

July 12, 1989

Docket Nos. 50-317 and 50-318
License Nos. DPR-53 and DPR-69
EA 89-107

Baltimore Gas and Electric Company
ATTN: Mr. George C. Creel
Vice President
Nuclear Energy
Calvert Cliffs Nuclear Power Plant
MD Rts 2 & 4, Post Office Box 1535
Lusby, Maryland 20657

Gentlemen:

Subject: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$75,000
(NRC Inspection Report No. 50-317/89-11; 50-318/89-11)

This refers to the special NRC safety inspection conducted during April 17 - 27, 1989 at the Calvert Cliffs Nuclear Power Plant, Units 1 and 2. The inspection report was sent to you on May 18, 1989. The inspection was conducted to review the circumstances associated with two examples of a violation of a technical specification limiting condition for operation which occurred at your facility in April 1989. Both examples were identified by members of your staff and reported to the NRC. During the inspection, the NRC also reviewed the circumstances associated with six examples of a violation of 10 CFR 50.59 which were identified by your staff's review of certain temporary modifications made at the facility. The review was performed in response to a commitment made to the NRC during an onsite meeting on March 10, 1989. On May 30, 1989, an enforcement conference was conducted with you and members of your staff to discuss the violations, their causes and your corrective action. The violations are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty.

The first violation involved two examples of failure to maintain containment refueling integrity while core alterations (namely, uncoupling of control element assemblies) were being performed. The violation occurred for approximately 1½ hours on April 17, 1988 and for approximately 2 hours on April 19, 1989. In each case, containment refueling integrity was not maintained in that a direct path existed from containment (via three small vent valves on a drained service water supply header) through the service water piping to the outside of containment (via either open vent valves or an open flange).

The NRC recognizes that the safety significance of these individual degradations was low since the size of the vent valves inside containment was less than 1/8-th of an inch, the differential pressure to provide the motive force for a radiological release following a postulated fuel handling accident was almost

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negligible, and the actual core alterations in progress were comparatively low risk evolutions. Nonetheless, the NRC is concerned about the lack of control and coordination between operations and maintenance personnel that contributed to these degradations.

In the first instance, although containment refueling integrity had initially been established via control valves in the service water lines, an unrelated maintenance activity was performed after the containment integrity verification procedure had been completed. This maintenance activity was not properly coordinated between operations and maintenance personnel, and resulted in this valve being opened and containment refueling integrity not being maintained. At the time this violation occurred, the responsible operations personnel were unaware of the maintenance activity. Furthermore, the maintenance personnel were neither aware of the need to maintain containment refueling integrity nor the significance of clearing the safety tags which allowed deenergizing of the control valve's solenoid causing the valve to fail open.

In the second instance, which occurred approximately two days later, although containment refueling integrity had again been established using, in this case, two butterfly valves in the service water supply piping, subsequent miscommunication between operations personnel and a lack of understanding of system status resulted in both valves being inadvertently opened and containment integrity again not being maintained while core alterations were performed. In addition to these two events, there were two other instances in April 1989 where containment integrity was inadvertently not maintained because of poorly coordinated maintenance activities. However, there were no core alterations during those instances and therefore a violation did not occur.

This violation demonstrates several weaknesses in the control of operations at Calvert Cliffs. Scheduling and coordination of outage activities were weak, thereby permitting equipment to be manipulated for maintenance purposes without the knowledge of responsible operations staff. Furthermore, the lessons learned from the first event were not promptly or effectively assessed and communicated to the staff, which, if done, may have precluded the occurrence of the second event.

The second violation involved the implementation of six temporary plant modifications between 1987 and 1989 without the required review by the Plant Onsite Safety Review Committee (POSRC) and without the required safety evaluations to confirm that the modifications did not involve unreviewed safety questions. When the evaluations were eventually performed, they confirmed that one of these modifications did in fact involve an unreviewed safety question, as described in the enclosed Notice. The NRC recognizes that the safety significance of this violation was also low because five of the six modifications did not involve unreviewed safety questions, and the other modification though increasing the possibility of a fuel handling event would not have increased its consequences. However, the NRC is concerned that a flaw existed in your procedure for controlling temporary modifications at Calvert Cliffs, thus providing inadequate controls over the modification process. The procedure permitted modification to equipment classified as "not

affecting nuclear safety" without prior 50.59 and POSRC reviews, even if the equipment was described in the FSAR.

