BALTIMORE
GAS AND
ELECTRIC

CHARLES CENTER • P. O. BOX 1475 • BALTIMORE, MARYLAND 21203

ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

September 20, 1983

Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: Mr. J. R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 1, Docket No. 50-317
Request for Amendment

Gentlemen:

The Baltimore Gas and Electric Company hereby requests an Amendment to its Operating License No. DPR-53 for Calvert Cliffs Unit No. 1, to reflect a planned modification to the hydrogen purge system outlet isolation valves MOV-6900 and MOV-6901. This modification consists of the addition of a Safety Injection Actuation Signal (SIAS) to the valve operators.

Pursuant to the procedural requirements of 10 CFR 50 paragraphs 50.59, 50.91 and 50.92, this letter forwards our notification of the proposed license amendment and provides a determination with regard to significant hazards considerations. In addition, with regard to operation of the modified portion of the system in **MODES** 1 through 4, a preliminary determination on significant hazards is submitted.

More detailed information based on the safety analyses being performed by our architechtural engineer will be forwarded in a supplement to this request at a later date, and will allow a final determination of significant hazards for operation in **MODES** 1 through 4.

Our present intention is to perform the physical modifications during the upcoming Unit 1 refueling outage beginning October 1, 1983. We plan to modify the valves and perform functional testing that will permit opening and shutting the valves while in **MODES** 5 and 6. The valves will be locked closed and administratively maintained in the closed position prior to entry into **MODE** 4, following completion of the outage. This condition will be maintained by proposed Technical Specification 3/4.6.1.8 during **MODES** 1 through 4 until receipt of the approved Technical Specifications.

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$4,000.00

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PROPOSED CHANGES (BG&E FCR 83-104)

1. Remove old page 3/4 6-23 and replace with marked-up page 3/4 6-23 incorporating the changes, which consist of the addition of "SIAS" under the column entitled "isolation channels", a change in the name of the function to "containment vent isolation" and the insertion of " $\leq$ 20" for isolation time for both MOV-6900 and MOV-6901.

2. Add a new Technical Specification 3/4.9.14 consisting of a limiting condition for operation, surveillance requirements, and Technical Specification bases as shown on the attached proposed Technical Specification pages. This additional Technical Specification assures that the containment vent isolation valves are maintained shut during core alterations or movement of irradiated fuel within the containment.

3. Add new Technical Specification 3/4.6.1.8 as shown on the attached proposed Technical Specification page. This Technical Specification assures that the isolation valves will be maintained shut in **MODES** 1-4 until receipt of the final NRC Safety Evaluation regarding operational use of the containment vent system.

DISCUSSION AND DETERMINATION OF SIGNIFICANT HAZARDS

During normal operation the containment must occasionally be vented to maintain containment internal pressure below the Technical Specification upper limit of 1.8 psig. Presently, and in the past, this has been performed by venting the containment atmosphere through the containment normal sump isolation valves which exhaust to the Emergency Core Cooling System (ECCS) pump room sump, and subsequently to the environment via the ECCS pump room ventilation system exhaust filter train. While this method of venting the containment has been acceptable in the past and is carefully controlled and monitored, an operationally easier and more useful method is possible through the use of a portion of the existing Hydrogen Purge system. The portion of this system to be used as a vent path consists of a four inch diameter hydrogen purge outlet line, which terminates in the penetration room in the main plant vent piping upstream of the penetration room exhaust filter train.

The function of Post Loss of Coolant Accident (LOCA) hydrogen control is more than adequately performed by the installed, redundant, safety grade hydrogen recombiners. We, therefore, intend to delete reference to the hydrogen purge system in the Updated Final Safety Analysis Report (FSAR), and install a blind flange on the air replenishment portion of the system (penetration 48b). The new function of the H_2 purge outlet as a containment vent system will be addressed in the next revision to the FSAR.

Presently, the hydrogen purge outlet containment isolation valves (MOV-6900 and MOV-6901) are maintained closed in accordance with Technical Specifications to prevent unnecessary exposure of the public if an accident resulting in airborne radioactivity release were to occur. In order to allow venting of the containment through these valves during **MODES** 1 through 4, yet still provide the necessary protection to the public in the event of an accident, the physical modification will provide for closure of these valves on a Safety Injection Actuation Signal (SIAS).

Normally, during power operations, these valves will remain shut and only be opened for brief periods of time to allow venting. Initiation of SIAS from either of two diverse parameters (containment pressure high or pressurizer pressure low) would close the isolation valves within 20 seconds, ensuring that the site boundary doses are maintained within a small fraction of the limits of 10 CFR 100.

The proposed Technical Specification changes would then, update Table 3.6-1 to reflect the addition of an SIAS closure signal to the hydrogen purge outlet isolation valves (to be renamed containment vent isolation valves) and provide limitations to prevent their use during **MODES** 1-4, or during core alterations or movement of irradiated fuel within the containment. These restrictions on operation of the containment vent valves preclude any need for installation of a Containment Radiation Signal (CRS) closure feature or for any safety analysis regarding postulated accidents during core alterations or fuel handling operations. To meet licensing requirements the above restrictions also ensure the isolation valves will be maintained shut in **MODES** 1-4, until receipt of the final NRC Safety Evaluation regarding operational use of the Containment Vent System.

Based on current review of the presently analyzed accidents in the Updated Final Safety Analysis Report, we find this proposed change does not involve a significant increase in the probability or consequences of these accidents, nor does it create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change does not involve a significant reduction in the margin of safety as defined in the Technical Specification bases. With additional restrictions imposed by proposed Technical Specification 3/4.6.1.8, the proposed change falls under the examples of amendments not likely to involve a Significant Hazards Consideration, as listed in Federal Register Volume 48, No. 67 dated Wednesday, April 6, 1983. We conclude that the proposed change does not involve a Significant Hazards Consideration.

