



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

ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

December 2, 1983

U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Washington, D. C. 20555

ATTENTION: Mr. Richard C. DeYoung, Director
Office of Inspection and Enforcement

ENCLOSURE: (a) Letter from Mr. A. E. Lundvall, Jr., to Mr. R. W. Starostecki dated
September 16, 1983, regarding I&E Inspection Report
50-317 (318)/83-22.

Gentlemen:

This letter provides the required response to certain items of apparent noncompliance with NRC regulations as set forth in I&E Inspection Report Nos. 50-317(318)/83-15 and 50-317(318)/83-22. These items of apparent noncompliance set forth in the inspection reports are uncontested. Accordingly, a check for \$60,000 is enclosed.

Subsequent investigations by members of our staff have confirmed that the violations referenced did occur at our Calvert Cliffs facility. Our review of the noncompliance items indicates that the major causes were:

- (a) deficiencies regarding the adequacy of procedures for controlling certain operations, testing and maintenance activities,
- (b) failure of some personnel to fully implement existing procedures, and
- (c) a lack of awareness on the part of some personnel regarding the importance of certain subsystems to the operability of safety-related systems.

The corrective actions provided herein have been directed towards alleviating the above concerns.

The measures that have been or will be taken to improve procedures in the operations, maintenance, and testing areas to preclude recurrence of similar violations are as follows:

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ITEM A (UNAVAILABILITY OF ECCS PUMP ROOM AIR COOLERS)

1. A precautionary statement has been added to the Operating Instructions for the Safety Injection, Containment Spray, and Saltwater Cooling Systems to alert the operator of the importance of the ECCS Pump Room Air Coolers for maintaining the operability of Engineered Safety Features Systems. This action was completed on November 28, 1983.
2. A new Operating Instruction has been developed for using the portable dewatering rig for maintenance activities on safety-related systems. This instruction contains provisions for alerting the operator of the requirements for maintaining operability of the ECCS Pump Room Air Coolers during plant operations consistent with the Technical Specification requirements. This action was completed on November 29, 1983.
3. Calvert Cliffs Instruction (CCI-117) for the control of Lifted Leads and Jumpers is being revised to diversify the classification of authorized changes performed on safety-related equipment. This revision incorporates a new category of authorized changes which includes such items as hoses, mechanical gagging, flow restricting and jumper (bypass) devices, etc. This revision of CCI-117 will ensure in the future that authorized changes (e.g., addition of hoses, etc.) to safety-related systems will receive the appropriate safety reviews and be controlled in such a manner as to ensure that operability of safety-related systems is maintained during the modes specified in the Technical Specifications.

ITEM B (UNAVAILABILITY OF NO. 12 EMERGENCY DIESEL GENERATOR)

Enclosure (a) provides a response to certain procedural inadequacies. Corrective actions have been provided in the response for items 7, 8 and 9 under the paragraph labeled, **Adequacy of Independent Verification of Plant System Valve Line-Ups** and items 2 and 3 under the paragraph labeled, **Validity of Operator Verification of Fuel Oil Day Tank Level**.

The measures that have been or will be taken to address the failure of certain personnel to fully implement existing procedures are as follows:

ITEM A

Within the scope of the violations described in I&E Inspection Report 83-15, and subsequent investigations performed by our staff, we have determined that the inadvertent isolation of the ECCS Pump Room Air Cooler did not constitute a condition where personnel failed to fully implement existing procedures. Therefore, no corrective actions have been taken in this area for this item.