The NRC has, in previous correspondence, expressed concerns regarding the (1) lack of sufficient control of operations at Calvert Cliffs, and (2) the lack of adequate coordination and communication among and between departments. These prior concerns were expressed during previous SALP evaluations, in a \$150,000 civil penalty issued to you on August 19, 1988 for two other violations of NRC requirements, and in several other Severity Level IV and V violations issued since that time concerning inadequate control of procedure changes, lack of POSRC reviews, and failure to adhere to procedural requirements. The enclosed violations demonstrate that these concerns continue to exist at Calvert Cliffs and aggressive management involvement is needed to prevent further problems in these areas.

Accordingly, a need exists for better control of operations at Calvert Cliffs, and better coordination both within and among the departments to assure (1) the reactors are operated in accordance with the technical specifications and regulatory requirements, and (2) changes to the facility are only made after the changes receive adequate safety reviews. To emphasize this need, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Materials Safety, Safeguards and Operations Support, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of Seventy-Five Thousand Dollars (\$75,000) for the violations described in the enclosed Notice. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, 53 Fed. Reg. 40019 (October 13, 1988) (Enforcement Policy), the violations described in the enclosed Notice have been categorized as a Severity Level III problem.

The base civil penalty amount for a Severity Level III problem is \$50,000. The escalation and mitigation factors of the Enforcement Policy were considered and overall a 50 percent escalation of the base civil penalty was found appropriate. With respect to identification and reporting, no adjustment of the base civil penalty was deemed appropriate despite the fact that the violations were identified by your staff. In the case of violation A, mitigation under that factor was viewed as unwarranted because adequate corrective actions were not taken subsequent to identification of the first event to prevent the second event. For violation B, mitigation for identification was unwarranted because the violation was not identified until after a review was done in response to a commitment to the NRC. In considering corrective actions, it was also found that no adjustment to the base civil penalty should be made. With respect to violation A, four separate instances where containment integrity was not maintained are not indicative of prompt or extensive actions. While the short-term actions for violation B were reasonable, the long-term actions were not yet finalized and overall the actions were not considered prompt and extensive. In the area of past performance, a 50 percent escalation of the civil penalty was deemed appropriate. Previous NRC correspondence including SALP evaluations, have expressed concerns about inadequate control of operations and inadequate engineering reviews. Full 100 percent escalation based on past

performance was not applied because previous concerns with control of operations did not specifically focus on the operations/maintenance interface and there is not recent enforcement history concerning violations of 10 CFR 50.59 requirements. The other factors set forth in the enforcement policy were considered and found not to be applicable in this case.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

Original Signed By
WILLIAM T. RUSSELL

William T. Russell
Regional Administrator

Enclosure: Notice of Violation and Proposed Imposition of Civil Penalty

cc w/encl:

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NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Baltimore Gas and Electric Company
Calvert Cliffs, Units 1 and 2

Docket Nos. 50-317; 50-318
License Nos. DPR-53; DPR-69
EA 89-107

During an NRC inspection conducted between April 17-27, 1989, NRC inspectors reviewed the circumstances associated with two examples of a violation of containment refueling integrity and six examples of plant modifications made without required safety evaluations. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Action," 10 CFR Part 2, Appendix C, 53 Fed. Reg. 40019 (October 13, 1988) (Enforcement Policy), the Nuclear Regulatory Commission proposes to impose civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205. The particular violations and associated civil penalty are set forth below:

- A. Technical Specification Limiting Condition for Operation (LCO) 3.9.4.c requires, in part, that during core alterations, each containment penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either (1) closed by an isolation valve, blind flange or manual valve, or (2) be capable of being closed by an operable automatic containment purge valve. Technical Specification LCO Action Statement 3.9.4 specifies that if the Technical Specification requirements can not be met, all operations involving core alterations shall be suspended.