A preliminary evaluation based on the above review of Chapter 14 of the updated Final Safety Analysis Report has yielded a determination that operation of the Containment Vent System in **MODES** 1-4 does not involve a Significant Hazards Consideration. This evaluation will be supplemented following our review of the safety analysis currently performed by our Architectural Engineer. We will forward the results of our review in a final determination which supplements our submittal.

SAFETY COMMITTEE REVIEW

These proposed changes to the Technical Specifications and our determination of significant hazards have been reviewed by our Plant Operations and Safety and Off-Site Safety Review Committees, and they have concluded that implementation of these changes will not result in an undue risk to the health and safety of the public. The forthcoming supplemental detailed safety analysis will be submitted following additional safety committee reviews.

FEE DETERMINATION

We request that you consider this change request as a supplement to the Unit 1 re-load application dated August 22, 1983.

We have determined, pursuant to 10 CFR Part 170, paragraph 170.22, that this Amendment request consists of a Class III amendment for Calvert Cliffs Unit No. 1. Accordingly, we are including Baltimore Gas and Electric Company Check No. B297515 in the amount of $4,000.00 to cover the fee for this request.

Very truly yours,

A. E. Lundvall

AEL/JET/sjb

STATE OF MARYLAND :
: TO WIT:
CITY OF BALTIMORE :

Arthur E. Lundvall, Jr., being duly sworn states that he is Vice President of the Baltimore Gas and Electric Company, a corporation of the State of Maryland; that he provides the foregoing response for the purposes therein set forth; that the statements made are true and correct to the best of his knowledge, information, and belief; and that he was authorized to provide the response on behalf of said Corporation.

WITNESS my Hand and Notarial Seal:

Minnie L. Robinson
Notary Public

My Commission Expires July 1, 1986

cc: J. A. Biddison, Jr., Esquire
G. F. Trowbridge, Esquire
D. H. Jaffe, NRC
R. E. Architzel, NRC
R. E. Corcoran, Chief (DHMH)

ALTIMORE GAS AND ELECTRIC COMPANY VENDOR CODE 93645-01 CHECK NO. B297515

OUR REF. NO.	INVOICE NO.	PURCHASE ORDER	INVOICE DATE	DISCOUNT	NET AMOUNT
3U9082			09 12 83		$4,000.00

Class 3 Technical Specification Change Unit 1
Table 3.6-1 adds SIAS signal to hydrogen purge valves

09 13 83	TOTALS ▶	$4,000.00	DETACH THIS PORTION BEFORE DEPOSITING CHECK

7-19
520

BALTIMORE GAS AND ELECTRIC COMPANY
BALTIMORE, MARYLAND 21203

SEP 13 83

AMOUNT	CHECK NUMBER
$4,000.00**	B297515

PAY EXACTLY **4,000.00**

TO THE ORDER OF

US NUCLEAR REGULATORY**
COMMISSION**
Washington, DC. 20555

EXAMINED

D. N. Jarvis TREASURER

MARYLAND NATIONAL BANK
BALTIMORE, MD.

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TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATION NO.	ISOLATION CHANNEL	ISOLATION VALVE IDENTIFICATION NO.	FUNCTION	ISOLATION TIME (SECONDS)
44	NA NA NA	238-1 238-1 MOV-6200 *	Fire Protection	NA NA NA
47A	NA NA	SV-6540A SV-6507A	Hydrogen Sample Outlet	NA NA
47B	NA NA	SV-6540E SV-6507E	Hydrogen Sample Outlet	NA NA
47C	NA NA	SV-6540F SV-6507F	Hydrogen Sample Outlet	NA NA
47D	NA NA	SV-6540G SV-6507G	Hydrogen Sample Return	NA NA
48A	~~NA~~ SIAS B ~~NA~~ SIAS A	MOV-6900 MOV-6901	~~Hydrogen Purge Outlet~~ CONTAINMENT VENT ISOLATION	~~NA~~ ≤20 ~~NA~~ ≤20

ATTACHMENT 1

FCR 83-104

REFUELING OPERATIONS

CONTAINMENT VENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.9.14 The containment vent isolation valves shall be closed

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION: With one or more containment vent isolation valves open, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel within the containment.

SURVEILLANCE REQUIREMENTS

4.9.14 The containment vent isolation valves shall be determined to be closed within 72 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel within the containment.

3/4.9.10 and 3/4.9.11 WATER LEVEL-REACTOR VESSEL AND SPENT FUEL POOL WATER LEVEL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the accident analysis.

3/4.9.12 SPENT FUEL POOL VENTILATION SYSTEM

The limitations on the spent fuel pool ventilation system ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the accident analyses.

3/4.9.13 SPENT FUEL CASK HANDLING CRANE

The restriction on movement of the spent fuel shipping cask within one cask length of any fuel assembly ensures that in the event this load is dropped (1) the stored spent fuel assemblies will not be damaged, and (2) any possible distortion of fuel in the storage racks will not result is a critical array.

3/4.9.14 CONTAINMENT VENT ISOLATION VALVES

The OPERABILITY and closure restrictions on the containment vent isolation valves are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

CONTAINMENT VENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.8 The containment vent isolation valves MOV 6900 and MOV 6901 shall be maintained closed by tagging the MCC power supply breakers open and maintaining the keyed hand switches locked in the closed position.

APPLICABILITY: MODES 1, 2, 3, AND 4

ACTION: With one or both containment vent isolation valves open, close the open valve(s) within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.8 The containment vent isolation valves shall be determined closed at least once per 31 days, by verifying that power to the motor operators is removed and the valves indicate shut.