><7</u>
24	SIAS B	PS-6531-SV	Oxygen Sample Line	<u><7</u>
37	NA NA	PSW-1020 PSW-1009	Plant Water	NA NA
38	NA	DW-5460-CV*	Demineralized Water	NA
39	NA NA	SI-463 SI-455	Safety Injection Tank Test Line	NA NA
41	NA NA	SI-652-MOV (2) SI-651-MOV (2)	Shutdown Cooling	NA NA



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 138 TO FACILITY OPERATING LICENSE NO. DPR-53
AND AMENDMENT NO. 121 TO FACILITY OPERATING LICENSE NO. DPR-69
BALTIMORE GAS AND ELECTRIC COMPANY
CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2
DOCKET NOS. 50-317 AND 50-318

INTRODUCTION

By its letters dated January 20, 1987, as supplemented on January 12 and June 28, 1988, the Baltimore Gas and Electric Company (BG&E, the licensee) proposed a change to the Units 1 and 2 Technical Specifications (TS). The proposed change would delete the current requirement of Technical Specification (TS) Surveillance Requirement 4.6.4.1.2.c to verify that the containment purge air inlet valves (CPA-1410-CV and CPA-1411-CV) and the containment purge air outlet valves (CPA-1412-CV and CPA-1413-CV) close to their actuation positions upon receiving a safety injection actuation system (SIAS) test signal. In addition, reference to the SIAS action of the containment purge valves would be deleted from TS Tables 3.3-3, "Engineered Safety Feature Actuation System Instrumentation," Table 3.3-4, "Engineered Safety Feature Actuation System Instrumentation Trip Valves," and Table 4.3-2, "Engineered Safety Feature Actuation System Surveillance Requirements."

In addition, the January 20, 1987 application, as supplemented on January 12, 1988, requested an additional TS modification. This change would have eliminated redundancy and consolidated containment purge valve TS requirements by relocating their surveillance test requirements from TS 3/4.6.4, "Containment Isolation Valves," and TS 3/4.9.9, "Refueling Operations - Containment Purge Valve Isolation System," into an expanded TS 3/4.9.4, "Refueling Operations - Containment Penetrations." Subsequently, in the June 28, 1988 supplement, the licensee requested the withdrawal of this proposed TS modification. The NRC staff concurred with this request and has withdrawn this proposed change from further consideration.

The June 28, 1988 submittal also provided camera-ready copies of the proposed TS changes. Other than the withdrawal of the proposed TS change, discussed previously, the June 28, 1988 supplement did not affect the proposed TS changes noticed in the Federal Register (54 FR 18615) on May 1, 1989 and did not affect the staff's proposed no significant hazards determination.

DISCUSSION AND EVALUATION

The licensee has requested the deletion of the SIAS test requirements of TS 4.6.4.1.2.c and TS 3/4.3.2, "Engineered Safety Feature Actuation System Instrumentation," for the containment purge valves as this test is unnecessary and serves no safety function.

SIAS performs its safety functions when the unit is in operating modes 1-4 (Power Operations through Hot Shutdown) and is not required to be operable while in modes 5 or 6 (Cold Shutdown and Refueling). One of the functions is to close the containment purge valves. However, TS Limiting Condition for Operation (LCO) 3.6.1.7 requires, while in modes 1-4, the containment purge valves to be closed by isolating air to their air operators and by maintaining their solenoid air supply valves deenergized. This requirement renders moot the need for testing the SIAS actuation of the containment purge valves as these valves are always closed during operating modes where SIAS is required to be operable (modes 1-4). In addition, the action requirements for an open containment purge valve of TS 3.6.1.7 are more restrictive than those presently applicable in TS 3/4.6.4.

The notes in TS Tables 3.3-3, 3.3-4 and 4.3-2 are for information purposes only and impose no operability or testing requirements. Thus, the deletion of the information statement, that "Containment purge valve isolation is also initiated by SIAS (functional units 1.a, 1.b, and 1.c)," would have no effect upon previously evaluated accidents.

Section 6.2.4, "Containment Isolation System," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," (SRP) specifies that containment purge valves should be capable of operating in response to diverse containment isolation parameters, not including the high radiation signal. Additionally, the SRP states that the design of the control systems for automatic containment isolation valves shall be such that resetting the isolation signal will not result in an automatic reopening of containment isolation valves. With the deletion of the SIAS test requirements for the containment purge valves, compliance with these recommendations shall no longer be demonstrated at Calvert Cliffs.