Contrary to the above, between 2:15 p.m. and 3:50 a.m. on April 17, 1989, and between 4:25 p.m. and 6:35 a.m. on April 19, 1989, core alterations (involving the uncoupling of control element assemblies) were performed in the Unit 2 containment, even though some containment penetrations providing direct access from the containment atmosphere to the outside atmosphere were neither (1) closed by an isolation valve, blind flange or manual valve, nor (2) capable of being closed by an automatic containment purge valve. Specifically, a direct access path existed from the containment atmosphere through the drained service water supply header for the No. 21 Containment Air Cooler (via three automatic vent valves No. 2-SRW-249, 2-SRW-245, and 2-SRW-244) to the outside atmosphere (via either an open valve or an open flange), as set forth below:

1. on April 17, 1989, the direct access path from the service water piping to the outside of containment was via either (a) open control valve (No. 2-CV-1582) and open vent valve (No. 2-SRW-470), or (b) an open flange where butterfly valve 2-SRW-138 had been removed; and
2. on April 19, 1989, the direct access path from the service water header to the outside of containment was via open butterfly valves 2-SRW-138 and 2-SRW-139, and vent valve 2-SRW-470.

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- B. 10 CFR 50.59(a)(1) states, in part, that the licensee may make changes to the facility as described in the Final Safety Analysis Report (FSAR) provided the changes do not involve an unreviewed safety question. 10 CFR 50.59(a)(2) states, in part, that a change shall be deemed to involve an unreviewed safety question if the proposed change may increase the probability of an occurrence or the consequences of an accident previously evaluated in the FSAR. 10 CFR 50.59(b)(1) requires, in part, that records of changes be maintained, and must include a written safety evaluation which provides the basis for the determination that the change did not involve an unreviewed safety question.

Technical Specification 6.5.1.6 requires that all proposed changes or modifications to plant systems or equipment that effect nuclear safety shall be reviewed by the Plant Onsite Safety Review Committee (POSRC).

Contrary to the above, between February 24, 1987 and February 18, 1989, six temporary modifications made to plant equipment (involving changes to the facility as described in the FSAR and which affected nuclear safety) were made without a written safety evaluation and without the changes first being reviewed by the POSRC to ensure that the changes did not involve an unreviewed safety question. The specific changes involved:

1. No. 1-87-47, installed May 7, 1987, on the Unit 1 Oxygen Analyzer;
2. No. 1-88-54, installed April 22, 1988, on the Refueling Machine;
3. No. 1-88-145, installed August 2, 1988, on the Unit 1 No. 11B Reactor Coolant Pump low lift pump pressure alarm;
4. No. 2-89-6, installed February 18, 1989, on Unit 2 to encapsulate a steam leak on a feedwater heater valve;
5. No. 2-89-8, installed February 22, 1989, on a Unit 2 secondary steam valve; and
6. No. 1-87-24, installed February 24, 1989, on the Unit 1 Oxygen Analyzer.

Further, one of the changes, No. 1-88-54, involved an unreviewed safety question in that the change allowed a Refueling Machine limit switch to be bypassed which in turn would allow a spent fuel assembly to be lowered onto the upender while the upender was not completely vertical, thereby increasing the probability of a fuel handling accident.

This is a Severity Level III problem (Supplement I).

Civil Penalty - \$75,000 (assessed equally between the violations).

Pursuant to the provisions of 10 CFR 2.201, Baltimore Gas and Electric Company is hereby required to submit a written statement of explanation to the

Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each alleged violation: (1) admission or denial of the alleged violation, (2) the reasons for the violation if admitted, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps that will be taken to avoid further violations, and (5) the date when full compliance was or will be achieved. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required above under 10 CFR 2.201, the licensee may pay the civil penalty by letter to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, or money order payable to the Treasurer of the United States in the amount of the civil penalty proposed above, or may protest imposition of the civil penalty in whole or in part by a written answer addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission. Should the licensee fail to answer within the time specified, an order imposing the civil penalty will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation" and may: (1) deny the violations listed in this Notice in whole or in part, (2) demonstrate extenuating circumstances, (3) show error in this Notice, or (4) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C, 53 Fed. Reg. 40019 (October 13, 1988) (Enforcement Policy) should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

Upon failure to pay any civil penalty due which subsequently has been determined in accordance with the applicable provisions of 10 CFR 2.205, this matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The responses to the Director, Office of Enforcement, noted above (Reply to a Notice of Violation, letter with payment of civil penalty, and answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington,

DC 20555, a copy to the Regional Administrator, U. S. Nuclear Regulatory Commission, 475 Allendale Road, King of Prussia, PA, 19406 and a copy to the NRC Senior Resident Inspector, Calvert Cliffs.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By
WILLIAM T. RUSSELL

William T. Russell
Regional Administrator

Dated at King of Prussia, Pennsylvania
this ²2th day of July 1989