ITEM B

Enclosure (a) provides a response to inadequacies regarding implementation of existing procedures. Corrective actions have been provided in the response for items 1, 2, 3, 4, 5 and 6 under the paragraph labeled, **Adequacy of Independent Verification of Plant System Valve Line-Ups.**

The measures that have been or will be taken to increase the awareness of personnel regarding the importance of certain subsystems to the operability of safety-related systems are as follows:

ITEM A

1. In July of this year, we initiated a program to systematically review the Unit 1 and 2 Technical Specifications. The purpose of this review has been to determine the adequacy of the current Technical Specifications with respect to identifying all equipment that is credited in the Updated Final Safety Analysis Report (UFSAR) for accident mitigation. Several approaches have been taken in verifying the adequacy of the Technical Specifications in preserving the accident analysis assumptions of the UFSAR. The first approach involved a comparison of the Combustion Engineering Standard Technical Specifications (NUREG-0212) with the current Calvert Cliffs Technical Specifications. The second approach has involved a comprehensive review of Chapter 14 (Safety Analysis) of the UFSAR with the intent of compiling a list of equipment assumed to operate during accident conditions. The list of equipment generated as a result of the Chapter 14 review will be used to revise the Technical Specifications and the Safety-Related classification lists (Q-List) where appropriate. Any changes to the Technical Specifications resulting from this review are being processed (as they are identified) in a timely manner. Following the review, processing, and NRC approval of any license amendments, training will be provided to all licensed operators through the existing Licensed Operator Training Program.
2. Following discovery of the ECCS Pump Room Air Cooler event, the General Supervisor-Operations issued a Standing Instruction (83-08) alerting Operations personnel of the importance of maintaining ECCS Pump Room Air Coolers operable during all modes requiring operable Safety Injection and Containment Spray Systems. The standing instruction provided guidance for maintaining the equipment operable and entering action statements if the equipment became inoperable during operating modes.

ITEM B

Enclosure (a) provides a response which addresses measures we have taken to increase personnel awareness regarding the importance of certain subsystems to maintaining the operability of safety-related equipment. Corrective actions have been provided in the response for items 2, 3, 4, 5 and 6 under the paragraph labeled, **Adequacy of Independent Verifications of Plant System Valve Line-Ups.**

In addition to the previously outlined corrective actions we have taken or plan to take, we anticipate that the following longer term actions will enhance our overall management objective of safe nuclear power plant operations. An integrated maintenance management system is currently under development for the Calvert Cliffs facility. One of the elements of this program involves an enhanced maintenance planner position whose primary responsibility would be planning and scheduling maintenance activities. Our past practice with regard to specifying post-maintenance operability testing has relied primarily on the Senior Control Room Operator's (SCRO) judgement. Because of the SCRO's detailed knowledge of system characteristics, we continue to place a high degree of confidence in his ability to specify appropriate post-maintenance testing. However, we realize that the SCRO may not always be cognizant of the detail of certain maintenance activities. A new program will integrate recommendations for post-maintenance testing from the maintenance planner as well as, the SCRO. This change will provide a more comprehensive review of testing requirements necessary to ensure that equipment returned to service meets the operability requirements of the Technical Specifications.

In an effort to upgrade administrative control of maintenance and operations activities at our facility, we recently scheduled a special (voluntary) INPO Assistance visit. This visit will concentrate on evaluating our current compliance in implementing existing maintenance and operations programs at Calvert Cliffs. This inspection will be conducted during the last part of November 1983. Weaknesses identified in this evaluation will be dealt with appropriately.

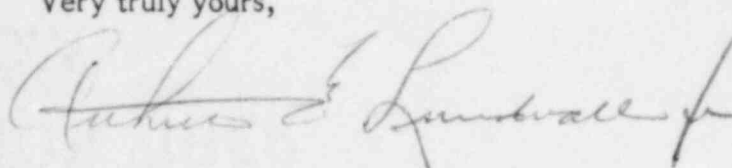
Enclosure (a) provided a discussion of our personnel error reduction program. We have seen a substantial decrease in the number of personnel error related LERs since implementing this program. We are committed to continuing and enhancing this program as necessary to reduce personnel errors at Calvert Cliffs.

The previous discussions provide a summary of the corrective actions we have taken or intend to take regarding the May 24, 1983, and August 10, 1983, incidents. We share your concern regarding the events culminating in the violations of our Technical Specifications. We believe that the above actions will provide assurance that similar events will not recur in the future.