However, SRP Section 6.2.4 states that if containment purge valves fail to satisfy the recommendations provided therein, they must be sealed closed during plant operational conditions where reactor coolant system temperature is 200°F or above. As previously noted, TS 3.6.1.7 imposes this specific requirement upon the Calvert Cliffs purge valves, specifying that they must be closed by isolating air to their air operators and by maintaining their solenoid air supply valves deenergized. Consequently, no diverse parameter is needed to actuate the isolation of these valves during modes 1-4 as they will already be sealed closed. Furthermore, hypothetical

improper maintenance on SIAS, resulting in the initiation of an open signal to the containment purge valves upon a SIAS actuation or gang reopening of valves on a SIAS signal override will have no effect upon these valves as they are incapable of operating in modes 1-4 due to the isolation of air to their operators and to the deenergization of their solenoid air supply valves. Thus, the TS 3.6.1.7 requirement to seal closed the containment purge valves during modes 1-4 eliminates 1) the need for diverse SIAS closure of these valves and 2) any safety-significant effects potentially arising from the lack of testing of the containment purge valve SIAS actuation capability which is physically remaining in place (i.e., valve opening on a SIAS closure signal or gang reopening of valves on a SIAS signal override). Consequently, the NRC staff has determined that this proposed change to the Units 1 and 2 TS is acceptable.

INTENT

The intent of this change is to eliminate the requirement to test the SIAS actuation of the containment purge valves due to the requirement of TS 3.6.1.7 (sealing closed the containment purge valves during modes 1-4) which renders the need for this test moot.

ENVIRONMENTAL CONSIDERATION

These amendments involve a change to a surveillance requirement. The staff has determined that these 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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 these amendments.

CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration, which was published in the Federal Register (54 FR 18615) on May 1, 1989. The Commission consulted with the State of Maryland. No public comments were received, and the State of Maryland did not have any comments.

Based on the considerations discussed above, the staff concludes 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

PRINCIPAL CONTRIBUTOR:

S. A. McNeil

Dated: May 31, 1989

UNITED STATES NUCLEAR REGULATORY COMMISSIONBALTIMORE GAS AND ELECTRIC COMPANYDOCKET NOS. 50-317 AND 50-318NOTICE OF WITHDRAWAL OF APPLICATION FORAMENDMENTS TO FACILITY OPERATING LICENSES

The United States Nuclear Regulatory Commission (the Commission) has granted the request of the Baltimore Gas and Electric Company (the licensee) to withdraw a portion of its January 20, 1987 application, as supplemented on January 12, 1988, for proposed amendments to Facility Operating License Nos. DPR-53 and DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, located in Calvert County, Maryland.

The proposed amendments would have revised the Units 1 and 2 Technical Specifications by eliminating redundancy and consolidating containment purge valve TS requirements by relocating their surveillance test requirements from TS 3/4.6.4, "Containment Isolation Valves," and TS 3/4.9.9, "Refueling Operations - Containment Purge Valve Isolation System," into an expanded TS 3/4.9.4, "Refueling Operations - Containment Penetrations."

The Commission has previously issued a Notice of Consideration of Issuance of Amendment published in the FEDERAL REGISTER on May 1, 1989 (54 FR 18615). However, by letter dated June 28, 1988, the licensee had withdrawn this proposed change.

For further details with respect to this action, see the application for amendment dated January 20, 1987, as supplemented January 12, 1988, and

the licensee's letter dated June 28, 1988, which withdrew the application for license amendment. The above documents are available for public inspection at the Commission's Public Document Room, 2120 L Street, N.W., Washington, D.C., and the Calvert County Library, Prince Frederick, Maryland.

Dated at Rockville, Maryland, this 31st day of May 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

Scott Alexander McNeil

Scott Alexander McNeil, Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

OFC	:PDI-1	:PDI-1	:OGC	:PDI-1	:SPLB	:	:
NAME	:CVogan	:SMcNeil:vr	:NR	:RCapra	:JWermiel	:	:
DATE	:5/2/89	:5/24/89	:5/26/89	:5/31/89	:5/24/89	:	:

OFFICIAL RECORD COPY