Mr. R. C. DeYoung
December 2, 1983
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Should you have further questions regarding this matter, please do not hesitate to contact us.

Very truly yours,

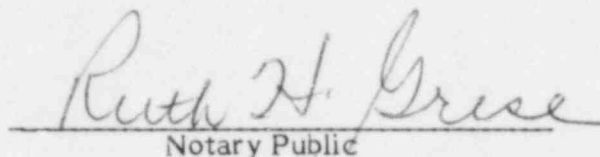


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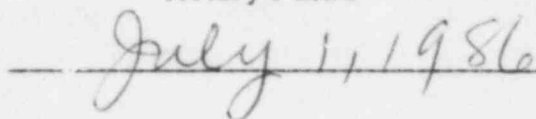
STATE OF MARYLAND :
: TO WIT:
CITY OF BALTIMORE :

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:


Notary Public

My Commission Expires:



cc: J. A. Biddison, Esquire
G. F. Trowbridge, Esquire
D. H. Jaffe, NRC
R. E. Architzel, NRC
T. E. Murley, NRC

BILL FOR COLLECTION

U.S. Nuclear Regulatory Commission

Bill No. _____

Date December 6, 1983

(Department or Establishment and Bureau or Office)

Washington, DC 20555

(Address)

PAYER:

Baltimore Gas and Electric Company
Charles Center
P.O. Box 1475
Baltimore, MD 21203

*This bill should be returned by the
payer with his remittance.*

SEE INSTRUCTIONS BELOW.

Date	DESCRIPTION	Quantity	Unit Price		Amount	
			Cost	Per		
12/6/83	Received full payment for EA 83-58, Docket No. 50-317, dated November 4, 1983.				\$60,000.00	
AMOUNT DUE THIS BILL.					\$ 60,000.00	

This is not a receipt

INSTRUCTIONS

Tender of payment of the above bill may be made in cash, United States postal money order, express money order, bank draft, or check, to the office indicated. Such tender, when in any other form than cash, should be drawn to the order of the Department or Establishment and Bureau or Office indicated above.

Receipts will be issued in all cases where "cash" is received, and only upon request when remittance is in any other form. If tender of payment of this bill is other than cash or United States postal money order, the receipt shall not become an acquittance until such tender has been cleared and the amount received by the Department or Establishment and Bureau or Office indicated above.

Failure to receive a receipt for a cash payment should be promptly reported by the payer to the chief administrative officer of the bureau or agency mentioned above.

BALTIMORE GAS AND ELECTRIC COMPANY

VENDOR CODE \$\$

CHECK NO B298901

OUR REF NO	INVOICE NO	PURCHASE ORDER	INVOICE DATE	DISCOUNT	NET AMOUNT
3X4542			11 22 83		\$60,000.00

Civil Penalties in connection with violations associated
with I and E Inspection Reports Nos: 50-317 (318)/83-15
and 50-317(318)/83-22

11 23 83

TOTALS ▶

\$60,000.00

DETACH THIS PORTION
BEFORE DEPOSITING CHECKBALTIMORE GAS AND ELECTRIC COMPANY
BALTIMORE, MARYLAND 21203

NOV 23 83

PAY EXACTLY

60,000.00

AMOUNT

\$60,000.00**

CHECK NUMBER

B298901

TO THE
ORDER
OFTREASURER OF THE UNITED**
STATES**
U. S. Nuclear Regulatory
Commission
Washington, D.C. 20555MARYLAND NATIONAL BANK
BALTIMORE, MD.

EXAMINED

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ENCLOSURE (a)



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

September 16, 1983

ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

ATTENTION: Mr. R. W. Starostecki, Director
Division of Project & Resident Programs

Gentlemen:

On September 2, 1983, Messrs. J. A. Tiernan, L. B. Russell, J. T. Carroll, and I met with you and other members of the NRC Region I staff to discuss an event that recently occurred at our Calvert Cliffs Nuclear Power Plant. This event involved the operation of Units 1 & 2 beyond the Technical Specification Limiting Conditions for Operation (LCO) concerning emergency diesel generator operability. As these events were fully discussed at our meeting and in NRC Inspection Report 50-317/83-22; 50-318/83-22, the details will not be repeated. In our meeting, we provided you with preliminary information concerning our corrective measures. This letter provides a written summary addressing corrective measures we have taken or plan to take for each area of concern specified in your Inspection Report.

ADEQUACY OF INDEPENDENT VERIFICATION OF PLANT SYSTEM VALVE LINE-UPS

1. Upon discovery of the event, the instrument bridle lower isolation valve on each fuel oil day tank was verified open and the surveillance test was successfully run on each diesel generator.
2. Personnel Incident Reports (PIRs) were written by each individual involved in the performance of the Preventive Maintenance (PM) and Surveillance Test Procedures (STPs) associated with the August 10, 1983, violation. The purpose of this program is to increase personnel awareness of the event by having each individual confront, acknowledge, and document their involvement in personnel errors. The PIRs are selectively routed as required reading or are disseminated (e.g., for training) to affected groups at Calvert Cliffs.
3. The Technicians and Operations personnel involved in the event were counseled by the Division Vice President, Plant Superintendent, and respective General Supervisors. The purpose of this counseling was to communicate Management concerns regarding the seriousness of the event.

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Mr. R. W. Starostecki
September 16, 1983
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4. Training sessions are being scheduled with all Maintenance and Operations personnel to ensure all personnel are aware of the expectations (requirements) inherent in an independent verification of valve position, (i.e., independent hands-on verification that the valve is in the proper position). This training will be completed by no later than October 30, 1983.
5. A meeting was scheduled with each Instrument Shop for the purpose of providing the opportunity for the cognizant Instrument Technicians and General Supervisor to review the event and provide a description of the lessons learned. This action was completed on September 9, 1983.
6. A weakness was identified in the practice of some Electrical & Control shops in the nature of assigning work to some Technicians on one job. To correct this deficiency, whenever more than one technician is assigned to a job, the Shop Work Coordinator will designate a lead individual to instill a stronger sense of responsibility and accountability for that job. This action has been implemented.
7. All PMs, STPs, and Functional Tests (FTIs) in the Instrument & Controls Section, will be reviewed by no later than December 31, 1983, to determine the adequacy of the independent verification steps in these procedures. In addition to the above, an evaluation of all Instrument & Controls PMs will be performed to determine whether it is advisable to include (in the verification step), a listing of all valves repositioned during the performance of the PM. This action will be completed by no later than September 30, 1983.
8. Calvert Cliffs Instruction-211D for Preventive Maintenance will be revised to be consistent with our present practice to require an independent verification step in all PMs that involve valve repositioning. This action will be completed by no later than September 30, 1983.
9. All Instrument & Controls PMs will be reviewed to evaluate the adequacy of post maintenance testing to ensure, where feasible, that the functional operability of involved components are adequately tested. This action will be completed by no later than September 1984.

VALIDITY OF OPERATOR VERIFICATION OF FUEL OIL DAY TANK LEVEL

1. Facility Change Request (FCR 81-129), which specifies the addition of a gauge glass on each fuel oil day tank, is being expedited. Although the FCR specifies the use of a gauge glass, equivalently effective alternative methods such as dipstick, float, or air bubbler indicators are under consideration. Pending engineering and parts availability, we are proceeding on a schedule to install local level indicators during the scheduled fall 1983 Unit 1 refueling outage.

2. STP 0-8-0 (Diesel Generator Weekly Test) has been revised to include: (a) a step to verify the frequency and duration of the fuel oil transfer pump operation when the diesel is being tested in a fully loaded condition, (b) a step to verify that the fuel oil day tank low level alarm is cleared, and (c) a separate data sheet for the Outside Operator to log the above information.
3. All Operations STPs will be reviewed no later than December 31, 1983, to determine if separate or additional data sheets (similar to the above) are appropriate.

MANPOWER AND TIME ALLOCATIONS FOR PM WORK

Management has in the past and will continue in the future to be sensitive to the issue of manpower and time allotment for performing safety-related activities. This is an issue which is faced, essentially, on a daily basis. We do not view this area as being deficient in Management Controls, but instead an invalid defense by the Technicians involved. Management has never tolerated shortcuts to meet a schedule. In the incident cited above, controls were exercised to alleviate the concern regarding manpower and time allotment. The PM scheduling includes estimates of man-hour requirements (in this case, 2 men/10 hours and 2 men/8 hours). To meet operational constraints during the above incident, one additional technician was assigned to the task to ensure timely performance. Maintenance supervisors at Calvert Cliffs are highly experienced at assigning safety-related work during rigorously scheduled periods and are very aware of personnel performance and capability. We continue to emphasize never sacrificing nuclear or personnel safety for time as a very basic Management objective in our training and awareness programs.

RECURRENCE OF PERSONNEL ERROR-RELATED SAFETY PROBLEMS

As discussed at our meeting, one of our major goals is to reduce personnel errors. In this regard we have implemented a program that draws upon existing controls and implements new controls that we feel will produce positive results for achieving our goal. Awareness and attitude programs have been one area of concentration, including: (a) emphasis on discussions with Supervisors and others to increase communications and awareness, (b) the formation of Interdepartmental Quality Circles, and (c) Corporate studies on quality workmanship. Training programs continue to provide a basic framework for achieving a reduction in personnel error. We have upgraded a number of areas in training including system descriptions, staffing, facilities, and feedback of plant events. In addition, error reporting and personnel counseling programs have been improved. Currently, Personnel Incident Reports are used at Calvert Cliffs. Comprehensive and independent event reports are prepared for serious events and when necessary direct counseling is performed with involved personnel and Line Supervision (up to the Vice President's level). Data analysis and evaluation programs have been implemented to assemble and review error information for trends and root causes.

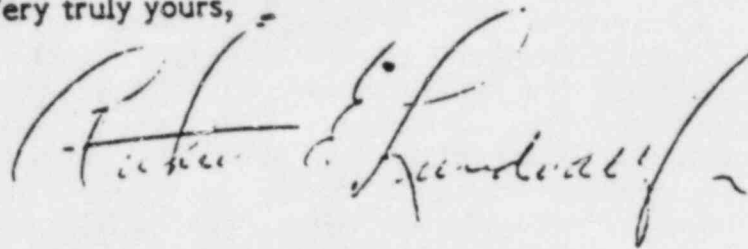
Mr. R. W. Starostecki
September 16, 1983
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As an integral part of our continuing effort to reduce personnel errors, we currently track and report personnel error trends to our Plant Operations and Safety and Off-Site Safety Review Committees. In the recent (September 1983) report a significant decrease in the number of personnel error initiated Licensee Event Reports (LERs) for the current year is noted as compared to an equivalent eight month period in 1982. This decreasing trend indicates approximately 64% fewer personnel error LERs reported. To ensure that all appropriate individuals on-site are informed and made aware of personnel error incidents and Management objectives in this area, meetings have been held with affected units and Calvert Cliffs Supervisors and key personnel to provide a forum for discussion on the seriousness of such trends.

The previous discussions provide a summary of steps we have taken or intend to take regarding the August 10, 1983, incident. We share your concern regarding the events culminating in the violation of our Technical Specifications. We believe that the above measures will provide assurance that similar events will not recur in the future.

Should you desire additional information, please do not hesitate to contact us.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Robert E. Fendley".

AEL/LOW/gla

cc: J. A. Biddison, Esquire
G. F. Trowbridge, Esquire
R. E. Architzel, NRC
D. H. Jaffe, NRC